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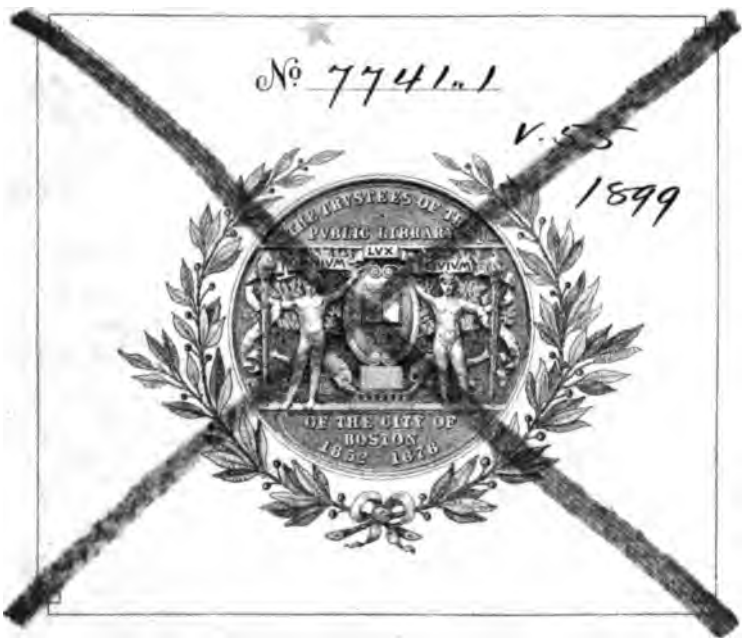

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Original Articles.

EXPERIMENTS UPON LEPROSY WITH THE TOXINS OF ERYSIPELAS.[1]

BY HENRY DWIGHT CHAPIN, M.D.,

NEW YORK.

IT has been known for some time that malignant growths, scrofula, and syphilis are favorably affected by an intercurrent attack of erysipelas. In reading up the subject of leprosy, the fact that attacks of erysipelas not infrequently occur suggested the thought that nature might in this way be making an effort to rid the body of the disease.

During the summer of 1897 the writer was on duty at the Riverside Hospital, and four lepers in one of the pavilions furnished the subjects for the following experiments. Upon consulting with Dr. Coley, he regarded the subject as worthy of investigation and kindly supplied the toxins, besides giving advice as to their administration.

The mixed, unfiltered toxins of the streptococcus of erysipelas and the bacillus prodigiosus, made from cultures grown together in bouillon and sterilized by heating to 58° C., were employed. In order to proceed safely, only one minim of the toxin was injected at the start, and the dose was usually increased by the daily addition of one minim. The injections were administered in the afternoon.

CASE I.—William B——, colored, aged nineteen years, a native of Danish West Indies, admitted to Riverside Hospital April 16, 1895. His father died of kidney disease; his mother was a resident of this city; a sister died of meningitis; he has a brother living; the patient was the only one of the family having symptoms of leprosy. The disease first appeared during early childhood. He has white spots on the legs. At the time of admission the left leg was much larger than the right; the flesh felt thick and œdematous to the touch. This condition has improved quite markedly. There was also on admission a small perforating ulcer at the base of the great toe of the left foot. The patient gives a history of having punctured the foot by a nail, and the wound failed to heal. It has never completely healed; sluggish granulation tissue has at this time practically closed the base, but superficially there has been horn-like tissue. At times this has taken on a subacute inflammation, with redness and pain in the foot. This condition has been relieved by cutting away the issue superficially and enlarging the opening. At the time of starting the treatment the toes and infiltrated left leg were somewhat œdematous. There is also a perforating ulcer in the same position on the right foot, but the infiltration is not so extended. This ulcer was caused by a burn. There were paralysis and atrophy of interossei of the upper extremity; he had a scar on the back of the hand from a burn; the legs and arms are anæsthetic. The patient has grown somewhat larger and gained strength since admission; his general health has been excellent.

[1] Read before the section on medicine, New York Academy of Medicine, December 20, 1898.

Urinary examination: reaction, acid; specific gravity, 1.026; no abnormal ingredients. July 14th, one minim injected; 15th, two minims; 16th, three minims; 17th, four minims; 18th, five minims; 19th, six minims; 20th, six minims; 21st, six minims; 22d, six minims; 23d, seven minims; 24th, seven minims; 25th, eight minims; 26th, no injection; 27th, ten minims; in three-quarters of an hour the patient had a slight chill of fifteen minutes' duration; 28th, eleven minims; 29th, twelve minims; 30th, thirteen minims. One hour after the injection the patient had a severe rigor and vomited a bloody-tinged mucus; there were headache, rapid pulse and respirations; the chill lasted one-half hour, but the chilly sensations longer; he complained of thirst, and vomiting persisted; temperature, 102.8° F.; pulse, 120; respiration, 40. 31st, fourteen minims; August 1st, fifteen minims; 2d, no injection; 3d, sixteen minims; 4th, seventeen minims; 5th, seventeen minims; 6th, seventeen minims; the buttocks are reddened and the site of injection area is indurated two inches in diameter and painful when patient lies on it; 7th, seventeen minims; 8th, eighteen minims; the patient complains of headache and had a slight chill of short duration; headache persisted throughout the afternoon; temperature, 101° F.; pulse, 84; respiration, 24; 9th, nineteen minims; 10th, twenty minims; 11th, twenty minims; 12th, twenty minims; 13th, twenty minims; 14th, twenty-one minims; 15th, twenty-two minims; 16th, twenty-three minims; 17th, 18th, 19th, and 20th, no injection from lack of toxin; 21st, twenty-two minims; 22d, twenty-two minims; 23d, twenty-two minims; 24th, twenty-two minims; 25th, twenty-two minims; the patient had a slight chill lasting twenty minutes, but chilly sensations lasted about an hour; temperature, 100.4° F.; pulse, 102; respiration, 34; patient complains of feeling cold and has a very severe headache, but no rigor; temperature, 102° F., pulse, 90; respiration, 30; 28th, twenty-two minims; the patient complained of feeling cold, but had no chill; temperature, 100.2° F.; pulse, 84; respiration, 32; 29th, twenty-two minims; 30th, twenty-two minims; 31st, twenty-two minims; there was induration about the site of injection on the buttocks, a little more painful than usual, with considerable redness of the skin; no fever. September 1st, twenty-two minims; 2d, twenty-two minims; 3d, twenty-two minims; 4th, twenty-two minims; 5th, twenty-two minims; the injections were discontinued; no appreciable effect on the lesions of leprosy.

CASE II.—Ling J——, Chinaman, twenty-eight years old, admitted to the hospital May 14, 1897. Patient is well nourished and seems bright mentally, but understands little English and speaks very imperfectly; his father is living and resides in New York; his mother is supposed to be living in Hong Kong; he has been sick eight months. The face and neck are covered with deeply infiltrated copper-colored tubercles; the hands and arms are also affected, but not to the same extent. There are two spots upon the chest and abdomen, with patches on the back showing loss of pigment; there is a large superficial patch around the waist; the backs of the hands are covered with infiltrations; the legs are also covered with copper-colored patches,

more on the anterior than the posterior surface. No accurate test could be made as to anæsthesia or hyperæsthesia. Urine: specific gravity, 1.022; reaction, acid; no abnormal ingredients. July 14th, one minim injected; 15th, two minims; 16th, three minims; 17th, four minims; 18th, five minims; 19th, six minims; 20th, six minims; 21st, six minims; 22d, six minims; 23d, seven minims; 24th, seven minims; 25th, eight minims; 26th, no injection; 27th, ten minims; 28th, eleven minims; 29th, twelve minims; one half-hour after injection the patient had a marked chill accompanied by vomiting; the chill lasted half an hour, with vomiting at intervals. In three hours the patient vomited an undigested green apple that he had eaten during the day. Temperature, 102.4° F.; pulse, 96; respiration, 26. 30th, thirteen minims; 31st, fourteen minims; the patient complained of headache; the face was slightly swollen; the eyelids were swollen; the right eye was congested, with slight suffusion; temperature, 99.2° F. August 1st, fifteen minims; the headache peristed, eyes about the same; 2d, no injection; headache, and eyes about the same; 3d, sixteen minims; improvement in appearance of eyes; the headache was less intense, but the face was still swollen; temperature, 99.4° F.; 4th, no injection; the headache persisted; the face was about the same as preceding day; the patient was not so bright as usual; 5th, no injection; the face was still swollen, and there was headache over the frontal region; 6th, seventeen minims; the patient was much brighter; the headache disappeared; the eyes were clear; temperature, normal; 7th, seventeen minims; there were swelling and slight induration along Poupart's ligament on the left side, sore to the touch; there was a slight induration at the site of the injection on the left buttock; 8th, eighteen minims; 9th, nineteen minims; the patient's face was slightly swollen, and the entire skin seemed of darker hue; 10th, twenty minims; 11th, twenty minims; 12th, twenty minims; 13th, twenty minims; 14th, twenty-one minims; 15th, twenty-two minims; 16th, twenty-three minims; 17th, 18th, 19th, and 20th, no injections from lack of toxin; 21st, twenty-two minims; 22d, twenty-two minims; 23d, twenty-two minims; 24th, twenty-two minims; 25th, twenty-two minims; the patient was drowsy and indisposed to usual activity during the afternoon; no chill; temperature, 102° F.; pulse, 108; respiration, 24; 26th, twenty-two minims; 27th, twenty-two minims; 28th, twenty-two minims; 29th, twenty-two minims; 30th, twenty-two minims; 31st, twenty-two minims; September 1st, twenty-two minims; 2d, twenty-two minims; 3d, twenty-two minims; 4th, twenty-two minims; 5th, twenty-two minims; injections stopped. The pigmentary patches on the face in this case appear to have grown darker in hue during the period of treatment; there also seems to be more infiltration in the tubercles, especially upon the prominences of the cheek and about the nose.

Later Note: This patient was visited by Dr. Bradley at the almshouse hospital in June, 1898. He reports that the disease has progressed very rapidly; the skin is a dark-brown hue, deeply infiltrated with large tubercles, especially over the frontal eminences and about the malar bones, giving a leonine expression to the face. The ears and nose are larger, the former standing out well from the head; the patient appears to have aged very greatly during the year.

Case III.—Philip S——, colored, twenty-four years old, a native of Louisiana, admitted to Riverside Hospital January 21, 1897. At the age of fourteen years the patient first noticed anæsthesia of the right foot, with loss of pigment over the instep; the numbness first appeared on the sole of the foot; the patient is the only child; the father is supposed to be living; the mother is dead, cause of death unknown; the patient states that in the village where he resided there were many lepers; he does not know the manner in which he contracted the disease; he denies any venereal history. On admission the patient was very well nourished; the right and left thighs were about the same size; the right leg was smaller than the left. There was a perforating, sluggish ulcer just anterior to the heel; the first, third, and fourth toes are absent, the stumps being covered with firm cicatrices; he states that the toes were amputated about four years ago; the large toe is curved outward over the stump of the second toe; the terminal phalanx of the large toe protrudes through the flesh; the exposed end is soft, spongy, necrosed, and blackened; a third perforating ulcer is situated just beneath the head of the metatarsal bone of left toe. The patient has complained of shooting pains through the right leg. The ulcers were cleansed and dressed with iodoform powder and gauze. The right eye is suffused, with considerable lacrymation; the lids are puffy and red; there is some redness on the right side of the face and nose and on a portion of the left side of the face. He states that six years ago he received a severe accidental blow upon the nose; since admission to the hospital this redness has gradually lessened; the eyes have likewise lost much of their œdema, but at times there is considerable lacrymation; about June 1st the foot of the right side became greatly swollen and œdematous, with the skin tense and shiny; the patient was feverish, with pains in the head and right leg; a perforating ulcer upon the right foot discharged considerable sanguineous pus. When the injections were begun, there was a sluggish, perforating ulcer beneath the head of the metatarsal bone of the right foot about the size of a five-cent piece; the ulcer was very deep; there was a smaller ulcer just anterior to the heel and an ulcer over the original site of the protrusion of the terminal phalanx covered over with horny tissue and scab formation, but not true cicatrization; there was paralysis of the anterior nerve branches, with loss of patellar reflex on the right side, but present on the left; the nose was large and flattened, particularly the alæ; there was atrophy of the right leg; a small pigmented eruption covered the entire body. Urine: specific gravity, 1.026; acid reaction; no abnormal ingredients. July 14th, injected one minim; 15th, two minims; 16th, three minims; 17th, four minims; 18th, five minims; 19th, six minims; 20th, six minims; 21st, six minims; the ulcers on foot were not secreting so freely; 22d, six minims; 23d, seven minims; 24th, seven minims; 25th, eight minims; 26th, no injection; 27th, ten minims; the foot is healing; 28th, eleven minims; 29th, twelve minims; 30th, thirteen minims; the ulcer on the foot is not so deep, filling with granulation tissue of a sluggish nature; 31st, fourteen minims; August 1st, fifteen minims; 2d, no injection; 3d, sixteen minims; the patient complained of soreness in the right inguinal glands; 4th, seventeen minims; the ulcer is apparently more healthy looking, filling with granulations; 5th, seventeen minims; the patient had a light chill an hour after the injection; the chilly sensations lasted for an hour; temperature, 102.4° F.; pulse, 120; respiration, 28; 6th, seventeen minims; 7th, seventeen minims; 8th, eighteen minims; the ulcer on the foot was more active in appearance, but discharged considerable sero-purulent fluid; a probe passes through the dorsum of the foot near the base of the little toe; 9th, nineteen minims; 10th, twenty minims; 11th, no injection; he complained of feeling feverish, has headache, and preferred to lie in bed; temperature, 101.2° F.; pulse, 104; respiration, 30; 12th, no injection; patient requested that injection be omitted, as he felt too miserable. The skin on the anterior dorsum of the foot was tense and shiny; the foot was swollen; 12th, no injection; the patient complained of headache and aching pains over the body; a large amount of pus

was discharged from the ulcer; a new opening is appearing on the dorsum of the foot just posterior to the base of the little toe; temperature, 100° F.; 14th, twenty-one minims; the patient was feeling much better; a little purulent discharge came from the foot; 15th, twenty-two minims; 16th, twenty-three minims; there were no chill and only a slight rise of temperature, 106° F.; 17th, 18th, 19th, and 20th, no injections from lack of toxin; 21st, twenty-two minims; 22d, twenty-two minims; about one hour after injection the patient had a slight chill of about thirty minutes' duration; temperature, 99° F.; 23d, twenty-two minims; the patient was seized with a marked rigor lasting about thirty minutes; temperature, 101.2° F.; the discharge from the foot is lessening somewhat; 24th, twenty-two minims; he had a light chill lasting about fifteen minutes; temperature, 100° F.; 25th, twenty-two minims; a light chill occurred lasting about twenty minutes, but the patient complained of feeling cold for an hour afterward; temperature, 101.8° F.; pulse, 120; respiration, 36; 26th, twenty-two minims; 27th, twenty-two minims; 28th, twenty-two minims; 29th, twenty-two minims; 30th, twenty-two minims; 31st, twenty-two minims; September 1st, twenty-two minims; 2d, twenty-two minims; 3d, twenty-two minims; 4th, twenty-two minims; 5th, twenty-two minims; injections discontinued; the opening on plantar surface of the foot is growing smaller, that of the dorsum remains as before; between the two there is a slight pouch-like cavity; at times it seemed as if the injection of the toxins affected somewhat the character of these ulcerations; it is doubtful, however, from the subsequent history, whether any real result was effected.

Later Note: Dr. Bradley reports that during the spring of 1898 the patient had amputation of the right leg below the knee at the almshouse Hospital, Blackwell's Island. The union not proving satisfactory, a second amputation was done a little higher; the wound healed readily and quickly, and later the patient was discharged.

CASE IV.—Frederick F——, German, forty years old, baker by occupation; his father was killed in war, and mother died of cholera; the patient resided in Brazil for twenty years; he has had the present disease for two years; it appeared first on the arms; the face, arms, and legs are now covered with large tubercles and cicatricial masses. The patient was admitted September 18, 1896; he is short of stature, well nourished, and of fair intelligence. Urine: specific gravity, 1.026; reaction acid, no abnormal ingredients. July 14th, injected one minim; 15th, two minims; 16th, three minims; 17th, four minims; 18th, five minims; 19th, six minims; 20th, six minims; 21st, six minims; 22d, six minims; 23d, seven minims; 24th, seven minims; 25th, eight minims; 26th, no injection; 27th, ten minims; 28th, eleven minims; 29th, twelve minims; 30th, thirteen minims; 31st, fourteen minims; August 1st, fifteen minims; the patient was seized with severe rigor, lasting about twenty minutes, three-quarters of an hour after injection, the chilly sensations persisting for about half an hour longer; temperature, 102° F.; pulse, 112; respiration, 32; 2d, no injection; 3d, sixteen minims; an hour afterward, he had a chill lasting thirty-five minutes; the patient shook severely, and the skin was clammy to the touch; there was a swelling in the right inguinal region, painful to the touch; temperature, 100.6° F.; pulse, 120; respiration, 28; 4th, sixteen minims; the swelling in inguinal region has disappeared; induration appeared on left buttock at the site of the previous injection; the skin was slightly reddened and painful; temperature, 100° F.; 5th, seventeen minims; in an hour a severe chill occurred, the hardest he has experienced, lasting thirty minutes, but chilly sensations continued for one hour and fifteen minutes; temperature, 102.4° F.; pulse, 118; respiration, 36; 6th, seventeen minims; 7th, seventeen minims; there were glandular enlargement and soreness in inguinal region on the same side as the injection; 8th, eighteen minims; 9th, nineteen minims; 10th, twenty minims; the buttock on the right side was sore, with redness at the site of injection; there was a disappearance of the inguinal-gland induration; he had a slight chill lasting thirty minutes; temperature, 100.2° F.; 11th, no injection; the patient complained of pain over the right side of the face, also twitching of the lower lid; the right pupil was a trifle larger than the left; there was no interference with the reflex; 12th, no injection; 13th, twenty minims; the patient stated that the pain in the face had disappeared; 14th, twenty-one minims; 15th, twenty-two minims; 16th, twenty-three minims; 17th, 18th, 19th, and 20th, no injections from lack of toxins; 21st, twenty-two minims; he had a chill with extreme rigor; the face was cyanosed; he felt better in two hours; temperature, 102.8° F.; pulse, 118; respiration, 30; 22d, twenty-two minims; 23d, no injection; the patient has severe headache and pain in the right side of the face; temperature, 101° F.; pulse, 96; respiration, 32; 24th, no injection; 25th, twenty-two minims; 26th, twenty-two minims; 27th, twenty-two minims; 28th, twenty-two minims; 29th, twenty-two minims; 30th, twenty-two minims; 31st, twenty-two minims; September 1st, twenty-two minims; 2d, twenty-two minims; 3d, twenty-two minims; 4th, twenty-two minims; 5th, twenty-two minims; the injections were discontinued. The face of this patient has grown thinner during treatment, but at the expense of other than tubercular tissue; the infiltration remained practically the same.

Later Note: Dr. Bradley saw this patient at the almshouse hospital in June, 1898; his condition has changed but little.

In the experiments here noted, when a reaction followed the injection, it usually ensued within an hour, and the temperature on an average reached its maximum in from three to four hours. The conclusions to be drawn from these experiments appear to be as follows:

First: The injection of the toxins of erysipelas has no effect upon the course of leprosy.

Second: The system can tolerate large and continued injections of the toxins of erysipelas if the dose is gradually increased. No bad effects are noted. Frequent examinations of the urine were made, with a daily inspection of the vital organs.

I am indebted to Dr. Bradley of the hospital staff for his diligence in carrying out these experiments and his careful recording of the histories.

A FALLACIOUS TEST FOR ALBUMIN IN THE URINE, WITH REMARKS ON THE BEST TESTS.[1]

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NEW YORK.

THE object of this article is to demonstrate the utter unreliability of a test for albumin in the urine, which was brought to the attention of the members of the New York State Medical Association three years ago. It was called "a domestic test," and was presented in such an alluring manner that the writer of this paper, and doubtless many others, were beguiled into giving it a trial. And just here a few words of explanation seem proper. The gentleman who presented the communication on this subject was none other than our lamented late associate, Dr. John G. Truax, and the

[1] Read before the New York County Medical Association, December 19, 1898.

reagent used was alcohol. He advocated the method chiefly on the ground of its great convenience as a bedside test; but, while admitting that it should be used in connection with control tests, he still claimed that it was just as accurate as any of those ordinarily employed and fully as delicate. When the writer of the present paper found that this test frequently played him false, he determined to ascertain its sphere of usefulness, if any, and present the facts to the State Association. Having learned, however, that a second contribution on the same subject was to be made by Dr. Truax at the next annual meeting, he waited, with the intention of affording him an opportunity of modifying his views if his further experience should warrant such a course; but it so happened that the paper was not read, and it was consequently nearly another year before its contents were made known. In this second contribution, strangely enough, Dr. Truax expressed still greater confidence in the test and suggested a plan by which one could distinguish, with this reagent, between serum-albumin and mucin in the urine. These facts are given here at length in order to explain my tardiness in presenting an adverse view of the subject. I feel sure that if our late member could be with us to plead his case, he would be the first to bow to the simple truths of science and recognize the spirit in which they are now offered.

The test in question may be made by the ordinary "contact method," just as is done with nitric acid; but perhaps the better way is to introduce about one drachm of alcohol into a test-tube and slowly add two or three drops of the urine to be tested. It is important that the alcohol should be largely in excess of the quantity of urine. The reaction consists in the formation of a white cloud or coagulum. When the quantity of albuminoid substances present in the urine is small, a white cloud will spread through the alcohol; but if the albumin exists in larger quantity the drops of urine, as they fall through the alcohol to the bottom of the tube, will be followed by white streaks. It has been claimed that this constitutes a ready means of distinguishing between mucin and albumin, the diffused cloud representing the reaction obtained with mucin; but, in the experience of the writer, it has been absolutely impossible to differentiate in this way between these substances, the difference in the reaction being really due to the proportion of albuminoid substances present.

As regards delicacy, this alcohol test leaves little to be desired, and the same may be said concerning its convenience and adaptability as a bedside or "domestic" test. The reaction is immediate and well-defined and does not require the handling of any corrosive liquids; but, aside from the question of its trustworthiness, it seems to the writer that the value of such bedside tests has been greatly overestimated. Cases no doubt occasionally arise, particularly in country practice, in which such tests may render valuable aid; but, as a rule, such a rough-and-ready method of analysis leads to superficial examinations and faulty diagnoses.

When the trial of the alcohol test was commenced, I was at first charmed with it, but the precaution was fortunately taken of using standard tests as controls. Even when it became evident that the indications were not always reliable, the writer was so loath to give it up that he set himself the task of carrying out a series of examinations, with the hope of finding it reliable under certain conditions, as, for example, when the quantity of albumin was considerable. All of the tests were made with ordinary ninety-five per cent. alcohol. The results of this investigation are herewith presented.

The examinations were made, for the most part, on supposedly healthy individuals, many of them candidates for life insurance. The result of the alcohol test was noted in 150 examinations, made on 95 different persons, and one or more of the well-known tests for albumin were generally used for purposes of control. The findings may be briefly summarized as follows: Reaction "very marked" (*i.e.*, a decided cloud with only one drop of urine) in 28 cases; reaction marked (*i.e.*, a decided coagulation with one or two drops of urine, but less copious than in the first group) in 48 cases; reaction "slight" (*i.e.*, where a faint cloud is produced by the addition of from one to three drops of urine) in 25 cases; reaction "barely perceptible" (*i.e.*, reaction only visible on close scrutiny and under careful illumination) in 18 cases; and "negative" (or no reaction) in 31 cases. This means that alcohol indicated the presence of albumin by a well-marked reaction in 76 of the 150 cases, or 50.6 per cent.; that the test responded feebly, but unequivocally, in 43, or 28.7 per cent.; and that there was no reaction in 31, or 20.7 per cent. of the whole number. It is a significant fact, in connection with the question of the practical value of the alcohol test, that in 83 cases, or over 50 per cent., this test gave the reaction for albumin, yet the control yielded a negative result. In the remainder of the examinations the urine was either albuminous, or the result with the alcohol was also negative.

The acidity or alkalinity of the urine apparently exerted no influence on this test.

It was soon discovered that there was a fairly definite relationship between high-colored urine, high specific gravity, and this reaction with alcohol. In 5 of these there was a sediment of urates, and all of these specimens gave with alcohol the supposed reaction for albumin. Of the 30 high-colored specimens, 24, or 80 per cent., gave a marked reaction, and only 2 yielded none at all. One of the last two had a specific gravity of 1.020, and the other of 1.039.

The specific gravity was recorded in 132 cases; the minimum noted being 1.004 and the maximum 1.044. The specific gravity was 1.030 or over in 50 specimens. Of these, 40, or 80 per cent., gave a very decided reaction with alcohol; 5, or 10 per cent., a very slight reaction; and 5 none at all. Of the 55 specimens giving a specific gravity between 1.015 and 1.025 —the normal range—9, or 16.3 per cent., gave a very decided reaction with alcohol; 15, or 27.4 per cent., gave a slight reaction; 13, or 23.6 per cent., a barely perceptible reaction; and 18, or 32.7 per cent., no reaction—in other words, practically 31, or 56.3 per cent., of the specimens of urine of normal specific gravity yielded no reaction, as compared with 90 per cent. of the samples having a high specific gravity, in which the reaction was obtained. Both of the two samples having a low specific gravity and giving a very marked reaction with alcohol contained no excess of urea, and no albumin could be detected in them by the control tests.

The experiment was tried of concentrating by heat a sample of urine having a normal specific gravity and giving a negative result with alcohol. The specimen so treated was originally normal in appearance and acidity; it had a specific gravity of 1.018; it yielded no reaction with alcohol, but gave a faint haze with nitric acid above the line of contact, showing some excess of the urates. The urine was then evaporated until its specific gravity had been increased to 1.036. It was still acid in reaction, and hence should have been freed, by the action of the heat, of any serum-albumin that it might have contained. The cold nitric-acid test and the heat test both failed to show the presence of any serum-albumin, but with alcohol one drop of the urine gave a heavy white precipitate. That the heat had not permanently changed the composition of the urine in such a way as to cause it to yield a precipitate with alcohol, was proved by the

fact that when the urine was diluted with water until the original specific gravity had been restored, the alcohol again failed to give any reaction.

It must be evident from the figures just given, as well as from this experiment, that alcohol precipitates from the urine other substances than serum-albumin or globulin—the only two albuminoid substances usually considered to have pathological significance—and that these other albuminoids probably exist in many specimens of normal urine, but in such high dilution as not to be precipitated even by alcohol. It might be objected that the very large number of specimens yielding positive results with alcohol was due to the superior delicacy of this test. That this is not the true explanation is proved by the feebleness of the reaction with alcohol in some specimens shown by standard tests to be decidedly albuminous, and the copious precipitate obtained with alcohol in many other specimens yielding entirely negative results with the control test—in other words, the reaction with alcohol is not at all proportionate to the quantity of serum-albumin present. For example, in No. 82 of this series, the urine yielded with heat and nitric acid a precipitate of albumin representing one fifth of the bulk, yet the reaction of this same urine with alcohol was no more marked than in many other samples in which nitric acid failed to show the presence of even a trace of albumin.[1] It is interesting to note in this connection that a specimen of urine, which was discolored by the admixture of blood, failed to give a distinct reaction with alcohol, although giving the usual ring of albumin when tested with nitric acid. These facts make it clear that the apparent sensitiveness of the alcohol test must depend upon other proteids than serum-albumin.

The albuminoid substances in the urine which most commonly lead to erroneous conclusions when testing for serum-albumin are peptone, hemialbuminose, mucin, and the coloring matter of the blood. Of these, according to Roberts, mucin is the most common source of fallacy, but the peptones are not infrequently present. In the specimens of apparently normal urine which gave a precipitate with alcohol, the absence of peptone was indicated by the failure to obtain a precipitate with picric acid; and similarly mucin was quite often excluded by the absence of any reaction with citric acid. The alcoholic precipitate was not dissolved by heat.

The test with sodium tungstate has been considered by some observers to be of little value because of its tendency to precipitate from the urine other proteids than serum-albumin; but in this series of examinations it has not rarely failed to give the reaction in specimens of urine containing some substance which was copiously precipitated by alcohol. In using the sodium tungstate care was taken to exclude possible errors arising from the presence of mucin, or of oleoresins, such as copaiba. That sodium tungstate and alcohol precipitate different proteids seems clear, because some specimens, giving a very copious reaction with alcohol, give an entirely negative result with the sodium tungstate, and *vice versa*. It is evidently not a question of the relative delicacy of the two tests.

Another fact brought out by this study is, that the results obtained with alcohol vary widely in specimens of urine from the same person on different days, and even at different hours of the same day, and that there is no definite periodicity about this, the reaction sometimes being absent or feeble in the morning and very marked in the afternoon, and *vice versa*.

In 44 of the cases the presence or absence of an excess of urea in the specimens (not the daily quantity excreted) was noted. The record shows that there was an evident excess in 20, or 45.5 per cent., and all of these specimens gave a marked reaction with alcohol.

[1] This fact was demonstrated to the members of the association by tests made in their presence.

The Best Tests.—In connection with this subject, and especially in view of the fact that it has been necessary to exclude one very promising test from the list, it may be interesting to speak of those which have been demonstrated to be not only reliable, but sufficiently delicate for the purposes of the clinician.

Heat.—Many authors assert that the most delicate, reliable, and altogether satisfactory test for serum-albumin in the urine is that made with heat and nitric acid, but if the urine be too acid or neutral or alkaline, it is liable to lead to wrong conclusions. Of the several methods of performing this test, perhaps the simplest and most accurate is that recommended by Dr. William Henry Porter in his book. He says: "Wash the interior of a test-tube with a four per cent. solution of acetic acid; then nearly fill the tube with the urine and heat the superior third to the boiling-point while holding it by the inferior extremity. In this way, if albumin be present, the superior layer will become cloudy, while the underlying layer remains clear."

Many physicians are in the habit of allowing the coagulated albumin to settle in the tube and then estimating its quantity as one-tenth, one-fifth, etc., of the bulk of the urine tested. In some specimens containing only a small quantity of albumin, the time required for the sedimentation is considerable, but this can be greatly reduced and the resulting precipitate made more compact by adopting the plan of holding the test-tube far above the source of heat for two or three minutes. This prolonged exposure to a heat a little below the boiling-point causes the tiny particles of coagulated albumin to coalesce into large flakes, which then quickly fall to the bottom of the tube.

Nitric-Magnesian Test.—Undoubtedly if the necessary precautions in regard to the heating and acidulation of the urine are strictly observed, the heat test is both delicate and reliable, but the writer is one of those who believes that for every-day clinical work the test with cold nitric acid, or that with Roberts' modification of it, known as "the nitric-magnesian test," will be found the most satisfactory of all. The technique of its application is less difficult and cumbersome than that of the heat test, and the result is quickly obtained. Its delicacy is about all that can be desired, if the analyst will only take the trouble to examine the reaction by reflected light while the test-tube is held against some dark object, such as the coat-sleeve. It is worthy of more extensive use, for it not only exceeds the nitric-acid test in sensitiveness, but gives a sharper and more compact ring of albumin, a matter of considerable importance in specimens containing mucin or an excess of urates, or in those which have not been thoroughly clarified. The test solution, which is made by mixing one part of pure nitric acid with five parts of a filtered, saturated solution of magnesium sulphate, is used in the same manner as nitric acid alone, and has the great advantage over the latter of not staining the hands.

Nitric Acid.—The test most generally used, because of the accuracy of its indications and the facility with which it may be applied, is that with cold nitric acid. The neatest and best method of performing it consists in pouring a small quantity of nitric acid into a test-tube, inclining the tube almost to the horizontal, and then floating the urine upon the acid by means of a pipette resting against the inner side of the test-tube. It is essential that the urine be allowed to flow into the tube from the pipette very slowly and gently, otherwise the line of demarcation between the urine and acid will not be sharp, and consequently if a ring of albumin forms at the line of contact it will not be so clearly defined as it should be. As the first few drops of

urine escaping from the pipette are apt to rush suddenly down the side of the tube and mix with the acid, this should be prevented by applying the pipette to that side of the tube which has already become wetted by pouring in the acid. Another practical point worth bearing in mind is, that unless the finger closing the pipette is kept entirely free from moisture it is impossible properly to manipulate the pipette. The line of contact of the acid and urine should always be closely inspected both by transmitted light passing obliquely through the tube to the eye and by reflected light, the test-tube being held against a dark background. When searching for very minute traces of albumin the test should not be made by artificial light. These observations apply with equal force to all tests for albumin in which the contact method is employed. If no ring of albumin is visible at once, the test-tube should be set aside for a few minutes, for when only minute traces are present the reaction is slow in appearing. This remark applies to the nitric-acid rather than to the nitric-magnesian test, for the indications of the latter are singularly prompt and frank, and, moreover, after standing for some time there is less tendency than with nitric acid for a faint and slowly developed reaction to be obscured by the gradual mixing of the two fluids.

Fallacies.—The most frequent source of error in testing for albumin in the urine by the contact method are, the presence of urates or urea in excess, the presence of mucin, or of such oleo-resins as cubebs and copaiba. When the urine contains an excess of urates, a white cloud is sometimes produced, which closely resembles the reaction for albumin, but, on close scrutiny, it will be found that it is not only rather more diffused, but the cloud forms above the line of contact and spreads downward; whereas with albumin the cloud first appears at the junction of the acid and urine and spreads slowly upward. They can be still further differentiated by warming the test-tube, when, if urates are responsible for the reaction, the cloud will disappear, while the turbidity produced by albumin will remain unchanged. The crystalline precipitate of nitrate of urea, occasionally noticed in connection with this test, should not cause any confusion if the observer exercises reasonable care, as the appearance of the cloud is entirely different from that produced by the other substances mentioned. Mucin also slowly produces a haze above the line of contact, because it is not precipitated by strong nitric acid, but only by that acid when highly diluted. If additional confirmation of the presence of mucin is desired, it can be obtained by substituting for the nitric acid a saturated solution of citric acid. This gives with mucin an opalescent zone immediately above the layer of acid. The presence of oleo-resins will usually be indicated by the odor imparted to the urine, but they may be definitely distinguished from albumin by the fact that the precipitate is readily soluble in alcohol.

On one occasion only has the writer observed a reaction resembling that produced by albumin, yet due to another cause than those already detailed. In this case the urine was slightly alkaline, and as it came in contact with the acid a ring was formed at the line of contact which might have been mistaken by a superficial observer for a ring of albumin, especially if the tube had not been examined a second time after the lapse of some minutes. On close inspection it was found that the ring was made up of myriads of tiny bubbles of carbonic-acid gas, and the phenomenon disappeared as soon as the evolution of gas ceased. I have never observed this in connection with other specimens of alkaline urine, nor have I seen it mentioned in the literature.

The Tests Compared.—While conceding a prominent place to the heat test as a reliable clinical guide to the existence of albuminuria, the writer would call attention to the widely varying statements of different authors regarding its delicacy as conclusive proof of the difficulties commonly experienced in applying the test. These estimates vary all the way from one part of albumin in two hundred and fifty thousand to one part in six thousand. It is probable that the average observer will find the nitric-acid test somewhat more delicate than heat, and the nitric-magnesian test one-third more sensitive than the nitric-acid.

Estimation of Quantity.—A fair estimate of the progress of a case of albuminuria can be obtained with either nitric acid or the nitric-magnesian test by noting the proportion which the albuminous precipitate bears to the total volume of urine above the acid fluid. As the nitric-magnesian fluid gives a more compact ring of coagulated albumin it is better for this purpose. Hoffmann and Ultzmann state that, given a sharp, clear layer of albumin, each one-tenth of an inch represents one-tenth of one per cent. of albumin.

In conclusion the author would say that, while he has not been able as yet to determine what albuminous substances are ordinarily responsible for the precipitate so commonly formed on the addition of alcohol to urine, he ventures to hope that he has succeeded in demonstrating the entire untrustworthiness of this reaction as a test for serum-albumin and in calling attention to its significance. Our present knowledge of the hourly and diurnal variations of the urine, irrespective of evident organic disease, does not allow us to do more than surmise regarding the meaning of such reactions; but it is surely within the bounds of probability to predict that this test, or a similar one, may yet be the means of wresting from nature very important truths concerning the physiology and pathology of digestion.

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THE PRESENT STATUS OF OPINION UPON THE USE OF QUININE IN MALARIA.

By H. A. HARE, M.D.,

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The return to this country of large numbers of soldiers affected by malarial disease, and the prospect of colonization of certain tropical countries by citizens of the United States, have naturally caused much interest in malarial fever, and in the æstivo-autumnal parasite in particular. Physicians in the North have suddenly developed an extraordinary degree of interest in a subject which their Southern brethren have long considered of vital importance, and in consequence have studied it with considerable zeal, so that many of them have arrived at definite views as to the matter in debate.

With these introductory remarks I proceed to a friendly criticism of a special article in the *Medical News* of December 17th, 1898, by an anonymous writer.

In this article the value of quinine as an anti-malarial is discussed, its praises sung, and then the writer sets his spear and proceeds to charge valiantly into the ranks of those who have the temerity to believe that quinine, like every other drug, has limitations as to its usefulness in malarial disease, and that it is given recklessly and in unnecessarily large doses. This writer also states that "there is in the air a spirit of opposition to the drug which is liable to do a good deal of harm." If this is true, it is unfortunate, for no one can deny that, so far as the infecting organism is concerned, quinine acts as a specific.

On the other hand, it is certainly a fact that quinine has been shamefully abused in malarial fever, that it is often given in excessive doses and in cases in which

its use is contraindicated, and, finally, because the practitioner has been led to believe that "where is malaria there should be quinine," he has been led to prescribe it without studying the case thoroughly, and therefore has failed to find that its use is sometimes unwise and that the condition is sometimes not really malaria at all.

The objection to the paper we have quoted is not that it urges confidence in quinine, but that it urges its universal use, with disdain for those who recognize its limitations. Thus that part of the article dealing with hæmaturia seems to indicate that the writer falls into the category defined by himself for the writer of an editorial in the *Journal of the American Medical Association*, namely, "one with but small experience with malaria, or perhaps none," since in the next sentence he proceeds to tell us that the voices of our Southern medical men, of the medical men of India and of Brazil and Italy have been as a unit in favor of the universal use of quinine. That this statement is anything but correct is shown by the fact that a very large proportion of these physicians have testified to the opposite effect. Thus, to take up the most recent literature, we find Goltmann and Krauss, the sub-committee on pathology of the committee on malarial hæmaturia of the Tri-State Medical Association, in a report published in the *Memphis Lancet* for December, 1898, telling us that they are "forced to the conclusion that, malarial hæmaturia once begun, quinine has no place in its therapy"; and, again, "the injudicious administration of quinine is often responsible for a hæmaturic attack." In *La Presse Médicale* for December 3, 1898, Vincent informs us that American statistics demonstrate that the greater number of patients survive that do not receive quinine, and Netter thinks that the absorption of quinine plays an important part in the production of bilious hæmoglobinuric fever. In the *Therapeutic Gazette* for 1897, page 94, Dr. Meek, of Arkansas, protests "in the name of humanity" against the use of quinine in this affection; and many other references to papers in Southern journals during the last few years could be given, not all against the use of quinine, but the majority at least preaching care in its use and recognizing that it may do harm.

In this connection it is proper to point out that physicians elsewhere than in America have reached similar views, and Karamitsas, a Greek physician, has published in the *Bulletin Générale de Therapeutique* an interesting paper dealing with seven cases in which, in the absence of acute malarial manifestations and because of malarial cachexia, quinine produced hæmaturia whenever it was given, and, further, these patients failed to have this symptom in acute attacks, if quinine was withheld, but suffered from bloody urine if it was used. Rizopoulos in Greece and Tomaselli in Italy have also seen cases in which quinine would produce hæmaturia. In Guadaloupe, Du Chassaing has reported such cases. Other cases have been recorded by Pampoukis and Chomatianos of Athens, Greece, and also by Carreau.

In view of these facts, the statement in the article quoted, that Koch "started" the present reaction against quinine by stating that quinine was given too freely in African malarial fevers, and that it caused "black-water fever," is scarcely correct. Whatever weight his views may have, he certainly did not "start" the reaction.

As long ago as 1892 the author of this paper became interested in this important question and made a collective investigation of the views of physicians living in those parts of the United States in which the mortality from malarial infection was greatest, namely, seventy per thousand or over, and reported the results to the Association of American Physicians.[1]

[1] Therapeutic Gazette, July, 1892.

While the views expressed by my correspondents were very antagonistic, I thought myself justified in stating that quinine is often useless and harmful in the bloody urine of malarial infection, although it was also evident that circumstances might exist in which the drug could be used. Much of the contradiction is more fancied than real, and depends upon the fact that the bloody urine may be due to many causes, such as acute renal congestion in the paroxysms owing to great distention of the renal vessels, to degenerative renal vascular changes as the result of chronic malarial poisoning, because of degenerative processes which cause the red cells to disintegrate, and finally to paroxysmal hæmoglobinuria not due to malaria.

It is evident, therefore, that quinine might be useful in one case with bloody urine and not in another, and the burden of this article is not to prove that quinine is never useful, but that it is not a "cure-all" in these states. That it may do damage is proved by the authorities quoted, and by the following facts that show, I think, that my friend who wrote the editorial in the *Journal of the American Medical Association*, whoever he may be, is not so ignorant as the *Medical News* would have us believe.

That malarial poisoning does cause nephritis in certain cases is admitted by every one, and Thayer tells us that in Baltimore tube-casts were found in the urine of 17.5 per cent. of the malarial cases, and Osler says that albuminuria was found in 46.4 per cent. of his cases in the wards. If this is true of a point so far north as Baltimore, it probably holds with greater force for those places where the malarial poison is still more virulent. Atkinson has shown that nephritis is a sequel of malarial infection; the committee of the Tri-State Society of Alabama, Tennessee, and Mississippi has found nephritis in all cases of fatal malarial hæmaturia; Ralfe has done likewise, and Kiener and Kelsch have reported that there is glomerulitis.

Admitting, then, that malarial disease produces changes in the kidneys, let us see if quinine is capable of so doing. We find that all writers of experience state that quinine, particularly in full doses, possesses distinct irritative effects on the genito-urinary tract, and I have proved that in poisoning by quinine the kidneys become congested and finally inflamed.

Guyochin has reported cases of genito-urinary irritation after the use of quinine, and Faginoti reports a case in which there were pain in the urinary passages and the discharge of a few drops of blood on urination. Monneret has seen positive hæmaturia follow its use, and Rivet has observed vesical spasm and hæmaturia after an ordinary dose of the drug. Dasset reports the development of hæmaturia, with retention of urine, from cystic irritation due to quinine, and Cachere records two cases in which hæmaturia followed the use of quinine. In one of these, a boy of thirteen had profuse hæmaturia after the dose of ten grains, and a girl of seven years was affected similarly whenever quinine was used. Stillé states that quinine irritates the urinary organs, and that if any part of this tract is diseased the lesion is aggravated.

Three facts may therefore be deducted: (1) That quinine sometimes produces hæmaturia in malarial disease; (2) that malarial disease often congests, irritates, or inflames the kidney; (3) that quinine is capable of doing likewise.

This paper so far has, doubtless, seemed destructive to the use of quinine in malarial nephritis and hæmaturia, but it is not to be regarded as advocating that no quinine be given; rather that it be given wisely. It must be evident that hæmaturia coming on in acute intermittent malaria is a manifestation of blood-breakdown or renal lesion, and is a result of the congestive

stage of the attack. To give quinine during the hæmaturia is equivalent to "shutting the door after the horse is stolen," and in addition gives the kidneys the irritating work of elimination. It would seem more rational to give it to prevent the next paroxysm.

In hæmoglobinuria occurring with the paroxysm there is probably less danger in using quinine than when true hæmaturia is present, since the kidneys are not as hindered and clogged by blood-clots; but even here it must be evident that quinine can only stop future attacks, not the one already in existence. Should the attack of hæmoglobinuria be prolonged, indicating that the malarial poison is destroying the corpuscles independent of the chills, then quinine may be needed. If it is given, I believe that cholagogues, followed by a brisk purge, should be used to aid in the elimination of coloring-matter through the liver and bowel, and to relieve the kidneys of all labor which it is possible to remove. If in any case the intermittent paroxysms are so frequent as to make the quinine necessary, in view of the fact that other measures have failed, the same attention to the bowels should be given; the kidneys should be flushed out by diuretics such as the vegetable salts of potassium, and the quinine be given because the danger of the continued attacks is greater than that of renal involvement from the drug.

The third class of cases, namely, those which are included under the severe forms of bloody urine associated with jaundice and general hemorrhages from the stomach, the bowels, and the nose, are more difficult to treat than those just discussed. They present all the difficulties which non-hemorrhagic remittents produce, and the peculiar inability on the part of the absorbents, coupled with the bilious vomiting, makes all medication difficult, let alone the complication of bloody urine.

Much that has been said in regard to the condition of the kidneys and the contraindications to quinine in the milder forms of malaria, already spoken of, holds true with the severe form of hæmaturic fevers, yet here the very severity of the infection calls for quinine, although the contraindications are stronger than ever. This may be cleared up, however, by a recollection of three facts, namely, (1) that this malignant form comes on suddenly with the access of a malarial attack in a patient already broken down; (2) as an attack of hæmaturic jaundice without any evidence of another dose of malarial poison; (3) there are a number of remedies which are capable of doing much good before quinine is resorted to. The quinine will be needed in the cases suffering from active malarial paroxysms imposed on the subacute or chronic forms, but will not be needed in the second class of chronic cases, which should be treated by other measures directed to the relief of the dyscrasia and bloody urine.

It seems evident, therefore, that quinine, like the tints of the artist, must be "mixed with brains" if the best results are to be obtained, and that its routine use with blissful ignorance of its dangers ought not to be advocated; while, on the other hand, no one should for a moment cast discredit upon a truly specific remedy.

Causes of Priapism.—(1) Reflex in infants from long, tight, adherent prepuce, stone in bladder or prostatic urethra, and rectal worms. (2) Reflex in adults from stone, stricture, or cystitis with retention. (3) Gonorrhœal form, which is painful and transitory, usually nocturnal, and often with downward curvature. (4) Cantharidal variety, seldom seen. (5) Essential form, caused by injury to the spinal cord or perineum, cerebral or descending spinal-cord disease, alcoholic or sexual excess, or leukæmia.—Dr. W. R. Taylor.

THE EFFICACY OF GUAIACOL IN THE TREATMENT OF EPIDIDYMITIS.

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So much has been written on epididymitis that it may seem almost superfluous to contribute another article on this subject, but it is not the object of this paper fully to describe the disease, since its purpose is briefly to present the author's experience relative to the value of one of the newer agents in the relief of this affection.

The treatment of epididymitis with applications of lead and opium solutions, tobacco poultices, and other time-honored remedies, has not been very satisfactory, since the pain, as a rule, is not promptly relieved by these measures and it is necessary for the patient to remain in bed for several days. The use of the cautery, as first suggested by Halsted, is often of marked benefit, but it causes considerable pain and many patients rebel when it is advised.

Guaiacol applied locally has proved a marked advancement over the older remedies employed in the treatment of this disease, and more nearly approaches that of a specific than any other which has been used. The following estimate of its value has been deduced from a study of its action in twenty unselected cases.

In the treatment of epididymitis the essential feature is to employ that agent which will promptly relieve the pain, hasten the absorption of the inflammatory exudation, and which will enable the patient to resume his business with as little loss of time as possible. A comparative study of a series of cases of the same type treated with guaiacol, with another in which the therapeutic measures have been poultices or other remedies generally used for this disease, will show that the symptoms are more quickly relieved and the course of the disease much shortened when guaiacol has been the agent employed.

Local applications of this drug over the cord and on the scrotum over the inflamed epididymis promptly relieve the pain, and in thirty minutes or an hour after the use of guaiacol the patient's suffering has been so materially mitigated as to make his condition quite comfortable. My notes show that patients suffering excruciating pain from the epididymitis, so much so that it was impossible for them to stand on their feet without agony, have obtained almost complete relief in an hour after the scrotum had been painted, often walking about the hospital to familiarize themselves with their new surroundings. This subsidence of pain, however, does not remain permanent, since the pain returns in a less intense form in six or eight hours, and another application becomes necessary. With relief of pain the patient secures refreshing sleep, and the febrile disturbance quickly subsides, as the temperature is promptly reduced by the antipyretic action of the drug.

The swelling rapidly diminishes; on the second or third day it has been reduced one-half, and has almost entirely disappeared at the expiration of the fifth or sixth. Another factor of paramount importance in this connection is that delayed absorption of the exudate and the formation of dense nodular masses in the epididymis are less apt to occur.

The analgesic and antipyretic effects of these applications are especially marked in the acute stage of epididymitis, whether due to gonorrhœa or traumatism; they are less pronounced in the subacute variety, the pain and swelling disappearing more slowly; and in the chronic form, judging from the few cases in which I have used guaiacol, the agent has no appreciable effect.

My method of using this remedy is to apply one cubic centimetre of pure guaiacol over the cord of the affected side as it lies in the inguinal canal, and to

paint the scrotum over the inflamed epididymis with two cubic centimetres of a mixture containing one part of guaiacol and two of glycerin. This does not produce much burning, and although some peeling of the skin of the scrotum occurs, it seldom causes discomfort. Two applications are made during the day, one in the morning, the other in the evening, but, if the attack is very severe, a third is used on the first day of treatment. My experience teaches that four or five applications are sufficient to effect a cure in the same number of days, and that a liberal use of this agent will often abort an attack of epididymitis when it is seen in its commencement.

The following table presents in a concise form the results obtained from the use of guaiacol in twenty cases:

A further study of the cases enumerated above shows that the greatest number of gonorrhœal cases (seven) developed during the fourth week of that disease; and that the others occurred as follows: one in the second week, three in the third week, two in the fifth week, one in the sixth week, two in the seventh week, and one in the eighth week.

The effect on pain was always marked, being relieved by the first application in twenty or thirty minutes. This relief lasted for six or eight hours or longer, when slight pain recurred in the majority of cases, but it entirely disappeared in all except five in two days. In three it continued until the third day; one was not completely relieved until the expiration of the fourth, and in a subacute case the remedy did

TABLE OF CASES OF EPIDIDYMITIS TREATED WITH GUAIACOL.

Case.	Cause.	Type of Disease.	Duration of Disease.	Number of Applications (2 c.c. each) of Guaiacol.	Effect on Pain.	Effect on Swelling.	Time Necessary to Effect Cure.	Where Treated.	Remarks.
1	Gonorrhœa (4th week).	Epididymitis, acute.	4 days.	4	Although intense, relieved in 1 hour.	Reduced one-half in 2 days.	6 days.	Hospital.	This case was of exceptional severity, the pain being so intense that patient had not slept for 3 days. First application afforded almost absolute relief. Exquisite tenderness disappeared in 2 days.
2	Gonorrhœa (5th week).	Epididymitis, acute.	2 days.	3	Relieved in 1 hour, but returned in 6 hours in less intense form.	Rapidly disappeared.	4 days.	Office.	
3	Gonorrhœa (4th week).	Epididymitis, subacute.	3 days.	1	Mitigated, lasted 24 hours, when entirely relieved.	Reduced one-third on 2d day.	3 days.	Office....	Was not seen again until the expiration of 3 days, when he said the pain had been completely relieved in 24 hours, and examination showed that the swelling had practically disappeared.
4	Gonorrhœa (7th week).	Epididymitis, acute.	2 days.	4	Only partially relieved.	Slowly reduced ..	7 days.	Hospital.	When discharged on the 7th day, the affected testicle was of normal size.
5	Gonorrhœa (4th week).	Epididymitis, acute.	3 days.	2	Relieved in 2 hours, but recurred in less intense form and persisted for 3 days.	See remarks	4 days.	Office....	Patient had been using tobacco poultices for 3 days, which had reduced the swelling but had not relieved the pain. In this case guaiacol caused much burning and peeling of the skin, evidently due to previous poulticing.
6	Gonorrhœa (6th week).	Inflammation of cord, commencing epididymitis.	12 hours.	4	Promptly relieved....	See remarks	Aborted.	Office....	Had suffered for 2 days from pain in cord, which was swollen and sensitive to pressure. Slight swelling of epididymis and some pain. Three applications were made on 1st day and one on 2d. Pain promptly relieved and disease arrested.
7	Gonorrhœa (3d week).	Epididymitis, acute.	4 days.	1	Promptly relieved, but recurred and lasted for 2 days in mild form.	Swelling and induration rapidly subsided.	3 days.	Office.	
8	Traumatism.	Epididymitis, subacute.	1 day.	1	Pain was not severe, little affected by treatment.	Slowly reduced ..	See remarks.	Office....	Not seen after 3d day, when much improved.
9	Traumatism.	Epididymitis, subacute.	2 days.	3	Pain entirely relieved by two applications.	Swelling and induration not much affected.	7 days.	Office....	Oleate of mercury used with good effect in causing resorption of exudate.
10	Gonorrhœa (4th week).	Epididymitis subacute.	1 day.	2	Promptly relieved....	Reduced one-half on 2d day; had entirely disappeared in 4 days.	4 days.	Office.	
11	Gonorrhœa (5th week).	Epididymitis, acute.	2 days.	6	Pain much less intense after first application, but persisted for 4 days.	Reduced one-third on 2d day, and had entirely disappeared in 7 days.	7 days.	Hospital.	Very severe case with great swelling. Oleate of mercury efficient in hastening absorption of exudate.
12	Gonorrhœa (3d week).	Epididymitis, acute.	2 days.	4	Relieved in 24 hours.	Reduced one-half on 3d day.	5 days.	Hospital.	Swelling had entirely disappeared when discharged on 5th day.
13	Gonorrhœa (4th week).	Epididymitis, acute.	1 day.	4	Promptly relieved....	Reduced one-half on 4th day.	6 days.	Hospital.	Necessary to use oleate of mercury to cause absorption of exudate. Small nodule present when discharged.
14	Gonorrhœa (2d week).	Epididymitis, acute.	1 day.	6	Pain severe, relieved by first application, less pronounced for 2 days longer. Each application afforded relief for 6 or 8 hours.	Rapidly reduced..	6 days.	Hospital.	
15	Gonorrhœa (4th week).	Epididymitis, acute.	2 days.	6	Relieved by first application, returned, but after second did not recur.	Reduced one-half on 2d day.	5 days.	Hospital.	
16	Gonorrhœa (4th week).	Epididymo-orchitis.	3 days.	4	Pain which was severe, promptly relieved.	Reduced one-half on 3d day.	5 days.	Hospital.	Very severe case.
17	Traumatism.	Epididymo-orchitis.	6 days.	3	See remarks	Much diminished on 3d day.	3 days.	Hospital.	Patient was suffering excruciating pain when first seen; had not slept for 3 days. In 20 minutes after the first application of guaiacol said the pain had practically disappeared, and the relief was so marked that in an hour he was sleeping soundly. Testicle was exquisitely sensitive to pressure, but this rapidly disappeared, and patient was discharged on the 3d day.
18	Gonorrhœa (3d week).	Epididymitis, subacute.	1 day.	4	Relieved in 2 days....	Had disappeared in 3 days.	4 days.	Office.	
19	Gonorrhœa (7th week).	Epididymo-orchitis.	4 days.	6	Although severe was promptly relieved.	Diminished one-half on 3d day.	6 days.	Hospital.	Testicle was swollen to the size of an adult's fist, and exquisitely sensitive on pressure. Pain promptly relieved and did not cause suffering after second application. Swelling rapidly diminished, but slight amount existed when patient was discharged on 6th day.
20	Gonorrhœa (8th week).	Epididymitis, acute.	1 day.	6	See remarks	Slowly reduced...	6 days.	Hospital.	Pain was relieved by first application, but recurred in milder form on following day and continued for 2 days, when it was permanently relieved.

not have much analgesic effect. This action was most prompt and lasting in the acute cases, and was as evident in those due to traumatism as when gonorrhœa was the exciting factor. Many patients have told me that they have experienced almost instantaneous relief from pain, and this has been corroborated by the sound sleep that has followed in patients which had been unable to secure any rest on account of the severity of this symptom. The sensitiveness to pressure was as markedly relieved, and by the second or third day the testicle could be manipulated without causing discomfort. The swelling was rapidly reduced, and by the end of the second or third day had become diminished one-half, the œdema rapidly disappearing and the cellular infiltration yielding more slowly, but in nearly every case the testicle had resumed its normal size in five or six days. In three cases it was necessary to use oleate of mercury to hasten absorption of the exudate that persisted as hard nodular masses in the globus major.

The epididymitis was severe in twelve cases; in five it was subacute; and the testicle proper was involved in three.

The time necessary to effect a cure, and by this is meant not only the relief of the symptoms but the return to such a condition as to enable the patient to resume his vocation without pain or discomfort, is shown to be as follows: One aborted, four cured in three days, four in four days, three in five days, five in six days, and three in seven days. Of the total number, eleven cases were treated in the hospital and nine were furnished office relief, the latter continuing to perform their duties. The hospital patients were not confined to bed but allowed to walk around with the inflamed organ supported by a suspensory.

A tabulated statement showing the duration of the disease as affecting the length of treatment would be of little value, because the time necessary to effect a cure depends principally upon the severity of the attack. My notes, however, show that the most marked effects of the treatment are obtained when the disease is seen soon after its commencement.

The other remedial measures used were laxatives and supporting the testicle with a Horand-Langlebert suspensory bandage. The latter exercises a mild stimulating effect and is of great service in the treatment of epididymitis; by supporting the testicle it relieves the dragging pain, and hastens the absorption of the inflammatory exudate. To test how much the relief of the symptoms was due to the suspensory bandage I treated some cases at first with the bandage alone, and, although the pain was mitigated by this support, it was necessary to use guaiacol to relieve it. With these few exceptions the bandage was not used until the pain had been relieved by the first application of guaiacol, and when it reappeared, although the suspensory had been continuously worn, the pain was again promptly relieved by painting the scrotum with the drug.

It is not my intention to decry the value of the Horand-Langlebert bandage, because it is an efficient therapeutic measure as an adjuvant in the treatment of this disease, exerting its beneficial effect especially by hastening the resorption of the inflammatory exudate; but for the prompt cure of epididymitis I wish to emphasize the fact that guaiacol is the most valuable remedy we possess.

Intra-Abdominal Hemorrhage.—Profuse intra-abdominal hemorrhage, resulting from penetrating gunshot wounds of the abdomen, is more frequently of parenchymatous and venous than of arterial origin.—NICHOLAS SENN.

THE RELATIVE IMPORTANCE OF FLIES AND WATER-SUPPLY IN SPREADING DISEASE.[1]

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THE diseases that may be borne in water under some circumstances, and by flies under others, are typhoid fever, yellow fever, certain forms of dysentery, Asiatic cholera, and perhaps malarial fever, and malarial poisoning in general.

It will be observed that there are two classes of these diseases—the intestinal and the malarial. In the former the infection is a bacillus of some sort, whose presence in any locality can always be traced to some preceding contamination by excretions from a diseased bowel. In the latter the source of infection is a plasmodium, as it is termed, which lives primarily in marshy soil or stagnant water, and whose presence in that location is independent of contamination from human sources. These distinctions are to be kept in mind constantly in attempting to trace out the manner in which these diseases spread, and in adopting measures for their prevention.

All are most emphatically camp diseases, and hence the propriety of their discussion at a meeting devoted to the subject of "camp hygiene." There is the greater need of such discussion, because the relative importance of flies and water-supply in spreading disease has been greatly misunderstood, especially in the very case of camps, where the danger is greatest.

Contrary to ideas that have existed heretofore, in camp and under similar conditions elsewhere intestinal diseases are spread almost exclusively by flies, and malarial diseases by water. The exceptions to this, which are relatively unimportant, will be noted in the course of the discussion.

In the Cuban campaign last summer it was sought to prevent the spread of diseases of the intestinal class by the use of water from the purest sources, or purified by boiling. It was a failure. Not until late in the summer was the agency of flies taken into the account in any practical way. Even now reports from Honolulu and Manila state that typhoid is still epidemic among the soldiers in those localities, showing that adequate measures of prevention have not yet been perfected. Likewise during the recent British campaign in Fashoda, which was most carefully planned, and which took place in a climate that is exceptionally dry and hygienic, there was no abatement of typhoid fever, it continuing to be the chief scourge of the army.

Nevertheless, diseases of the typhoid type can be prevented with almost absolute certainty, and malarial diseases greatly abated, in both instances by very simple measures. It is only necessary that those most concerned should think it worth while to understand the matter and act accordingly.

It is not possible to enter very much into detail in a brief summary of results such as the present. Suffice it to say that in the performance of his duties as health officer and practising physician, the writer has been able to put an end to epidemics of typhoid fever and dysentery of the exact type that prevail in the army, in such manner as to warrant the belief that the problem of their prevention has been solved competely.

For example, the outbreak of malignant dysentery mentioned in my paper at the recent meeting of the American Public Health Association was encountered when at its height, there having been forty cases and ten deaths, and the disease spreading rapidly from house to house in a single neighborhood. As soon as such measures were adopted as would make convey-

[1] Read at a meeting of the Buffalo Sanatory Club, December 14, 1898.

ance of the infection by flies impossible, there was not another new case, although there had been fresh ones every day for some time previously. In like manner the past summer a lively epidemic of typhoid fever was ended in a day by measures directed against conveyance by flies. So, too, on the malarial side of the question, there has been prevention without the aid of quinine, by measures directed against conveyance by water.

It is true that under certain circumstances the poison of intestinal diseases may find its way into water and be thus conveyed, and that the poison of malaria may be taken up and carried by mosquitoes or flies, as the case may be. Hence it is necessary to discriminate carefully in reference to the peculiarities attending these different methods of conveyance of infection.

When flies are responsible there are little neighborhood epidemics, extending in short leaps from house to house, without reference to water-supply or anything else in common. But when water is at fault the disease follows its use wherever it may go, the only limitations being the resisting-power of the individual using it, and such household measures of boiling and the like as tend to destroy disease germs. Epidemics spread by flies tend to follow the direction of prevailing warm winds, as though the fly, wandering outdoors after contact with some source of infection, had drifted with the wind; but nothing of the sort is perceptible in the case of water-borne disease. In villages and camps, where shallow, open closets are in use, giving access of flies to the chief sources of infection, the flies are the chief medium of its conveyance. In cities, where underground sewers carry such material beyond the ordinary reach of flies, whose migrations are not extensive, such diseases can become very prevalent only through infection of the source of public water-supply. Hence in villages and camps they are usually fly-borne and in cities water-borne. When a source of public water-supply has been infected in this manner, cases of the disease will occur more or less throughout the year, provided that the germ remains active at all temperatures. When the conveyance is by flies the prevalence of the disease will be confined to a particular season exclusively. Thus in cities typhoid fever prevails at all seasons; in villages it is an autumnal disease. When the weather is dry and sultry, flies have their best opportunity to carry the disease, or, in other words, under the very conditions best adapted to prevent its spread if water-borne.

With this understanding of some of the more prominent general relations of the subject, it becomes possible to enter into the study of details that are of the utmost practical importance. For example, in investigating a series of epidemics confined to a single neighborhood recurring year after year, the writer, following the lines that have been indicated, was able to secure very positive evidence, both clinical and microscopical, that burying typhoid material in the ground is no protection against flies. Such a procedure simply establishes a culture bed in which the bacilli, like plants, grow toward the surface, attracted by the warmth and other effects of the sun's rays in that location. If any prevention whatever is secured by such burial of typhoid material without disinfection, it is very transient, especially when the weather is sultry. The application of this to the care of the sinks in the army is evident. Indeed, it is the key to the situation, so far as army conditions are concerned, the danger being greatly intensified by the utter heedlessness of many of the men. Discipline as well as accurate knowledge is required, in order to make preventive measures a success in this case. Indeed, unless carefully looked after, there will be neither burial nor disinfection of such material, far too often.

Furthermore, the burial of typhoid material not only fails to prevent the immediate spread of the disease; it, on the contrary, actually perpetuates it in the locality from year to year. This was clearly shown in the series of epidemics referred to in the preceding paragraph, which came to an end at once when this mode of disposal of material was abandoned and proper disinfectants were used.

The subject of disinfection in general demands revision from the point of view of the present discussion. The material employed must be suitable. If of a volatile nature, like carbolic acid, it must be remembered that on evaporation it will leave nothing behind to protect against reinfection, and consequently must be used in large quantities and often, so that not a single particle of material containing living bacilli may escape to reinfect the entire mass. Sulphate of copper in solution, on the other hand, on evaporation is left behind, diffused through the material, thus prolonging its effect and even making it permanent, if a sufficient quantity has been employed. Earth containing sulphate of copper thus diffused becomes a good disinfectant, and may be used with confidence to cover typhoid or other infected material.

The time at which disinfection is to be performed is likewise of the utmost importance. If a case of intestinal disease is in progress, the material from the diseased bowel should not be exposed to access of flies for a single moment without disinfection. It is taking serious chances to allow even a single fly to crawl over such material, and then visit articles of food and drink. No matter how cleanly the premises or what other precautions may be taken, if instant disinfection be neglected the danger becomes impossible to compute. On the other hand, a very little care at the right time yields a result that is an absolute certainty and that even a child can understand.

Among large bodies of men there will always be some who are negligent, and even among those who are thoughtful the very beginnings of an attack of sickness may pass unnoticed. Thus there is constant danger that bacilli from the diseased bowel will be planted in the sink and there find opportunity to grow and propagate. Consequently there can be no security unless all excretions are disinfected instantly if possible. Just here the point that has been made in regard to sulphate of copper in solution as a disinfectant may prove to be the key to the situation. The writer has had large experience with its use for this purpose, and has been surprised many times at the way in which even so small a quantity as a pound or two diffused through several barrels of water checked putrefaction and all signs of bacterial growth in foul drains and the like. The fact that soil can be converted into a good disinfectant by its aid is likewise important. It is portable, and its color is such that there is no liability of mistake, and it likewise has the advantage of showing visibly exactly how far it has penetrated. It would seem to be the ideal disinfectant for army use, if its efficiency is as great as the writer has been led to suppose. In the absence of water it can also be used dry with good effect, but a larger quantity is required.

If, however, during the exigencies of a campaign no special means whatever of disinfection are at hand, it is nevertheless possible to do much. For instance, it is a good plan to follow the example of the Indians, who change the location of their camps often. Although burying infected material is at best a very uncertain precaution as against conveyance by flies, still it may lessen the chances somewhat for a period of some hours more or less, according to the quantity or character of the earth employed. Hence it may be resorted to as a temporary expedient, in default of a better, when a camp is to be abandoned very soon, for

example, or in the interim between the hours at which disinfectants are to be applied.

If so cumbersome an arrangement as the tank, fourteen feet long and two or three feet square, containing a strong solution of crude carbolic acid, to receive the excretions, as recommended by the commission appointed to investigate the spread of disease in the army, can be had and its use insisted upon, there is no doubt that a vast amount of sickness will be prevented. The idea of its use is certainly based upon a correct understanding of the dangers involved, and is something new in army sanitation. Perhaps inventive genius may evolve something even better and more readily available under all of the exigencies of warfare, now that it is known precisely what is necessary to be accomplished.

Pretty much everything that has been said thus far has had reference to the prevention of conveyance by flies, this being the greatest danger in camps. Still there may be times when the use of water that is liable to contain the bacilli of intestinal diseases cannot be avoided. It may be necessary also to use water from soil in which the plasmodium of malaria is indigenous. In either case boiling is a precaution that has the merit of absolute certainty. If it is possible to light a fire and make a little coffee or tea to drink on the spot, or to fill the canteens for subsequent use, it relieves the difficulty completely and at once.

With reference to this mode of escaping malarial disease by not touching water that has not been boiled, the writer has reason to believe that the security it affords is wellnigh absolute. It is possible that there may be some small conveyance by mosquitoes, which are known to harbor the malarial parasites. There is a likelihood also that flies that have come in contact with freshly upturned marshy soil may carry the infection to some extent. But the chances in both these regards are so small that they are nothing compared with drinking the soakage from swamps fairly reeking with the poison. The deepening of wells in marshy soil may be of some assistance, especially if they are of the artesian variety, not admitting water except at the very bottom of an iron pipe. This also avoids contamination with surface filth, and if such water could always be had there would be no need of other precaution. Under army conditions, however, it is better to cultivate the habit of boiling the water as a protection against diseases of the malarial type especially. There are many persons known to the writer who find it cheaper and pleasanter to do this than to dose themselves with quinine while undergoing slow processes of acclimatization so-called, on any change of residence, for it is a peculiarity of malarial infection that immunity against it in one locality does not always protect in another. Hence there is the greatest need of preventive measures on the part of soldiers, who are liable to be constantly changing their location.

It is evident that much was expected in a sanitary way during the recent campaign against Spain, although it was organized in such haste. The American people do not appear to be willing to tolerate the idea that any of their boys at the front should be sick at all. At any rate, if there have been suffering and death they want to know the reason why. It is a healthy symptom. But sanitation under the guns of the enemy is a hard matter, implying thorough knowledge and discipline. If anywhere this should be found, it is on the part of the American soldier who exhibited such magnificent initiative at Santiago. With the tremendous efflorescence of patriotic feeling taking the form of sanitary inquiry in the manner that it has, the Spanish-American war of 1898 may come to be known as the war that saved many thousandfold more lives than it destroyed.

THE IMPORTANCE OF EARLY DIAGNOSIS.

By JOHN C. MORFIT, M.D.,
ST. LOUIS, MO.

From both the scientific and the practical standpoint, the diagnosis of a disease or ailment ought to be the most attractive factor in the practice of medicine or surgery. In any case, the diagnosis is the foundation or base on which we build our plan of treatment and make our prognosis; it is the fulcrum on which moves the lever of judgment and logical deduction that raises our unknown quantity into the light of scientific certainty. It is often asserted that any one who can correctly diagnose will have no trouble in treating the pathological condition with which he is confronted. I have as frequently heard the statement that scarcely over fifty per cent. of cases treated are accurately diagnosed. There may have been some foundation for the latter statement in former times, but certainly to-day there is not enough accuracy—there is too much empiricism.

Nature is a wonderful doctor, and I would not underestimate her marvellous powers. She often finishes the work while we are striving to guide and influence her; but I maintain that it is both our right and our duty to be cognizant of the why and the wherefore of her action. We should know what she is doing as well as what we intend to do in a given case.

The doctor who wishes to guard his reputation as well as the very best interests of his patient, and who is imbued with the proper earnestness of purpose and love for the science of his profession, is he who most promptly and exhaustively weighs every indication of cause and effect, and applies his therapy accordingly. To-day, when specialism has advanced to the position of exactitude it now holds, when every organ opening on to the body surface can be brought under observation, when the bodily humors and excreta can be chemically and microscopically examined so quickly and thoroughly, when light can be made to penetrate through the tissues—there is little or no excuse why a reasonable if not a correct diagnosis should not be made in every instance. Through simple instruments the large bowel is becoming more familiar to us every day, for we can view it directly as far up as the splenic flexure, and the stomach is susceptible of illumination and instrumental investigation. The genito-urinary apparatus is plainly visible from the meatus to and including the bladder; it is palpable and accessible for microscopic and chemical investigation and differentiation, on both sides, up to and including the kidney itself.

The sense of touch, though, is being rather more exercised than neglected through the advent of these instruments of precision. Indeed, some instruments could scarcely be useful were they not backed up by a well-developed tactile sense on the part of the manipulator. Palpation alone is responsible for the correct diagnosis of many conditions, particularly of an abdominal or a pelvic nature. Certainly to-day we are better equipped collectively, if not individually, to make a diagnosis than ever before.

Now as a rule the physician, particularly the city practitioner, who has the advantage of every useful innovation, does not employ every available means to arrive at an early and positive diagnosis. In many of our public institutions a diagnosis is often not made for several days after the admission of the patient, and this often to his and others' serious disadvantage. I have seen tuberculous subjects with acute exacerbations put into wards for the treatment of transient acute cases, as bronchitis or grippe, and I have seen the latter develop tuberculosis, presumably because the intruder was not isolated, examined promptly, and properly classified.

Specialists too often err in confining their observations to their own limited field. Thus I saw recently a weak, nervous, emaciated woman, who was promised complete relief after she had had repaired a lacerated cervix and perineum, which no doubt ought to have been done. She was not relieved, however, until a more careful and a more general observer discovered unmistakable signs of gastric dilatation, for which she was treated with much relief. In my own practice I lately had two cases of pyosalpinx, which were cured after surgical treatment. Both had been treated by estimable practitioners, but neither of them had made a complete physical examination, and consequently was ignorant of the real trouble. One patient had been treated for a vague and indefinite "inflammation of the bowels," and the other for "rheumatism." One case of tuberculous peritonitis came to me from the country, diagnosed as either ovarian cyst or pregnancy. The latter supposed possibility subjected the girl to much mortification and embarrassment, all because the attending physician was not decisive in his deduction from the simplest and most significant symptoms.

An eminent nose, throat, and chest specialist recently showed me two cases which had been treated for frontal headache for over two years, by men prominent in their communities, who failed to recognize the true cause of the incessant cephalalgia. The specialist recognized pus in the ethmoidal sinuses and afforded complete relief by intranasal trephining. It would have been far better for the patient, and much more to the physician's credit, had they consulted the specialist earlier and availed themselves of the latter's special knowledge and skill.

Reference to these cases is merely to emphasize the point I wish to bring out, viz., the duty to ourselves and to our patients of utilizing every available means to arrive at an early and positive decision as to what we are treating. This available means may not and often does not lie entirely within ourselves. It is impossible that any one man could be so skilled in laboratory technique, certain instrumental manipulations, and the activities of general practice, as one who devotes his time to one or the other of these vocations. In other words, we should not make it a rule to diagnose our cases unaided. We must recognize more fully the superior ability, in their own special lines, of the pathologist, bacteriologist, chemist, and often the specialists in other lines than our own, and let their opinion as far as justifiable influence us in reaching conclusions. We owe it to these laboratory men to reward their labors by a practical use of their peculiar talents, and they should surely be more substantially encouraged than they have been in the past.

We all learned in our college and hospital life the principles of chemistry, microscopic investigation, and the handling of simple diagnostic instruments, as well as the amateurish examination of all special fields, as the eye, ear, etc., and were reasonably well up theoretically and practically on general and special work, as far as the teaching of that day could carry us. But when we find ourselves subsequently unable to keep up with the rapid advancement along all lines and the revolutions that take place as the result of new discoveries, we are compelled to confine ourselves and endeavor to become thorough and expert in the field of our selection, while keeping a watch on the general progress, but not the details, of other specialties.

Every practitioner of surgery should have an intimate knowledge of pathology and bacteriology, in order to be a well-rounded scientist, but in practice it is better and safer to make it a rule to seek the aid of the expert in those branches. Let us be specialists if we must—and I believe we surely must—for fame and for revenue, but let us be amateurs in the laboratory sciences for pleasure and recreation.

Many men look on consultation as a reflection on their ability, but happily this feeling is fast passing away, and conferences are becoming more frequent. Keep well up to the front in your own specialty, and use any spare time you have in keeping as well up as possible in other lines; but acknowledge the right of specialists in other lines to your respect and indorsement.

In occasional cases we are at a loss to know just what is the matter, in spite of the fact that we have conscientiously made every possible effort to find out. But we have done our duty, and we have elicited enough facts to indicate that the trouble is one of a couple or a trio of affections. This pardonable uncertainty often determines us on a line of treatment which would be indicated in any one of the possible conditions present, so that, as far as the patient is concerned, the right thing is being done, regardless of the uncertainty of the exact condition of affairs.

Statistics show that the mortality of certain diseases increases directly as the time of application of treatment is deferred. For an instance, the mortality of appendicitis is excessively greater when the operation is done on the third or fifth day of the attack, than on the first or second day. The same may be said of the antitoxin treatment of diphtheria.

Therefore I conclude it should be our aim to arrive at a correct diagnosis and apply our treatment accordingly, at the earliest possible moment consistent with the means at our command.

Clinical Department.

TRAUMATIC APPENDICITIS.

By M. B. SULLIVAN, M.D.,
DOVER, N. H.

Having read the recent article by Dr. Small and the criticism by Dr. Brown, I wish to give a brief account of a recent case in my practice. On Saturday, September 17th, I was called, about 7:30 A.M., to see Annie P——, aged about fifteen. She was in bed and writhing with excruciating pain in the right iliac region, the point of most intense pain and tenderness being midway between the iliac spine and the umbilicus. A hypodermic of morphine and atropine (gr. $\frac{1}{4}$ to $\frac{1}{150}$) gave the usual relief in about half an hour. This had to be repeated three times a day for four days, with continuous use of salines and ice bag. From this time on to September 25th the symptoms gradually subsided, and my attendance ceased on that date.

Miss P—— is a strong, well-nourished girl weighing one hundred and thirty-five pounds. She had never complained of abdominal pain or any other sickness, until Sunday, September 11th. While riding on an electric car she signalled the conductor to stop it; before she had stepped off and while she was standing on the "running board," the car was suddenly started and she was thrown forward, striking the corner of the seat back in front of her violently against the abdomen, in the right iliac region, causing severe pain. She walked home and was treated by domestic remedies, and went to school Monday, remaining in school until Thursday. At that time she suffered more acute pain, and was treated by the parents until I was called on Saturday morning. The pulse varied from 80 to 110; temperature, from normal to 102° F. Urine normal. The patient was seen by Drs. Dyer and Blanchard, of this city, in consultation, and our

unanimous opinion leaned towards traumatic appendicitis with prognosis fair. She is now in bed, using salines, and is free from pain. I believe there are many cases of pure and simple traumatic appendicitis.

September 28, 1898.

DIPHTHERIA OF UNUSUAL COURSE.

By J. D. AUSTIN, M.D.,

CORONA, S. C.

On Tuesday, October 18th, Mrs. A—— and my five children, varying in age from nine months to six and one-half years of age, went to Cross Hill, an adjoining town, for a visit of a week. They went by railroad, and I heard nothing from them until the following Monday, when I received a message over the telephone from the mother, asking me to meet them at the depot that morning, as two of the children were sick and she was anxious to get them home. After getting them safely home and to bed, the following history was obtained:

Edith, aged five and one-half years, was taken suddenly, Saturday afternoon, with a severe sore throat, attended with enlargement of glands at the angle of the lower jaw, and tenderness, and also with a deposit on tonsils. There was, however, not much fever. The next morning (Sunday) she called in a local physician, living across the street from where she was stopping at that time, who, being an acquaintance and friend of mine, kindly took a great interest in them and gave her some repeated doses of calomel and used locally some antiseptic in the form of spray.

He called again during the afternoon, at which time Willie, aged three years and nine months, was also quite sick, having been taken suddenly with a chill, followed by high fever, but with no particular throat trouble. He also gave him some powders of calomel and antikamnia, and, though he passed a restless night, the next morning both were found with a normal temperature and feeling much brighter, so he advised Mrs. A—— that they might be brought home.

When they arrived at home the exudation was still on Edith's tonsils; she was weak and vomited occasionally, her temperature being and remaining normal.

With the use of an antiseptic gargle the exudation disappeared during the course of twenty-four or thirty-six hours, and she, to my great relief, was convalescent. Willie had a slight elevation of temperature, but was convalescent in about the same length of time.

The latter part of the week they both seemed quite well, and I gave their attacks little more consideration.

On the following Monday (24th), however, Edith was again taken in the same manner and about the same severity of symptoms as the previous one, and with the same treatment ran very much the same course, being up and about the house in two or three days.

Wednesday, Louise, aged two years and eight months, was taken in the same manner—sore throat, exudation on tonsils, etc., fever being very slight—only about one degree for a few hours. She was given the same treatment, and hardly stopped her play at all.

Friday night (28th), Edith, who had for a day or two been out in the yard at play and seemingly quite well, was taken about midnight with croup. Though she has always been somewhat subject to it, occurring under the surrounding circumstances I became at once quite apprehensive. I gave her at once one-half drachm compound syrup of squills, and she in a short while vomited and rested very well the remainder of the night, though occasionally she would have a harsh croupy cough and was very hoarse.

During the forenoon (Saturday) the compound syrup of squills was continued in smaller doses (ten to twelve drops), and by noon her voice was more normal and there was very little cough.

During the afternoon she slept a while, and when she waked her voice was so husky she could not be understood unless you were within a few feet of her. Still she had no fever and no cough until late in the afternoon, when she began to have an occasional "brassy" cough, which as night came on grew worse.

Upon examination of her throat, there, like *Banquo's* ghost, were those exudations on the tonsils again. I now decided there was but little room for further doubt that the trouble was diphtheritic. The enemy, as it were, thinking he was entrenched beyond reach, now threw off his disguise (as during the night a patch of exudation appeared on the wall of the pharynx), thinking he had my little patient in his terrible clutches.

I decided at once to use antitoxin, but as I had not before had occasion to use it—my practice being remarkably free from diphtheria since the introduction of the serum-therapy—I had none; and as her constitutional symptoms were not severe, she having yet no fever and a pulse of 90 per minute, I decided to wait until morning. She passed a very bad night, suffering much from cough and dyspnœa. By the use of steam inhalations her sufferings were somewhat mitigated.

I will here mention the apparatus used for generating and conducting the steam to the tent, which costs nothing, is effectual, and very convenient, especially during winter, when fire is kept anyway.

It is simply to place an ordinary kettle of water on the fire and put the small end of a guano horn on the spout of it, the funnel-shaped end being placed in the tent or simply propped up in front of the fireplace when it is desired to saturate the atmosphere of the room with it. Lime was kept in the kettle, and this steam was kept up continually in the room day and night, it not often being necessary to place her in a small tent. As soon as the steam was allowed to cease her cough and dyspnœa would be aggravated.

On the 30th (Sunday) I had Dr. G. P. Neel, of Greenwood, come over and bring his syringe and some serum, he having had a good deal of diphtheria to contend with. He agreed with me that there was no doubt as to the disease being diphtheria, though we had no means of verifying the diagnosis by the use of the microscope.

We accordingly gave her at 11 A.M. 2,000 antitoxin units.

We also caused her to gargle her throat with hydrogen peroxide, twenty-five to fifty per cent., every two or three hours. At 3:30 we tried calomel fumigation, but it seemed to increase, for the time being at least, the difficulty in breathing, and for an hour or two she was quite restless.

At 5 P.M., temperature, 101° F.; pulse, 120.

At 8:30 P.M., temperature, 99° F.; pulse, 115.

At 9 P.M., she coughed very little and seemed to be painless. She breathed more freely.

On the 31st, at 1 A.M., the patient was resting well; pulse, 100.

At 2:30 A.M., temperature, 99° F.; pulse, 100.

At 8 A.M., temperature, 98° F.; pulse, 104.

I had been giving milk as often as every three or four hours when she would take it, and now began giving a teaspoonful of whiskey every three hours.

At 9 A.M. she began to suffer more difficult breathing—more so than at any time since her illness. We repeated calomel fumigation, but had to desist by the time five grains were used, though it was done very slowly and carefully.

Despite these untoward symptoms the membrane had almost totally disappeared from the parts in sight.

At 2 P.M. we gave her again 2,000 antitoxin units, and in a very few hours she began to improve in every

respect. Her temperature through the day (Monday, 31st) ran 99° F., and the pulse ranged about 100, which continued through Monday night.

On Tuesday her general condition was much improved. The pulse was less than 100, gradually lessening in rapidity, until in the evening it was about normal.

On Tuesday night her voice, which had all the while been very "hoarse and husky," began to improve, and on Wednesday was almost natural. About this time some difficulty in swallowing was noticed, which was not present during the first part of the attack.

On Monday, as Louise's throat still looked suspicious and she was not very bright, she was given 500 units.

The other children also received an immunizing dose of antitoxin.

No further trouble was experienced, and now (Nov. 8th) all are well.

These cases are reported for the reason that the symptoms were so long obscure and then assumed such a grave form. There had been some such cases at Cross Hill before and during Mrs. A——'s visit, but had not been considered diphtheritic. I know of no chance for them to have contracted the disease except there or on the cars. I also wish to add this to the already large list of brilliant results from the use of antitoxin.

REMOVAL OF THE ENTIRE BOWEL BELOW THE SPLENIC FLEXURE OF THE COLON.

By JOHN S. PYLE, M.D., LL.B.,
TOLEDO, OHIO.

About July 1, 1898, I was called to see a woman suffering from obstinate constipation and excruciating pain in the rectum. Examination revealed a carcinomatous growth surrounding the lower third of the rectum and involving the proximate portions of the vagina. The orifice of the bowel was deeply fissured and the lumen almost filled with hard excrescences having a polypoid appearance. The patient's condition was indeed pitiable, and the only prospect was an early occlusion with the attendant results. The growth was already very large, but there were no

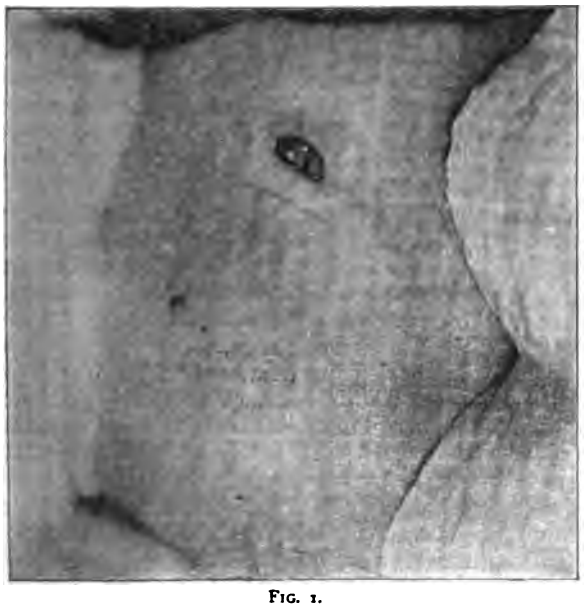

Fig. 1.

cancerous cachexia and, as far as could be determined, no involvement of the lymphatics. Two courses were open, palliative and operative. The former promised nothing; the latter, hope and relief from the intense pain. These considerations decided the patient in favor of the operative plan of treatment.

On July 28th the patient was admitted to the Aultman Hospital, at Canton, Ohio, suffering from obstruction. I opened the abdomen over and in line with the

Fig. 2.

descending colon. The colon was drawn through the wound and divided between ligatures below the splenic flexure; the divided ends were cleansed and the lower segment was closed with additional catgut sutures. The mesocolon and mesorectum were now divided between ligatures, and the released lower segment was dropped into the pelvis. The upper end of the divided colon was drawn through the wound and seared below the ligature encircling the gut. The peritoneum at this point was stitched to the peritoneum of the abdominal wound. The peritoneum and the abdominal walls on either side of the incarcerated gut were next closed, the mucous membrane of the protruding colon was seized with T-forceps, and, the ligature used to close the gut in the first stage of the operation being then divided, the mucous membrane was drawn out considerably, forming an elastic tube, which was surrounded by absorbent gauze packed into the wound to prevent any possible leakage from the open intestine into the deep wound. The border of the mucous membrane was stretched over the gauze and sutured to the integument, two points being left open through which to extract the gauze packing.

Fig. 1 shows the result after recovery. From the illustration it will be seen that the abdominal muscles afford a pretty complete sphincter. Four weeks after the patient's recovery from the above piece of work, I removed the entire lower end of the gut, consisting of the descending colon, sigmoid flexure, and the rectum. The steps were: a circular cut bounded by the tuber ischii, coccyx, and a line running transversely through the middle of the vulva; secondly, the growth was dissected out, following closely the inside of the pelvis until above a point of probable infection; thirdly, the gut was then seized and drawn down, while the finger was made to loosen the attachments. In this way it was possible completely to enucleate the entire lower segment without entering the peritoneal cavity, the only requisite being a ligature to close the invaginated peritoneum where the divided end of the intestine left the pelvic cavity.

Fig. 2 shows the appearance of the parts four weeks after the last operation. More than half of the vulva and vagina was cut away. The patient fully recovered and was relieved of her intense suffering. The

operation was wholly original, as I was not aware that a similar one had been performed until September 11th, some three weeks after my last operation, when I received a copy of *Modern Medical Science*, containing an abstract from *The Lancet*, describing a similar procedure performed by Dr. Treves at the London Hospital.

2123 Ashland Avenue, September 23, 1889.

HEMORRHAGE AS A SYMPTOM OF URETHRAL STRICTURE.

By L. E. NORFLEET, M.D.,
TARBORO, N. C.

Never having seen hemorrhage noted as one of the important symptoms of urethral stricture, and having during the last year treated three cases in which it was the sole cause of the patients' seeking my aid, I desire to publish the cases, as they may be interesting.

Two of the cases I will dismiss with a short description. Both patients gave a history of several attacks of gonorrhœa, from which they recovered after using injections that "hurt." I will say here that all the three were negroes. Both complained of bleeding just after urinating, but no other sign of urethral trouble whatever. Examination showed no gleet, but an annular stricture, just about one and one-half inches from the meatus and probably not more than one-fourth of an inch thick, but contracted from a normal 30 to a 15 French sound. Cutting with an Otis urethrotome, followed by sounding, completely relieved these patients in a very short time. But now comes my third and most interesting case: A negro Baptist preacher consulted me during last January for a hemorrhage, which he said had bothered him once before, and had been relieved by some medicine of a neighboring doctor, but after six months it had returned, and now he was satisfied that he bled a pint a day. No other trouble was complained of, and when I told him of my suspicions of a stricture, he denied it and said he passed a large stream, had no gleet, no frequency of urination—in fact, nothing but the hemorrhage. He admitted having had twelve or fifteen attacks of "clap," however, and these as usual were treated by an injection that was very painful to use. I insisted on an examination and refused to give him the desired prescription without so doing, and finally he acquiesced. As he took down his trousers I noticed his drawers were wet to the knee with blood; and this, too, when he told me that he had put on clean ones two or three hours before, and he also repeated that this bleeding was the usual amount he had lost daily for some two months. I located a stricture, beginning two inches from the meatus, through which I finally passed a Banks' dilating filiform, and at intervals of an inch or so I found others, up to five in all. Profuse hemorrhage followed the examination, weakening the patient, who was a powerful negro of very robust build, very markedly. Having convinced him of the existence of a stricture I had no trouble in inducing him to submit to semi-weekly dilatation with a steel sound. I carried this up to 20 F., and all bleeding ceased, but I then went on to 29 F., and now he assures me that no bleeding has occurred in eight months. In introducing the sound in this urethra I get the sensation of four or five tight rubber bands, rolling under the instrument in a most peculiar manner. All of these patients gave the same history of recurring clap, treated by strong irritant injections—to burn it out, as they say—which is the common treatment among our negroes. And to this is due, I think, the common idea among them that all clap "bleeds," and also to this as a cause I lay these anterior strictures, seemingly made up of a chronic granulating surface, with such an increase of local blood supply, due to this inflammation, that almost any injury, even passing water, will set up a hemorrhage.

All of the patients had been treated by other physicians with drugs and without examinations, with but temporary benefit, while treatment of the stricture with sounds, etc., gave the promptest results that could be desired.

Progress of Medical Science.

Diphtheria Bacilli in the Urine.—Dr. Fred. Smith (*Lancet*, November 19, 1898) found diphtheria bacilli in the urine of two guinea-pigs, inoculated, one a few days and the other five hours before the examination. A typical growth of Klebs-Loeffler bacilli was cultivated. These results it is thought suggest that in hemorrhagic diphtheria at least bacilli may be found in human urine, and that in order to prove the presence of the bacillus in the blood it may be looked for in the urine.

The Jurisprudence of Drunkenness.—The legal view, expressed by Coke, that the drunkard who is voluntarily insane (*voluntarius dæmon*) enhances his criminality (*omne crimen ebrietas et incendit et detergit*), is certainly not in accord with modern ideas. Eminent legal opinions and decisions of recent date are quoted by Dr. Sutherland, in which drunkenness was held in some measure to reduce the responsibility—for example, from murder to homicide. Whether this is based on the assumption that the drunkenness was involuntary does not appear. The civil law holds the drunkard to be irresponsible for his own acts—such as testamentary dispositions and contracts made while in a state of intoxication. The inebriates act of the present year provides, first, for the punishment of the criminal habitual drunkard by imprisonment; and secondly, for treatment by detention in an inebriate reformatory. These legal methods of dealing with drunkards are so contradictory that they must necessarily be based on uncertain or erroneous views, which demand consideration and if possible amendment. Intoxication, as even Coke admits, is an insane state, and the consequent irresponsibility which is recognized in civil law, if extended to the criminal, would leave only the voluntariness of the drinking as a basis for punishment. The moment at which drinking or the habit of drinking becomes involuntary in many cases is impossible to determine. The inebriates act assumes that drunkards can only be punished satisfactorily by admitting a partial responsibility and a partial involuntariness demanding treatment. It would appear that the law now admits that the element of disease in drunkenness—that is, of defective self-control—ought to be taken into account. An assault by a sober man, for example, which might properly be punished by a week's imprisonment, when committed by a drunkard might demand treatment in an institution for three years. If this becomes generally known, it is probable that treatment will become more deterrent to those who are still susceptible to it than punishment has hitherto been. Instead, therefore, of insisting on the criminality of drunkenness, we should insist on the view that it is an abnormal condition requiring, in every case coming before the courts, very full investigation in regard to the extent to which the diseased habit has extended.—*British Medical Journal.*

Epididymitis.—Until inflammation begins to subside apply a bandage of some soft, elastic material lined with zinc-rubber plaster.—Dr. Gerson.

MEDICAL RECORD:

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THE SANITATION OF PUBLIC PLACES OF AMUSEMENT AND CHURCHES.

THE hygienic arrangements of theatres and other places of amusement are all the world over disgracefully neglected. The importance of the thorough sanitation of schools and similar institutions is now fully realized, and no expense or trouble is grudged in carefully looking after the bodily as well as the mental welfare of the young. Not only do parents insist that the schools they select for their sons and daughters should be in a good state of sanitary soundness, but those in authority evince a praiseworthy disposition to see that the atmosphere of the educational establishments is pure and wholesome. It is therefore decidedly curious that the greater portion of the adult members of the community exhibit a complete indifference toward matters hygienic in connection with theatres and music halls. One reason for their careless disregard of the laws of health is without doubt owing to the fact that a stay in a place of amusement is necessarily brief, and that, so long as attention is paid to pleasing the eye and ear, it appears to be a question of small moment whether the air is healthy or foul. Nevertheless there are signs that the general public are becoming more alive to the dangers lurking in theatres and establishments of a like nature, and it is probable that in the near future the construction of buildings devoted to pleasure will be conducted with a due regard to the health of their patrons. Before touching upon the defects in the structural arrangements of the body of theatres a few remarks upon the unsanitary condition of the green-rooms, toilet-rooms, and lavatories provided for the use of the employees may not be out of place. At the meeting of the American Public Health Association held at Ottawa on September 27th last, an excellent paper dealing with the whole subject of theatre sanitation was contributed by Mr. William Paul Gerhard, C.E., who spoke as follows:

"Arrangements for the comfort and health of theatre-goers, of actors and stage employees, are seldom considered, except in the rare instances of a few recent metropolitan theatres. Leaving these out of consideration, it is no exaggeration to state that most theatres are ill ventilated and badly drained; that the arrangement of their toilet-rooms is unsanitary and ill planned; that the plumbing is defective, the water-closet accommodation inadequate, the dressing-rooms are overcrowded and without any provision for fresh air, and that the general state of cleanliness of the building is very far from being satisfactory. . . . The arrangement of the stage dressing-rooms is at times frightful beyond description. Often they are located below the level of the stage in narrow, dark, underground passages, without outside window or any other means of ventilation. Their size is reduced to a minimum, and they are generally overcrowded. In many instances the theatre architect has done his best to provide dressing-rooms for a small company, and the place is subsequently changed to one devoted to comic opera or spectacular entertainment requiring a large number of performers. To acccommodate, the dressing-rooms are partitioned off, or dark, underground places are selected for additional rooms. Then, again, we find the water-closet accommodations, both for the public and for the actors and theatre employees, insufficient and always more or less antiquated, worn-out, and defective, or with an insufficient water-supply and flush. In many places their location and state of untidiness suggest the greatest disregard for decency and moral feeling."

This is a severe indictment of the manner in which matters relating to the health of the staff of theatres are controlled, but the language is by no means too forcible and does not err on the side of exaggeration. Although naturally the comfort of playgoers is more carefully regarded than that of those whose living is gained by contributing to their amusement, yet the ventilation and general provision made to insure an efficient state of sanitation leave much to be desired. For the most part, theatres, concert halls, and places of the same class are but "whited sepulchres," externally and internally gorgeous and often artistic, but woefully lacking in almost every other respect. Many of them have but few windows and no means of renewing the air when empty. Their location is often in a high degree prejudicial to health. In large towns like New York, London, Chicago, where space is valuable, such establishments are not infrequently pushed in between immense buildings, with scarcely any frontage. The sewerage is bad, and indeed Mr. Gerhard says that he knows of at least one theatre in Greater New York where, each time the curtain rises, a strong whiff of sewer air greets the audience. The fact, then, that the system of the sanitary arrangements of most places of amusement is altogether wrong may be taken as proven, and the question remains, In what way can a thorough change for the better be brought about? To touch even briefly upon the many points of sanitary reform which can and should be effected in the sense-stimulating and mind-relaxing establishments of the people, is a subject quite too intricate and arduous. However, as to ventilation, the opinion of experts would seem to be that the mechanical method by propulsion is the only one whereby a theatre can be properly aired, and that there should be an allowance of about eighteen hundred cubic feet of pure atmosphere per hour for each individual. A person does not care —be the entertainment provided for his delectation as excellent as possible—to run the risk of being poisoned

by foul air. If the public will make a determined stand and refuse to sit in an unhealthy building, an alteration in the existing condition of affairs will be quickly effected. So long as playgoers are indifferent the managers, whose sole object would appear to be to make money, will allow matters to remain *in statu quo*. Theatre proprietors are unfortunately not the only sinners as regards the health of their congregations. Churches of all denominations are in many instances overcrowded and insufficiently ventilated. These remarks especially apply to the Roman Catholic houses of worship. These are in the majority of cases ill lighted from without and either stuffy or draughty. Masses in many of them are held at frequent intervals, at which all sorts and conditions of people are present. This is, of course, as it should be; but, after all, the worshippers have a right to expect that a certain amount of consideration should be given to their bodily well-being. At a church, as at a theatre, it is impossible to provide a sufficient allowance of pure air by means of windows or other openings. Consequently the only effective alternative is the mechanical process of ventilation already referred to.

The London *Times*, in an article written in January, 1896, refers to the subject of overcrowding in churches thus: "We regard this as a highly objectionable practice in two respects—first, on account of the danger of blocking the exits in case of panic, and, second, because of the injury to health caused by cramming a building to its utmost capacity. Churches are never too well ventilated, and there should be a definite limit imposed upon the members of the congregation." Both theatres and churches are a long way from being hygienically perfect, and it rests with the general public that the necessary reforms should be introduced.

THE SCHOOL OF TROPICAL MEDICINE IN GREAT BRITAIN.

It is unfortunate that the success of a scheme so worthy of support as the founding of a school for teaching tropical medicine in England should have been prejudiced at its very commencement by an acrimonious controversy between those medical men interested in the furtherance of the project and those opposed to it. The objections urged against the scheme suggested—that a seaman's hospital at the Albert Docks, on the Thames in the East End, should be set aside for the teaching of tropical medicine, and that a new school should be equipped and maintained there—are many. It is not, however, necessary to enter into the subject of these objections, but it may be said that *The Lancet* thinks that Netley, the army hospital near Portsmouth, is the most suitable location, on account of its fine bacteriological laboratory and the number of patients always within its walls from tropical countries in all parts of the world, and it is also of the opinion that the expense of building, equipping, and keeping up a new school at the Albert Docks is an altogether uncalled-for outlay. But the most unpleasant feature of the case is the heated discussion aroused by the alleged discourteous treatment of the honorary staff of the Dreadnought Hospital by the committee of the Seamen's Hospital Society. An extended correspondence bearing on the matter has been published in *The Lancet*, and from a perusal of the various letters it would seem that the committee has treated the medical and surgical staff of the Dreadnought with but slight consideration. *The Lancet* of December 10th, summing up the whole question in a leading article, remarks: "It is much to be regretted that the Royal College of Physicians of London was not approached in the first instance and asked to advise as to the foundation of the school. Looking to the manner in which the scheme has been introduced, we cannot but feel that if every portion of it is managed in the same way as the attempted formation of the teaching staff has been, the managing committee will at once lose the confidence of both the medical profession and the public." We venture to express the hope that all difficulties will be smoothed over, and that no petty jealousies will be permitted to stand in the way of the foundation in Great Britain of a school of tropical medicine on the best possible basis.

BRONCHOTOMY.

The accidental entrance of a foreign body into one of the bronchi by inhalation is an occurrence common enough to make any advance in the treatment of the condition worth noting. Methods, until recently employed, were such as inversion of the patient and the administration of drugs to cause coughing or vomiting, but it is only within the last few years that attempts have been made to remove the offending body through an external incision. When a body cannot be reached with some kind of a forceps through a deep tracheotomy wound, or is too firmly fixed to be removed with safety by such means, we are compelled to seek other avenues of attack. If the foreign body is left in the bronchus, it is practically certain to cause suppuration and then a suppurative pneumonia and death, so we are justified in taking very considerable risks in order to remove it. The route most often selected is through the back, and it is usual to resect one or more ribs. The shape of the incision has been variable, and is not of much consequence; and most operators have not encountered any great difficulty in reaching the posterior mediastinum, after which point in the operation cases apparently vary very much. Very recently Curtis (*Annals of Surgery*, November, 1898) has reported a very interesting case. The object inhaled was the seed pod of some plant which had been transfixed with a pin, and the patient was a boy of twelve.

Efforts were made to reach the body through a deep tracheotomy wound, and it was grasped in the forceps repeatedly, but could not be removed. On the following day the operation through the back was attempted, but had to be discontinued on account of impending collapse, and the wound was temporarily packed. Next day a second attempt was made, and the body could be felt through lung tissue after the pleura had been opened between two sutures. It could not be reached with forceps through an opening in the bron-

chus, and the lung was therefore incised with the thermo-cautery at the point where the body was felt; but the latter could not be found, possibly on account of its partially macerated condition.

The patient unfortunately succumbed to the septic pneumonia which soon developed, and we therefore cannot call the treatment successful. However, the case has encouraging features. We know that we can reach the bronchi from behind with safety, as it has been done a number of times, and that therefore the accessible area in the respiratory apparatus is enormously enlarged. That the element of time is of very great importance is another lesson of such an experience. After a suppurative inflammation is once started around a foreign body in a bronchus, there is great danger that the process will cause a fatal pneumonia, even if the foreign body is removed and the inflammation stopped at the locality where it began.

Twenty-four hours ought to be the limit of time allowed for all ordinary methods of getting rid of the intruding object. These methods include low tracheotomy. At the end of this period we ought to be prepared to undertake the more extensive operation. It should be possible in almost all cases to come to a pretty definite conclusion as to the location of the body before we operate, and during operation it will probably often be possible to feel it in the bronchus. The use of the thermo-cautery is the safest procedure in case it is necessary to invade lung tissue, but if a large vessel should be opened, the bleeding might be troublesome in such a deep cavity. This operation of bronchotomy undoubtedly has a useful future, but it is a good illustration of what very highly specialized knowledge modern surgery demands, and of how much more exact and specialized this knowledge must be, as the most inaccessible regions in the body become accessible to the surgeon's knife and finger. Almost any one might find himself the victim of an accident such as we have been considering, and there would be only one way of sure relief, and the danger of that would be inversely proportional to the skill and experience of the operator.

THE PASSING OF PSYCHIATRY.

THE report of the director of the Pathological Institute of the New York State board of the insane, recently appearing in the report of the State commissioners of lunacy for 1897, appears to differ from all commonplace reports of similar scientific laboratories at home or abroad, much as the White Queen's memory differed from that of the immortal Alice. "Any one," said that sovereign chess lady, "can remember backward; it is only really useful to remember what is going to happen." It is with a very genuine pity that the writer reviews, at the length of some one hundred and fifty pages, the limitations of his contemporaries who are studying insanity with such paltry material as the insane; and it is with a heartfelt outburst of enthusiasm, couched in conciliatory and explanatory language, that he explains to them that the dawn of a new era is at hand, and that the Pathological Institute is its bright particular star, and that the work that will be done in the future by this organization will prove to them how futile, how on a par with the chains of the middle ages, is the well-meant but utterly inadequate work of the alienist of to-day.

The one very evident piece of work of this young and well-equipped laboratory is the coining and appropriating of the word "psycho-pathology." "Psycho-pathology," writes the director, "will, we believe, ultimately replace the would-be science of psychiatry," for "unfortunately psychiatry is a science in name only. It endeavors to be scientific, but fails in the attempt. Psychiatry is the most vague and incompetent of all departments of medicine."

And what is this new prancing claimant, "psycho-pathology"? How much more substance there would seem to be in an old thing, if one can only give it a new name and by diligent use of obfuscating praise, at the expense of the State, delude a poor harrowed public into the belief that now finally we have something which is no *ignis fatuus*, but a tangible, operable force. And this is psycho-pathology! a revivified mesmerism, a reincarnation of animal magnetism, in its modern garb and brought thoroughly up to date with fulsome praise of its marvellous powers in the hands of one of the Institute's illustrious "disciples." This is the great thing that is to replace psychiatry. Frankly speaking, it impresses us that this portion of the gifted director's report presents a hopeless confusion of ideas. We learn that psychiatry is no science, that clinical methods of investigation are of no service in the study of insanity, and that the best way to study the insane is to have nothing whatever to do with them. The only thing that is necessary is to have a bountiful supply of sphygmographs, cardiographs, pneumographs, chronographs, eigographs, etc., which, when combined with a large amount of grapho-maudlin twaddle, can construct a new pathway into the hidden mysteries of the mind. What is wanted by the taxpayer is not silly flattery of a coworker, comparing his immature conclusions and specious borrowing of others' plumes with the masterly conception of the neuron and Flechsig's magnificent work, but some results. Not what "we" are going to do, but what have you done? True science is ever modest of what it has achieved; bogus science is ever praising what it is going to accomplish. In the succeeding portions of this report it would appear that ordinary earth was being trod upon, and wholesome truths are well and forcibly put, but are they in any sense new? Does not the thinking world know that knowledge is many-sided, and that it is necessary to attack the intricate problem of insanity from all avenues of human research? This part of the report is ably and sensibly presented, but it involves already established truths only.

The really unique feature of the report is this marvellous psycho-pathology, which promises such a brilliant career to the younger workers in the field of insanity; and the older, less brilliant men, whom fortune has not permitted to be the discoverer of new truths—how happy they must be! for does not the rainbow of a new idea illumine the Pathological Insti-

tute—the bright, many-hued vision of "psycho-pathology" lead them away from dull paths of clinical research, from all contact with the tiresome vagaries of the State insane, along happy paths, which must inevitably bring them to a pot of gold and to glory?

THE PLAGUE IN CALCUTTA.

An article appeared a short time ago in *Indian Engineering*, severely criticising the measures taken by the Indian government in Calcutta to prevent the spread of the plague. According to this article these preventive steps were both unnecessary and harmful. The writer of the remarks referred to thus expresses himself: "One of the questions that is now and has for some time past been exercising the minds of people in India is that of the plague. After devastating Bombay, Poona, Karachi, and other places, it was declared last April to have made its appearance in Calcutta, and the result of this declaration was disastrous, not in the number of seizures and deaths, but in a wholesale stampede, which nearly paralyzed all business and from which Calcutta has not yet quite recovered. With how much wisdom and justice Calcutta was declared a plague-stricken city is well shown in the very able 'Analysis of Plague Cases in Calcutta,' prepared by one of the municipal commissioners of Calcutta. The analysis extends to the 13th of August last, and shows that from the outset there were altogether two hundred and twenty-four cases of a disease which certain doctors regarded as plague cases. Even if the full number of cases had been undoubted cases of plague, the proportion to the population is infinitesimal; but Babu Nalin Bihari Sircar has shown that even of these two hundred and twenty-four cases, thirteen cases were demonstrated to have not been cases of plague at all, and one case was entered twice in the statements—thus leaving two hundred and ten cases in all from the middle of April to the middle of August, a period of four months, with one hundred and seventy-four deaths in a population of close on a million. . . . Many of the old and experienced medical practitioners in Calcutta assert that a disease closely resembling the plague in its symptoms of glandular swelling with fever has been in Calcutta for years past—a malignant variety of fever, to which all damp, low-lying, deltaic tracts are subject. Very few of the two hundred and ten cases were subjected to bacteriological examination, whatever the real value of such bacteriological examination; and we think, knowing the undoubtedly evil effects in cases of serious illness of every kind of fear, shock, depression of spirits, absence of accustomed comforts and kindly 'sympathy and service of friends and relatives, that a proportion of the one hundred and seventy deaths may safely be put down to the credit of the damp, ill-managed, comfortless hovels dignified by the name of plague hospital in Manicktoda." The article then makes a bitter attack upon the "experts" from all quarters of the civilized world, and upon the highly paid nurses gathered together to attend on the sick. It charges the "experts" with jubilating and "liquoring up" with indecent hardihood. There can be no doubt, however, that this wordy attack was dictated by personal animus, and its very vehemence defeats to a certain extent its object. Because a man is an "expert" there is no reason that he should not enjoy a good dinner and a glass of wine as well as an ordinary mortal.

News of the Week.

Bacteriological Study in Australia.—The several governments in Australia have steadfastly refused to license any bacteriological institutes in their respective countries and have taken measures to impede the entrance of any pathogenic germs. A bacteriologist who recently returned from India with a number of tubes of the plague bacillus was apprehended, and his cultures were unceremoniously cremated, and the authorities of New South Wales have forbidden the importation of the specific microbes of any infectious diseases, whether of those indigenous or naturalized in the country or of foreigners like the plague.

The Influenza, which was recently proclaimed by some of our health commissioners to be epidemic in New York, and to be contagious and non-contagious (according to the view of the individual commissioner), has subsided as rapidly as it arose. Whether the disease was really influenza or simply a cold induced by the effluvia arising from the neglected streets could be decided only by a bacteriological examination, and we have not heard of any of the commissioners making such. In the mean while the cable informs us that M. Roux, of the Pasteur Institute in Paris, is fearsome lest the dreaded grip be imported into France from America. In view of the fact that Paris is blessed with an endemic catarrh of some sort which almost invariably attacks visitors immediately upon their arrival, an importation of the grip from America would be carrying coals to Newcastle or beans to Boston.

The Promotion of Longevity.—New York has many and various clubs—religious clubs, secret-society clubs, musical clubs, poker clubs, Japanese clubs, literary clubs, Raines-law clubs, and scores of other kinds—but the latest and the most novel of all is the hundred-year club. The object of this is primarily to promote length of life, and as a means to this end to encourage the study of the problems of longevity and all questions of heredity and environment, habits, occupations, climate, and mental and physical conditions bearing thereon. A library will, of course, be collected, and all centenarians who come within the ken of the committee on statistics will be interrogated as to the causes of their long sojourn in this vale of tears. The prospectus announces that all members must pledge themselves to live beyond the age of one hundred years and to encourage others to do the same. As an incentive to membership, it is suggested that one result of the club's activity may be a reduction in the cost of life insurance, although the benefit would accure to posterity rather than to any of the charter members. Among the names of the char-

ter members thus far secured is that of Lieutenant Hobson. He will not be required to leave the navy, since an American warship is shown to be such a safe place in battle, but he will have to forswear any future *Merrimac* escapades as well as osculatory engagements.

Dr. **Daniel Murray** was recently elected mayor of the town of Campbellton, N. B., where he has practised for a number of years. He had served on the school board and had also been chairman of the board of health, while the school system of Campbellton was, the *Maritime Medical News* says, inaugurated by him.

A Pacific Coast Medical Association.—The manifest want of harmony existing in the California State Medical Society, and which threatens seriously to impair its usefulness, has led to the suggestion of a new society. Following the example of other large territorial organizations, such as the Mississippi Valley Medical Association, it is proposed to found an association on the Pacific Coast, membership in which is to be constituted by practitioners resident in California, Oregon, Washington, Nevada, and Arizona.

Dr. **Thomas H. Manley** has been appointed visiting surgeon to the Harlem Hospital. Dr. Manley was one of the twenty-eight who were dropped from public hospital service three years ago, no charges having been made and no reasons being given, although the true reason was known to be one of unseemly medical politics. Dr. Manley's reinstatement at this time is welcomed by his colleagues as an act of tardy justice.

A Convalescent Hospital at Nagasaki.—It is said that Surgeon-General Sternberg has recommended to the Secretary of War that a military hospital for convalescents from the army of the Philippines be established at Nagasaki, Japan, on a plot of ground to be selected in the foreign reservation, where a United States naval hospital already exists. The climate of Nagasaki is much less enervating than that of Manila.

More "Christian-Science" Deaths.—A gasoline stove exploded in a house in Omaha recently and severely burned four members of the family, the head of which was at one time sufficiently endowed with brains to serve a term as a county judge. When the accident occurred, two "scientists" were called in and assured the sufferers that nothing was wrong, although at the time the skin was peeling from their arms. The mother died, but the others, in their fanaticism, refused to seek relief elsewhere than in their delusion.

Leprosy in Hawaii.—In the report to the surgeon-general of the Marine-Hospital service, of an inspection of the leper settlement at Molokai, Dr. D. A. Carmichael recommends that measures be adopted to control emigration to the continent from the Hawaiian Islands and other places which may be regarded as endemic foci of leprosy. These measures, he says, should consist of a careful inquiry into the family and personal history of each emigrant, a rigid physical examination, and disinfection of all his effects. Similar precautions should be taken at the port of arrival, and a record of the destination of the emigrant should be preserved, in order that he may be still kept under observation by the health authorities of the place where he resides.

Dr. **Robert H. M. Dawbarn** has been appointed visiting surgeon to the City (Charity) Hospital, to succeed Dr. Wylie, who has resigned.

Dr. **R. G. Wiener** has been appointed attending physician to the Harlem Hospital.

Dr. **H. M. Silver** has been reappointed attending physician to the Gouverneur Hospital.

Water Supply of London.—A considerable amount of discussion is now going on in some of the English journals as to the water-supply of London, which is notoriously inadequate. Two schemes find favor with experts, one of which is by providing increase of storage to make use of present supplies, while the alternative and more ambitious scheme is to draw upon certain Welsh rivers. The London *Times*, referring to the situation, summarizes as follows: "The capital cost of storage for the supply of two hundred million gallons would be at Staines about £3,500,000 (about $17,500,000), and in Wales about £14,000,000 ($70,000,000)." The authors of these figures avow their preference for the more expensive scheme on the grounds of "sentiment" and "soft water." It is for the Londoner to decide whether he cares to pay a water rate more and probably a good deal more than sixteen per cent. higher than he need, mainly for the sake of sentiment, because, as our correspondent bluntly puts it, "he cannot reckon on soft water," as "it might not come his way"—and if we may add, he might not like it if it did.

Ventilation of the British Houses of Parliament.—In a paper read on December 13th before the British Institution of Civil Engineers, Mr. Francis Fox referred to the ventilation of the Houses of Parliament. These buildings, he pointed out, were erected in 1836, and, considering that they were designed for the requirements of sixty years ago, it was not surprising that they were unsuited to the necessities of the close of the nineteenth century. . . . The vitiated air was extracted by furnaces in the roof, the fresh air being filtered through cotton wool, cooled and warmed as required, and pumped into the chambers by fans and machinery. But this having been done, much of the good was undone, the air being admitted through open matting on the floor on which were wiped the shoes of people coming from the muddy or dusty streets of Westminster. Need it be wondered at that occasionally there were epidemics of influenza and other mal adies among honorable members of Parliament? In addition to this grave state of affairs the quantity of air admitted was wholly insufficient. It might be difficult and costly completely to remodel the Houses of Parliament, but there would be no difficulty in providing at once silent, quick-running electric fans in connection with every room. This would extract the vitiated air, and the fresh air could be admitted in proper situations, certainly not through the floor.—*London Times.*

Sir William Jenner's Relaxation.—It is related by the London *Spectator* of Sir William Jenner that his only intellectual relaxation when he was in the full flood-tide of his practice was the reading of sensational novels on his frequent railway journeys. As he put it with characteristic bluntness, "I like a good lie."

The Society of College Gymnasium Directors held its second annual meeting at Columbia University last week. Representatives were present from Yale, Harvard, Columbia, Princeton, New York University, the Johns Hopkins, McGill, Wesleyan, and other colleges. Papers were read by Dr. Seaver, of Yale, on "The College Athletic Trainer"; by Dr. Sargent, of Harvard, on "The Hygienic Value of Strength Tests"; by Dr. Crenshaw, of the Johns Hopkins, on "What We Mean by Physical Training"; and by Dr. Anderson, of Yale, on "Some Tangible Results of Gymnastics."

Sanitary Improvements in Dublin.—Lord Iveagh, formerly Sir Edward Cecil Guinness, of the well-known firm of brewers of stout, who recently gave the equivalent of $1,250,000 to the Institute of Preventive Medicine in London, now contemplates a great improvement in Dublin. He proposes to purchase an area of about three acres between Bull Alley and Bride's Alley in that city, which has been condemned as insanitary, and to give parts of it to the corporation for street improvements. He will erect on the remainder workmen's dwellings and recreative buildings, including a concert hall, reading-rooms, baths, and a gymnasium. A bill authorizing the purchase of the property and the carrying out of the proposed improvements has been drawn and will as soon as possible be introduced into Parliament.

A Suggestion for Mitigating the Horrors of War.—Professor von Esmarch writes in a recent number of the *Deutsche Rundschau*, apropos of the peace conference which is to be held on the Czar's initiative, suggesting that the conference should arrange for the instruction of all soldiers in first aid to the injured. They should, he says, be equipped with first-aid packets such as our troops had in Cuba, and be taught the full significance of the Red Cross Society and the immunities and privileges of its officers. He says that such instruction is now all the more necessary, as he believes that the wounded in future wars will inevitably be so numerous, owing to the use of quick-firing weapons, that any staff of surgeons, of reasonable numbers, will be entirely unable to handle them. The writer also urges an international agreement to do away with all bullets on the dum-dum pattern, of a brass envelope with open point —the so-called explosive or spreading bullets—because of the frightful and disabling wounds which they inflict. If the members of the peace conference really desire to promote the cause of peace, they will reject *in toto* Dr. v. Esmarch's suggestions, and will also decree the abolition of international or national Red Cross societies. Let this be done, and let the use of explosive bullets become universal, and we shall be much nearer a world peace than any proclamations of Czar or Kaiser or the adoption of any humanitarian proposals can bring us. Peace on earth will come through fear sooner than through love.

Professor Roentgen has been called from Wurzburg, where his experiments leading to the discovery of the x-rays were conducted, to the chair of physics at the University of Leipsic.

The Richmond Academy of Medicine and Surgery.—At the annual meeting of this society, held December 13th, the following were elected officers for the year 1899: *President*, Dr. Ernest C. Levy; *Vice-Presidents*, Drs. John Dunn, D. J. Coleman, and J. W. Henson; *Secretary and Recorder*, Dr. Mark W. Peyser; *Assistant Secretary*, Dr. W. H. Parker; *Treasurer*, Dr. J. Travis Taylor; *Librarian*, Dr. M. E. Nuchols.—*Virginia Medical Semi-Monthly.*

Sir Thomas Grainger Stewart, of Edinburgh, has joined the ranks of literary physicians, having just published a drama in blank verse, entitled "The Good Regent." The play is of the time of Mary Stuart, the leading personage, who gives the title to the work, being the Regent Moray.

The Western Ophthalmological and Otolaryngological Association will hold its fourth annual meeting in New Orleans on February 10 and 11, 1899, during carnival week. Dr. J. Elliott Colburn, of Chicago, is the president, and Dr. Thomas A. Woodruff, also of Chicago, is the secretary of the association. The chairman of the committee of arrangements is Dr. W. Scheppegrell, of New Orleans.

Mosquitoes and Malaria.—We learn on trustworthy authority that the Italian investigators have once again succeeded in conveying to man malarial infection by means of mosquito bites. The parasite in this instance was the benign tertian; the mosquito employed was the same as that which has already proved an efficient transmitter of the malignant tertian parasite—namely, anopheles claviger. In this second successful experiment the mosquitoes were brought from a notoriously malarial spot at a distance, and liberated on the subject of the experiment in Rome. The investigators referred to have not yet discovered Ross's "germinal rods" in mosquitoes purposely fed on crescent-containing blood. We hear, however, that they have found these rods in mosquitoes brought from houses at a distance in which there had been malarial-fever cases.—*The British Medical Journal.*

School of Tropical Medicine in London.—The London *Times* in its issue of December 16th, commenting in a leading article upon the objections evinced by many of the more prominent London physicians with regard to the projected scheme for teaching tropical medicine, and with special reference to the memorial signed by them, says: "In any document which bears numerous signatures the absence of names is sometimes even more remarkable than their presence; and it is impossible not to inquire why two great schools of medicine—that of Guy's Hospital and that of the Royal Free Hospital, which is limited to female students and which finds its most important work in edu-

cating lady doctors for India—should be unrepresented. It is further to be observed that of the ten hospitals no less than four are represented by their 'consulting' physicians—that is to say, by men who have retired from active service both in the wards and in the school, and whose minds may not unnaturally be supposed less open to the claims of comparative novelty than those of their juniors who are now bearing the heat and burden of the day."

"The Practitioner," edited by Malcolm Morris and published by Cassell & Company, will be increased in size as well as price after January 1st. The price, which up to the present has been the modest sum of twenty-five cents, will be doubled. More portraits and illustrations will be introduced, and in every possible way the journal will be made more attractive.

Cremation after Death from Infectious Disease.—A petition, signed by many of the physicians of Berlin, has been presented to the city government, calling attention to the danger of earth burial in cases of death from infectious disease, and urging the advisability, in the interest of the living, of cremation in such circumstances.

The Cigarette has been declared by the supreme court of Tennessee not to be a legitimate article of commerce. This decision was rendered in a case brought to test the law passed by the State legislature, prohibiting the sale of cigarettes. The court holds that the law is constitutional and must be enforced. In Chicago the sale of the seductive little cylinders is not expressly prohibited, but the city council has raised the fee for license to deal in cigarettes to $500. The cost of a license hitherto has been $100.

A Chinese Medical Journal.—The Hong Kong correspondent of the *British Medical Journal* writes that the first number of a new magazine, with the title *A Monthly Journal of Medicine, Surgery, and Hygiene*, has just appeared. It is edited by Wan Tün Mo, a diplomat of the Imperial Medical College, Tientsin, and resident surgeon Alice Memorial Hospital, Hong Kong. The publication of this journal marks an epoch in the history of Western medical science in China. Slowly but surely the more enlightened Chinese are becoming convinced of the superiority of Western methods of medicine, surgery, and hygiene. In the first issue the scope and object of the magazine are set forth, and run thus when translated: "The journal is published solely for advancement of medical science, and all contributions to its pages must be in strict harmony with the great facts on which true medical science is based, with special reference to the facts of anatomy, physiology, botany, chemistry. Each issue is to consist of six sections: (1) Leading articles and translated selections from recognized authorities in the medical world; (2) special cases and treatment; (3) to deal with new methods; (4) to give instruction in first principles of anatomy and physiology; (5) notes on laws of health, food, sanitation; (6) miscellaneous, including news of special interest to students of medicine. Western doctors in China will be asked to report cases of special interest. Illustrated plates and diagrams will be used." The first issue contains three leading articles—two from Western sources treating of diagnosis and treatment of disease; the third is an exhaustive inquiry into the nature and causes of bubonic plague. There is also an introductory article on the study of anatomy and physiology. The section on hygiene treats of impurities in water and maladies to which they give rise; preservation of eyesight, means of maintaining the body in health, and the importance of pure air. Dr. Wan, the editor, is a man of large professional experience.

A Naval Hospital at Cavite.—Admiral Dewey has cabled a recommendation that a naval hospital be established in Cavite, where he says there is a building already available large enough for twenty beds.

The Health of the Troops in Porto Rico is reported to be exceptionally good. The sick-list is very small, and, although there are seven thousand soldiers on the island, for six days ending on New Year's Day there was not a single death among them.

"Christian Scientists" do not have it all their own way in Ohio, and attempted manslaughter by victims of that particular psychosis has recently received a slight check in Cincinnati. A certain Harriet Evans, who non-treated a man with typhoid fever so successfully that he died, was convicted on December 8th of practising medicine illegally, and was fined $100. Another "scientist," named Allie Putnam, met the same fate on December 21st. The person had non-treated a man with alleged gastric disorder, and had demanded and received a fee for her inaction. This second conviction has excited the other illegal malpractitioners, and a fund has been raised to carry Putnam's case to a higher court. A wealthy victim of the delusion is said to have given $10,000 to meet the expenses of the appeal, and the trustees of the Christian Science church say that the building fund of $24,000 is available for the same purpose. They say they will make this a test case and will fight it through all the courts if necessary, even up to the supreme court of the United States.

Obituary Notes.—Dr. Charles Louis Leroux, of Pass Christian, Miss., died in New Orleans on December 28th, aged fifty-three years. He was born in France, but came to this country in 1864 and was graduated from the medical department of Tulane University in 1873. In 1878 he received a medal from the French Government in recognition of services rendered French citizens during an epidemic of yellow fever. He was an acting assistant surgeon in the United States army at the time of his death.—Dr. Charles F. Guillou died in this city on January 1st, of pneumonia, at the age of eighty-five years. He was born in Philadelphia and was graduated in medicine from the University of Pennsylvania in 1836. In the same year he was appointed assistant surgeon in the navy and served until 1854, when he went to Honolulu to take charge of a hospital there. In 1867 he returned to New York and resided here continuously up to the time of his death.

Reviews and Notices.

THE MEDICAL RECORD VISITING LIST OR PHYSICIAN'S DIARY for 1899. New York: William Wood and Company.

THIS convenient, compact, and practical visiting list has been thoroughly revised to date, and the amount of information for use in emergencies has been judiciously increased and appropriately condensed. Another important change is in the elaboration of the list of remedies with their maximum doses in both the apothecaries' and decimal systems. It contains everything needed in a visiting list, and is of proper pocket size.

A TEXT-BOOK OF VOLUMETRIC ANALYSIS. By HENRY W. SCHIMPF, Ph.G., M.D., Professor of Inorganic Chemistry in the Brooklyn College of Pharmacy. Third Edition, revised and enlarged. New York: John Wiley and Sons. 1898.

THE fact that a third edition has so soon appeared after the first in 1894, proves best its usefulness and popularity. The main features of the work have been retained in the present edition and much new matter has been added.

ADULT DIET LIST. Compiled by C. S. MILLET, M.D. Brockton, Mass.: Tolman Press.

THIS work consists of about seventy-five detachable leaflets, printed alike and containing a list of the ordinary articles of diet under the headings of "Eat," "Try Cautiously," and "Avoid." It affords the physician a ready way of mapping out special diets in accordance with special indications.

THE PHYSICIAN'S VISITING LIST for 1899 (Lindsay & Blakiston's). Philadelphia: P. Blakiston's Son & Co.

THE forty-eighth issue of this extremely practical little book again comes before us. It is needless to praise its well-known merits of compactness and simplicity, with the accessory features of table of signs, the metric system and its conversion into the apothecary equivalents, the dose table, the method of treatment of asphyxia and apnœa, comparison of thermometers, and a table for computing the period of utero-gestation.

TEXT-BOOK OF MEDICAL AND PHARMACEUTICAL CHEMISTRY. By ELIAS H. BARTLEY, B.S., M.D., Ph. G., Professor of Chemistry and Toxicology in Long Island College Hospital, etc. Fifth Edition, revised and enlarged. P. Blakiston's Son & Co. 1898.

ON the outside this well-gotten-up and splendidly printed work calls itself a "Medical Chemistry," but in what sense it is such we are at an utter loss to comprehend unless the author is unaware of the modern progress of physiological chemistry in its practical applications to modern medicine. Were he to call it "An elementary work on physics, inorganic chemistry, introductions to the study of organic chemistry," we would have for it in the main unqualified praise, but under the guise of a "Medical Chemistry" it is a delusion and a snare. We hope that the day has gone by when high-school knowledge, or what the student should get at his first year's undergraduate work at college, shall be presented to him in the guise of something new. What is wanted in works of this kind is up-to-date knowledge of pathological chemistry such as is being taught to us by Chittenden and by Herter. This work is certainly commendable for unprepared students, but it is our belief that every student applying for entrance into a medical school should know three-quarters of what is contained in Bartley's Physics and Chemistry.

HISTOLOGY, NORMAL AND MORBID. By EDWARD K. DUNHAM, Ph.B., M.D., Professor of General Pathology, Bacteriology, and Hygiene in the University and Bellevue Hospital Medical College, New York. New York and Philadelphia: Lea Brothers & Co. 1898.

THERE certainly is no lack of elementary text-books on histology for the medical student. Each one has its special advantages, yet it may be said that most of the books with which we are familiar have been household works of many editions. In Dunham's "Histology" we really have a new histology, and what is more refreshing than its splendid get-up and excellent bookmanship is that it really has new ideas. It is a book not like so many of the older ones, with the newer discoveries grafted on to the old, but a book written from a more recent point of view throughout; and while as an elementary text-book it lacks somewhat of what it might be if more detailed, it is certainly a commendable volume. As in most books of this kind, we deplore the lack of bibliographical references. A knowledge of the sources of histological knowledge is certainly worth imparting. The engrafting of the pathological on the normal in one volume is, we believe, a good idea, especially when it is done not with the idea of completeness, but of giving a harmonious presentation of things intimately associated.

THE NATURAL HISTORY OF DIGESTION. By A. LOCKHART GILLESPIE, M.D., F.R.C.P. Edin., F.R.S. Edin., Lecturer on Materia Medica and Therapeutics in the Medical School of the Royal Colleges, Edinburgh; Medical Registrar, Royal Infirmary, Edinburgh. Illustrated by Figures, Diagrams, and Charts. London: Walter Scott, Limited. 1898.

IN this volume an attempt has been made to describe in a brief compass the general laws governing digestive processes in all living bodies. The author treats of the ancient theories of digestion as it occurs in both animals and plants; then follows a description of digestion in plants and animals, ferments and ferment action, food elements, digestive processes of the body, and absorption from the alimentary canal. The subject of micro-organisms of the alimentary tract in the higher animals is considered. A very interesting chapter is devoted to a comparative study of digestion in animals. Metabolism in animals, dietetics and animal heat, stimulants and foods are successively considered. The book is one belonging to the Contemporary Series, edited by Havelock Ellis; this fact alone will insure its popularity.

HUMAN ANATOMY. A Complete Systematic Treatise by Various Authors. Including a Special Section on Surgical and Topographical Anatomy. Edited by HENRY MORRIS, M.A. and M.B. London; Senior Surgeon to the Middlesex Hospital; Examiner in Surgery in the University of London; Member of the Council and Chairman of the Court of Examiners of the Royal College of Surgeons of England; Honorary Member of the Medical Society of the County of New York. Illustrated by 790 cuts, the greater part of which are original and made expressly for this work by special artists, over two hundred printed in colors. Second Edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 1898.

THE reproach that the English language can boast of no treatise on anatomy deserving to be ranked with the masterly works of Henle, Lushka, Hyrtl, and others, is fast losing its force. During the past few years several works of great merit have appeared, and among these Morris's "Anatomy" seems destined to take first place in disputing the palm in anatomical fields with the German classics. The nomenclature, arrangement, and entire general character resemble strongly those of the above-mentioned handbooks, while in the beauty and profuseness of its illustrations it surpasses them. This edition offers but few changes; a chapter on the skin has been added, and a useful list of vestigial and abnormal structures has been compiled. Sections especially worthy of praise are those on surgical and topographical anatomy, and the chapter on the nervous system is presented with great clearness and fulness. The ever-growing popularity of the book with teachers and students is an index of its value, and it may safely be recommended to all interested.

MATERIA MEDICA NOTES. Compiled for Medical Students by C. A. VALADIER, A.M., M.D. J. T. Dougherty. New York. 1898.

THE author of this very useful compilation has succeeded in giving, in a comparatively short and succinct form, all the information necessary for a student to have in order to pass his examination, and a good deal which he will not need for that purpose, but which may prove useful to him after the incubus of examination has been lifted from his mind. The author has not attempted to give the results of any original work upon his subject, but has simply epitomized the views of various authors as found in the standard text-books, and he has done this in the tabulated form in his text. Tabulated statements always appeal to the students. The work represents a large amount of comparison and abstraction and really forms a useful, compact book of reference.

Surgical Suggestions.

Venereal Warts. — Warts are directly contagious without any discharge being present in either party, and may occur without intercourse. Several cases are cited to support this statement.—CATHCART.

Malignant Disease of the Uterus.—There is no one method of operating applicable to all cases of malignant disease of the uterus treated by vaginal hysterectomy. I believe, however, that a judicious combination of clamp and ligature will ultimately become the usual method adopted.—F. J. MCCANN.

The Treatment of Sarcoma by Coley's Fluid.—Dr. Morgan Dockrell (*British Medical Journal*, September 10th) reports his experience in one case, thinking that this experience may be of service to those who contemplate a trial of Coley's fluid in mycosis fungoides. The points of interest seem to him to be: (1) A marked diminution in the tumors. (2) The fact of the powerlessness of the fluid to check the extension of the disease in this case. (3) Its exact value in cases of mycosis fungoides, and, if valuable, the exact stage at which it should be used in this disease; to the author's idea, not in the first stage, and, indeed, not till the tumors have begun to show a tendency to remain permanent. (4) It is somewhat unfortunate that the use of Coley's fluid has not been attended with the success in this country that it has in America. But this may be mainly due to the fact that it has not been tried sufficiently early, and that the doses used have been too large to begin with.

Operative Treatment of Pelvic Suppuration.—Dr. Le Dentu (*Bull. et Mém. de la Soc. de Chir.*, No. 26) concludes that incision of the vaginal cul-de-sac is indicated in the following instances: (1) Suppurative hæmatocele in which there is a single sac. (2) Suppurative hæmatocele which is made up of numerous deposits included within septa, provided in such case there be a probability of a solid boundary of adhesions between the tumor and the peritoneal cavity. (3) Unilateral salpingitis or suppurative oöphoritis, if the sac is adherent to the vaginal mucous membrane, or at least is not much raised above the cul-de-sac. (4) Double suppurating salpingitis, provided the two sacs have run together so as to form a single sac, and do not project to any great extent into the pelvic cavity. Simple incision of either the anterior or posterior vaginal cul-de-sac is contraindicated in the following instances: (1) Multilocular suppurating hæmatocele when the superior limits of the disease are ill defined, and when there is reason to fear the rupture of adhesions and penetration into the peritoneal cavity during the operation. (2) When there are grounds for suspecting the existence of a salpingitis or oöphoritis, either single or double, which is complicated with encysted peritonitis. (3) When the swelling, even though small, is situated far above the cul-de-sac. (4) When the omentum just above the disease is thickened and indurated, and forms a considerable portion of the swelling.

Appendicitis.—If the appendix is firmly fixed in the abscess wall, do not remove it. To remove it under these circumstances would rupture the wall and allow pus to enter the peritoneal cavity, where it is not protected by pads and gauze. Deaver, Murphy, and others tell us to try to remove the appendix. We do not believe this to be a safe rule to follow. To insist on removing the appendix may cause death. When the appendix is left it usually sloughs away. It is true a fæcal fistula may result, but this usually heals spontaneously. Even if it does not heal, the surgeon acted properly, because a fæcal fistula may be remedied by another operation, but there is no remedy for death.—DR. JOHN C. DACOSTA, "A Manual of Surgery, General and Operative."

No surgeon will deny the propriety of evacuating an abscess, but in the matter of appendicular abscesses the strangest views of proper treatment obtain. Men like Deaver, of Philadelphia, and some others, in their search for a diseased appendix, actually recommend the tearing down of that protective wall which nature has so kindly raised to exclude the fatal general peritonitis. — DR. SCHUYLER C. GRAVES, *International Journal of Surgery*, October, page 300.

Treatment of Soft Chancre.—Wash the ulcer and surrounding skin with soap and water, then with perchloride lotion. The chancre is then frozen with chlorethyl and the superficial part is removed with a sharp razor. Control the hemorrhage by touching the raw surface with a stick of nitrate of silver. Cover the wound with iodoform powder, and next apply a zinc-oxide plaster. Renew the plaster every twenty-four hours. Continue the treatment for four or five days, when the chancre should be cured.—UNNA, *Monats. f. prakt. Derm.*, No. 26.

Calculus in Children.—There are three symptoms which, when observed in the same case in childhood, point almost conclusively to the existence of calculus: a long prepuce, pain on urination, the passage of blood, particularly at the close of urination. The long prepuce is caused by the constant traction the child makes on the prepuce to relieve the pain, which it no doubt refers to the end of the penis, as in the adult. The exquisite pain, far more severe than in the adult, is the result of the driving of the calculus by the expulsive efforts of the bladder against the sensitive vesical neck. In this way also is caused the bleeding.—BRISTOW.

Indication for Change of Dressing.—Dressings should never be changed except for good cause. If penetrated by discharge at some spot or spots, and prompt drying at the margins of the stained area tends to occur, it would be better to secure a pad of aseptic gauze over the stained spot rather than undress the wound; but if the dressings are thoroughly soaked, the superficial portions must be changed, leaving those immediately related to the wound unchanged if possible. When drainage tubes require removal dressings must be changed, usually about the fourth day. If filled with firm clot, the wound is aseptic and the tube should not be replaced; when doubt exists as to the asepticity, drainage would better be continued until this question is settled. A sustained temperature unexplainable by complications external to the wound demands inspection, since drainage may be defective or infection may have occurred.—CHARLES B. NANCREDE.

Fractures of the Skull.—Dr. Pope (*International Journal of Surgery*, April) sums up his experience on this subject as follows: (1) Operate in all cases of fracture of the skull, basilar or compound, and preferably in simple fractures. (2) Expectant treatment is dangerous, permitting injury to the nerve structures. (3) Danger does not exist in fracture *per se*, but in subsequent injury to the nerve elements and tissues. (4) Failure to trephine and immediately remove the existing pressure, depression, hemorrhage, inflammation, or septic infection may result in the development of focal epilepsy and other cerebral diseases. (5) Little or no danger results from the operation. (6) These rules are doubly applicable to fractures of the base, owing to the danger to vital structures lying there.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, December 20, 1898.

LOUIS FAUGÈRES BISHOP, M.D., CHAIRMAN.

Typhoid Fever in the Negro.—DR. LOUIS FAUGÈRES BISHOP said that, as typhoid fever was not very common in the negro, it might be of interest for him to exhibit a temperature chart from such a case. The patient had come under observation in the third week; the case had run the usual course, and had then suffered a relapse.

A Case of Echinococcus Cyst of the Liver, with Discharge of Daughter Cysts Through the Common Duct.—DR. HENRY W. BERG reported this case. He said that the patient, a man thirty years of age, had begun to complain three years ago of distress over the epigastrium. This would usually be relieved by an emetic or a cathartic, but last April these attacks became more severe and frequent, and were accompanied by severe pain in the hypochondriac region. One of these attacks began on August 26, 1898, and a few days later he became jaundiced. The jaundice lasted about a week, and during this time the stools were of light color. After a time the fever became higher, and was associated with rigors. The case first came under the speaker's observation on September 18th, and at that time examination showed him to be emaciated; the respirations were shallow and rapid; well-marked jaundice was present. The liver extended two inches below the free border of the ribs at the nipple line, and its edge could be felt, but the gall bladder could not be palpated. Posteriorly on the right side the liver dulness extended to two inches above the angles of the scapulæ. The urine contained bile pigment, but was otherwise normal. Owing to the size of the liver it was supposed that there was an abscess of that organ, and that this accounted for the septic temperature. The following day there was quite a severe colic, but examination of the stools failed to show gall-stones. It did, however, reveal the presence of five or six opalescent whitish bodies, which were at once recognized as daughter cysts of the echinococcus. The statement was then made that similar bodies had been passed a week or two before. On September 30th he was operated upon at the Mount Sinai Hospital by Dr. H. Lilienthal. An incision was made posteriorly, and an aspirator introduced. Clear fluid having been withdrawn, the incision was enlarged, and a large cavity, about one inch from the surface of the liver, was entered, and a large quantity of clear fluid and echinococcus cysts evacuated. The cavity was washed out and filled with peroxide of hydrogen, after which its walls were thoroughly curetted before inserting the gauze packing. On November 15th the patient was discharged, a small sinus still remaining. Dr. Berg said that there were four possible ways in which these cysts could pass from the gall bladder into the gut, viz.: (1) By adhesions, ulceration, and subsequent perforation between the cyst in the right lobe of the liver and the hepatic flexure of the colon; (2) by a similar process between the cyst and the duodenum; (3) by a similar process between the cyst and the gall bladder; and (4) by adhesion, ulceration, and perforation of the common cystic or common bile duct. It was not probable that these cysts perforated directly into the bowel, for the reason that their discharge was always preceded by an attack of colic, just as occurred when stones passed through the common duct. There was no fecal odor to the liver cyst at the time of operation, which certainly would not have been the case had there been any direct connection between the cyst and the colon. The pressure to which the cysts had been subjected in their passage through the duct had resulted in bursting them, and hence they were collapsed when found in the stools. In the human body echinococcus cysts developed in the liver in more than sixty per cent. of the cases. The condition must be differentiated from malignant disease of the liver, abscess of the liver, subdiaphragmatic abscess, pleural effusion, and aneurism. When an hydatid cyst of the liver underwent suppuration the difficulty of differentiation from ordinary abscess of the liver was quite great, but it should be remembered that hydatid cyst developed slowly, without pain and fever up to a certain point, and that then there was a sudden appearance of these symptoms. For diagnostic purposes in these cases the speaker was not in favor of using the aspirating needle, except as a preliminary step to the radical operation. The only treatment worthy of consideration was surgical, and it consisted of one of two procedures, viz., incision, with evacuation of the contents of the cyst, or puncture. Puncture was dangerous, because of the liability to leakage of the fluid. The operation of incision and evacuation, on the other hand, was absolutely curative, and was the only proper surgical procedure.

DR. H. LILIENTHAL spoke of the surgical aspect of such cases. In the operation already described, he said, great care had been taken not to incise the costal pleura; it had been pulled up from the upper surface of the diaphragm, and then the needle had been passed through the diaphragm into the liver. Had the costal pleura been incised, infection could hardly have been prevented, and the results would probably have been disastrous. The incision was made vertically, because he did not know the probable extent of the operation. For the same reason he had used this incision in operating upon cases of empyema, and, although it was attended by a little more bleeding, undue hemorrhage could be avoided by proper technique. At least three or four inches of each rib resected was removed. The needle was plunged to a depth of nearly four inches before it reached the clear fluid. On incising through the diaphragm, the reason for having to go to this great depth became apparent, *i.e.*, the contents of the cysts nearest the abdominal wall had undergone degeneration and the fluid was too thick for aspiration. The abscess was, therefore, not found three or four inches deep, as was at first thought, but only a little over half an inch from the surface. It was exceedingly important for a cure that the drainage should be perfect. Great care was taken to guard all the raw surfaces about the wound with gauze, so as to protect these parts against the entrance of the hydatid elements. For a considerable time after operation an enormous quantity of bile was discharged through the wound. The cavity of the cyst was lined by very stiff membrane, and he had consequently feared that difficulty would be encountered in securing closure of the cavity. An attempt was made to remove some of this membrane by the curette, but it was not considered prudent to use the curette very vigorously, because of the liability to infection. He had made use of the peroxide of hydrogen, not so much because of its antiseptic properties, as because the resulting foam facilitated the discharge of the débris. Dr. Lilienthal said that he had once removed a suppurating tumor from the left breast of a young man, thinking it to be a tuberculous abscess. Examination showed it to be an hydatid cyst. The patient assured him that he had had an exactly similar tumor in the right breast some time before, and that it had disappeared spontaneously.

A Case of Leprosy.—DR. P. A. MORROW presented a leper, a native of the West Indies, who had been in

this country about eleven years. This man exhibited very typical signs of the disease, such as tubercular lesions on the face, characteristic areas of pigmentation on the trunk, and loss of the eyebrows. The speaker said that loss of the eyebrows was very characteristic of tubercular leprosy, whereas the loss of the eyelashes was characteristic of anæsthetic leprosy.

DR. BERG remarked that he had seen several cases of leprosy on Blackwell's Island. One of these had improved very much without any special treatment. This patient had a syphilitic history, and it was interesting to note that some observers had seen benefit, in cases of leprosy, from antisyphilitic treatment.

Experiments upon Leprosy with the Toxins of Erysipelas.—DR. HENRY D. CHAPIN read a paper on this subject (see page 1).

Previous Attempts Disappointing.—DR. P. A. MORROW said that he thought any one familiar with the history of the therapeutics of leprosy would receive the announcement of a new treatment with some scepticism. It was an attractive idea to treat leprosy by injections of erysipelas toxins, for it was a matter of common observation that an intercurrent attack of erysipelas had a marked modifying effect on the manifestations of leprosy. The same had been observed in other diseases of the granuloma type, such as lupus vulgaris and syphilis, and also in certain forms of malignant disease. The experiments in this direction, however, had not been very satisfactory. As long ago as 1882 Campana had inoculated lepers with erysipelas, but they had not been benefited. In 1891 a physician in Rio Janeiro began certain experiments with pure cultures of the streptococci of erysipelas. He found that the reaction, both local and general, was so violent that the experiments had to be discontinued. An erysipelatous serum was then substituted for the erysipelas cultures, and tried on quite a large number of lepers. Each patient received sixteen or eighteen injections. The reaction differed very materially in different individuals. In some cases these injections caused abscesses. Dr. Morrow said that a consideration of the pathology of leprosy did not seem to show any good reason for believing that it could ever be cured by injections of the toxins of erysipelas, because the bacilli of leprosy were too deeply entrenched within the system to be dislodged. Moreover, it was not known whether there was a direct antagonism between the toxins of erysipelas and the bacillus of leprosy, or whether the benefit occasionally observed was due to the increased temperature occurring during the stage of reaction. He had tried the injections in a case of "indigenous" leprosy or mycosis fungoides, and a dose of twenty minims had been reached before there had been any reaction. The patient grew rapidly worse after the treatment.

Antileprous Serum.—If a curative agent should ever be found, it would probably be something in the line of an antileprous serum. Cascarilla had first advocated the antileprous serum treatment. He injected the serum from an advanced case of leprosy into a horse a number of times, and then withdrew the horse serum and used it for the treatment of leprosy. So far as known, the bacillus of leprosy is not found in the blood, and hence the value of the method would be disputed on theoretical grounds. Several modifications were then tried, one of these being the use of a juice expressed from the tubercular nodules. It was found to contain the bacilli, and when injected with sterilized salt solution into horses and goats, it caused more reaction than had the first serum. Cascarilla had claimed very extraordinary results from this treatment—viz., the disappearance of the nodules and the restoration of sensation in anæsthetic nodules. This serum had been experimented with quite extensively in various quarters of the globe, and the results had been submitted to the leprosy congress. They were unsatisfactory, and the consensus of opinion of those present at that congress was that the method was a failure. Dr. Morrow said that, in spite of this verdict, he personally felt inclined to believe that good results might be obtained if good cultures of the bacillus lepræ could be secured.

Antivenin.—The use of antivenin was suggested by the observation that in South America lepers who had been bitten by poisonous snakes, and survived, showed vast improvement in their leprous manifestations, and that some had even been cured. For this reason it was quite common for lepers purposely to subject themselves to the bite of a snake, called the corrall, which produces a severe reaction, but is rarely fatal in an adult. This method had been tried by Dr. I. Dyer in New Orleans, with very encouraging results. Following the injections of antivenin, there were always cold sweats.

Lepers Improve in this Country.—This country, however, is not a good place for experiments of this kind, for the reason that most lepers improve on coming here, irrespective of any treatment. Another source of error was that the lesions of leprosy, like those of syphilis in the early stages, develop periodically, the patient being in good health in the interval. This explained the contradictory statements regarding modes of treatment for leprosy. It could not be denied that there was something in this country which not only limited the spread of leprosy, but actually effected an improvement in individual cases. Instances occurring in Dr. Morrow's own experience were cited in support of this view.

The Comparative Safety of the Toxin Treatment.—DR. W. B. COLEY said that it had seemed to him, from more or less close analogy between syphilis and leprosy, and the supposedly good results in syphilis from erysipelas toxins, that this method of treatment might have some value in leprosy. The experiments had certainly shown that the toxins could be given with comparative safety if the dosage was small at first, and was gradually increased. The doses given by Dr. Chapin were very much larger than had been found necessary in the cases of malignant disease that the speaker had treated. He had rarely used in these cases more than fifteen minims, and doses of more than twenty minims, except in very vigorous persons, were somewhat dangerous. The case showing increased inflammation during the treatment gave an important hint as to the use of the toxins in cases exhibiting an open sloughing area. In the two fatal cases in England there had been such ulcerating areas, and care had not been taken to keep these portions properly aseptic. The post-mortem examination showed that death was really due to another bacillus—the staphylococcus—and the result was to be explained by the fact that the toxins often increased the virulence of other bacilli that might happen to be present. He had given the toxins over very long periods—from two to four years—with only occasional intermissions, and without interference with the general health.

Nocturnal Cough in Children.—A child with a chronic nasal catarrh will sometimes keep up a most aggravating nocturnal coughing simply because of a collection of mucus that has made its way into the post-nasal space and defies the mother's simple remedies. I have known such a cough to be relieved as soon as the child had hawked to clear the throat and used a handkerchief in response to a bidding to do so. Many an examination of the chest made to determine the cause of an obstinate cough has revealed for the first time an unsuspected cardiac affection.—ROBERT H. BABCOCK.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, December 19, 1898.

GEORGE TUCKER HARRISON, M.D., PRESIDENT.

Conservative Treatment of Stricture of the Bowel.—DR. JOHN A. WYETH reported a number of interesting clinical cases. The first case was one of a series illustrating the conservative treatment of stricture of the bowel, and in it an excellent result was secured by the use of bougies and daily irrigations. The colon was irrigated daily with sterile water, and the dilatation of the gut was effected by the use of extra long and remarkably flexible bougies. These bougies were eighteen inches in length. They could be used in high strictures of the rectum and colon, even as high as the descending segment of the colon, without danger of discomfort. Their introduction should be preceded by the injection of water, the patient being in the Trendelenburg posture. In this way rectal irritation and spasm were practically eliminated. After about one quart of water has been injected, the bougie, well lubricated with white of egg, was carried into the bowel. The distention of the gut obliterated the pockets and folds, so that the instrument glided readily along to the seat of the obstruction. The soft, flexible point was forced through the stricture by gentle but steady pressure. Anæsthesia was inadvisable, as the sensations of the patient constituted a useful guide in these manipulations. This line of treatment was carried out systematically in this case, the bougie being repeatedly inserted. Every day the patient received an injection of one or two quarts of warm water, while occupying the Trendelenburg position. The calibre of the gut was now restored, and he was ready to be discharged.

Diet for Surgical Cases.—Dr. Wyeth said that, in addition to the treatment already detailed, there was a careful system of dieting employed, which he considered extremely important in all surgical cases. It was just as important, in his opinion, to eliminate septic poisonous gases and ptomaines from the bowel as it was to supply suitable nourishment to the system. At intervals of about one week the patient was given the small calomel-and-soda triturate tablets up to one or two grains. One or two teaspoonfuls of Carlsbad salt in hot water were given in the morning of the day of operation, to secure a thorough emptying of the intestine. The nourishment should be administered in moderate quantity, four or five times a day, rather than a larger quantity three times daily. He did not advocate a limited and soft diet, or a too strict diet; surgical patients could often digest a small quantity of beef, chicken, or quail better than broths. In the way of meats, he would give sirloin or tenderloin steak, roast beef, roast mutton, mutton chop, or stewed chicken. Goose, bacon, or fat of any kind should be forbidden. Eggs should be given sparingly. The yolk contributed to the formation of gases in the alimentary canal, and consequently, if the yolk was given at all, the yolk of one egg should be added to the whites of two or three eggs, and the eggs shirred. Shredded wheat, the crust of a roll, and fresh butter in moderate quantity might also be allowed. All uncooked vegetables were strictly forbidden. Beans, peas, and carrots, cooked slowly, asparagus, and sweet potatoes in moderate quantity were chiefly relied upon. The white or Irish potato was not so satisfactory. When given, it should be boiled, thoroughly mashed, mixed with cream, and then baked. Fruits were very rarely permissible.

The second case was one of partial occlusion of the descending colon and sigmoid flexure by peritoneal adhesion bands. The patient, a male, forty-two years of age, came under observation in September, 1898. He had had several attacks of acute dysentery. In 1889 he had the first attack of severe colitis, lasting several weeks, and between this and October, 1897, there were two other attacks of dysentery, the last being the most severe. Since that time there had been evidence of increasing constriction of the bowel, and with this was an irritation of the bladder, necessitating very frequent micturition. Examination showed no stricture of the urethra, no stone or tumor in the bladder, and no cystitis. There was a well-marked fulness in the inguinal region, and the thickened wall of the colon could be made out distinctly. An incision along the left semilunaris exposed the colon, the walls of which were considerably thickened; its lumen was reduced one-half. The intestine was adherent to the anterior abdominal wall by a wide band of omentum, which passed over the gut at this point, and was anchored by firm adhesions. The latter extended downward three or four inches, and across to the summit of the bladder, which was considerably elongated. The adhesions were all separated by dry dissection, and the wounds closed. The patient recovered completely. The laparotomy was done in this case for the reason that the stricture was rather high up in the descending colon and the symptoms pointed to something more than a simple peritoneal band—possibly a malignant tumor.

The third case was one of carcinoma of the rectum. This man was sixty-three years of age, and came under observation last August. There had been no cancer in the family previously. He was temperate in his habits. In July, 1898, he first noticed an uneasy throbbing sensation in the rectum near the anus, and a digital examination revealed a tumor on the anterior wall of the rectum. This examination caused bleeding. A diagnosis of malignant disease was made by his attending physician, and this diagnosis was concurred in by Dr. McBurney, who advised its removal. On coming under the speaker's care subsequently, the diseased area extended from a point two and one-half inches from the anus upward for four and one-half inches. The base or attached portion was about one and three-fourths inches in diameter. It involved the entire thickness of the wall of the bowel in the median line, just beneath the prostate and prostatic urethra, and extended backward to the bladder. There were no stricture of the urethra, and no stone or tumor in the bladder. As a radical operation would have seriously involved the bladder and neighboring parts, and would have resulted in a permanent flow of urine into the rectum, making the patient's life intolerable, local and constitutional treatment was advised. He was given "mixed treatment" on general principles, and every morning two quarts of sterile warm water were thrown into the colon and allowed to remain for half an hour. At intervals of ten days, under anæsthesia, the destruction of the growth was undertaken by the use of caustic potash, and occasionally the electro-cautery. The rigid system of dieting already detailed was enforced. By December 1st nothing was left of the neoplasm except a smooth, granulating surface about the size of a quarter of a dollar, which was situated where the tumor had been originally attached to the intestinal wall. The broken-down tissue was at that time removed with the curette, and the caustic potash applied vigorously. Now the patient suffered no inconvenience, and, although not cured, it was probable that his life could be considerably prolonged and rendered comfortable.

The Treatment of Carcinoma by Caustics.—The speaker said that the operation of exsection of the rectum for carcinoma had not yielded encouraging results, and was attended, moreover, by a heavy death-rate. It was only when the disease was in its incipiency and

involved only a small area of the intestinal wall that this operation afforded a reasonable hope of success with moderate risk. He had been so encouraged by the results of the treatment by escharotics in the case just reported, that he purposed to try it in others. He did not think the profession generally appreciated sufficiently what was being done in a quiet and conscientious way by certain surgeons in the treatment of epithelioma on the surface of the body by such means, especially by the use of Marsden's paste. He had had a large experience in this field, and could cite a number of very gratifying cures.

The next patient, one with carcinoma of the rectum, was exhibited to the association. In his case the disease was so advanced that even this conservative method could not be carried out. He came under observation last October. There was a very large tumor of the rectum, and such great constriction that a probe could hardly be introduced. He was operated upon on November 27th, by the method of Bodine. A permanent fecal fistula was satisfactory only when there was a strong spur holding the protruding segment of the bowel so firmly in the proper direction that the fecal contents would not gravitate into that portion. At the operation a small sterile pad was placed between the intestines and the operative field, and the parietal peritoneum was carefully stitched by a continuous catgut suture to the cut surface of the integument after the manner of a buttonhole. The gut was then brought up into the wound, until five inches on each side of the place where the fistula was to be established had been exposed. The two portions were laid side by side, and, with a running stitch of fine silk, carefully inserted into the muscular walls of the gut, the contiguous surfaces of gut were stitched together, about one inch of space being left between these rows of sutures. The loop was, in part, returned into the abdomen, and stitched to the margin of the abdominal wound, bringing the parietal and peritoneal surface of the intestine into close contact with the margin of the abdominal wound. Forty-eight hours later, under cocaine anæsthesia, a portion of the intestinal wall above the centre of the row of silk sutures was cut away. This artificial spur enabled the patient to control perfectly the evacuations from the fistula.

The next case was that of a man, fifty-four years of age, a native of Connecticut, who twelve years ago noticed after defecation the escape of a few drops of blood from a small projection of mucous membrane, which had been supposed to be a hemorrhoid. It was not until one year later that he consulted a physician, who removed the tumor by ligating it at its base. There was no further trouble for a year and a half, and then the bleeding returned. Six months after this the mass was again tied off, but it once more recurred. In 1896 treatment was begun by the injection of some fluid, of unknown composition. The injections caused much pain and resulted in a sloughing away of some of the growth. On December 13, 1898, the patient came under Dr. Wyeth's care. Digital examination revealed a large mass springing from the anterior and lateral walls of the bowel, which would not permit even the tip of the index finger to enter. The disease was carcinoma, and it was too far advanced to justify a radical operation. The urine contained albumin, hyaline casts, and a large quantity of oxalate of lime.

The next case reported was that of a merchant, forty-three years of age, who came under care on November 13th. Twenty years ago, while in robust health, he acquired a specific urethritis, which resulted in an abscess in the periurethral tissues near the base of the bladder. This abscess discharged into the rectum after a time, giving relief from the pain and fever. It continued to discharge into the rectum for several months, and then gradually healed. Some months after this he first noticed difficulty in defecation. Digital examination demonstrated that at two and one-half inches from the anus there was a cicatricial formation which had reduced the aperture to not more than one-fourth of an inch in diameter. On November 16th, under anæsthesia, a speculum examination showed a cicatricial curtain attached to the upper and lower walls of the bowel. As the urethra was close to this curtain above, it was divided on either side, making an incision through the wall of the intestine as well. A posterior linear proctotomy was then done, dividing as far back as the tip of the coccyx posteriorly. This large wound was packed with sterile gauze to control the hemorrhage. This packing came away three days after the operation, during defecation. Two weeks later dilatation with bougies was begun. The patient was now practically well.

Prolapse of the Bowel and Hemorrhoids.—This patient gave a history of trouble with hemorrhoids for ten years. The tumors increased gradually, and finally he suffered from complete prolapse of the hemorrhoidal tumors with the mucous membrane of the bowel. On November 11th there was such a severe hemorrhage while he was at stool that it nearly cost him his life. When admitted to the hospital on December 13th he was anæmic and weak. Examination showed typical prolapse of the rectum, with a circle of hemorrhoids. It was now proposed to excise fully two inches of the entire circumference of the mucous membrane after the method of Whitehead, which Dr. Wyeth considered a good operation only when there was associated with the prolapsed hemorrhoids a well-marked and long-continued prolapse of the bowel.

Injection of Arsenious Acid into Malignant Growths.—The next case reported was that of a ranchman, thirty-seven years of age, who had been in excellent physical condition up to July, 1897, when he had been thrown from a broncho, injuring the left hip. He was in bed for three weeks, and on crutches for six weeks more. In August of the same year he began to suffer from nausea and vomiting, and experienced dull pain in the right iliac fossa. On incision for a supposed appendicitis, in December, 1897, malignant disease was discovered. On examination by Dr. Wyeth, a tumor was found beneath the line of this previous incision, and projecting from the centre of the scar was a hard, red nodule, apparently a sarcoma. At the man's urgent request, an exploratory operation was done, and the scar tissue in the sarcomatous growth, together with a large sarcomatous mass involving the anterior and posterior wall, was removed with a curette. The wound was packed, and the patient recovered without serious symptoms. Two weeks later treatment was begun by the injection of five to fifteen drops of Fowler's solution of arsenic into the edges of this extensive new-growth. Strange to say, the tumor had materially decreased in size, and at various times portions had sloughed away. The patient's general condition had markedly improved. The sarcoma was attached to the posterior iliac vein. Dr. Wyeth said that ten or twelve years ago he had first made use of injections of arsenious acid in a case of sarcoma of the abdominal wall. It was followed by severe inflammatory reaction, but the man had remained well ever since. He knew of ten or more cases of sarcoma that had been cured by a very violent streptococcus inflammation. In these cases the diagnosis had been established beyond question by a number of microscopists, working independently of one another.

Remarks on Exophthalmic Goitre.—Dr. J. Herbert Claiborne read a paper with this title. He said that three most prominent and constant symptoms were acceleration of the heart's action, exophthalmos, and goitre, and yet it was claimed that both the exophthalmos and the goitre might be lacking.

The disease had been described as an atonic condition of the vasomotor centres of the vagus and spinal accessory nerves. The theory that exophthalmic goitre was due to a derangement in the cervical sympathetic was probably the most generally accepted one. It had been maintained that the lesion in the cervical sympathetic produced a dilatation of the vessels of the thyroid, and those designed for the postbulbar tissues, by a paralysis of the vasomotor nerves of these regions, and that at the same time the constant irritation of the vagus and spinal accessory interfered with the proper inhibition of the heart. In other words, one set of symptoms was explained on the ground of an actual lesion, and the other set by an irritation, which was obviously unsatisfactory. A lesion of the vagus would result in an opposite effect on the heart, *i.e.*, a slowing of its action. Moreover, the cilio-spinal centre would be affected, and there would be certain pupillary symptoms. As such symptoms were not present, this fact seemed to exclude the sympathetic system. Autopsies on certain cases of exophthalmic goitre showed changes in a few instances, but in only a few. Reference was then made to certain other theories that had been propounded to explain the causation of this disease. In this disease there was a lack of association between the upper eyelid and the movement of the cornea in looking downward. This was known as "the Graefe symptom," and had been considered absolutely pathognomonic of exophthalmic goitre. When "Stellwag's symptom" was present, the patient had the appearance of a frightened stag. This was probably due to the retraction of the lids. It was more properly called "Dalrymple's symptom," as the former was really applied to an infrequency of nictitation. The "Fiske-Bryson symptom" was a diminished power in expansion of the chest. Observers were quite generally agreed on the constancy of this symptom. If the Graefe symptom was associated with tachycardia and dilatation of the thyroid, the diagnosis was no longer in doubt. The cause of the exophthalmos had not yet been determined; it was still attributed to the muscle of Müller, which was said to be under the control of the sympathetic. He had noticed that there was generally a set expression of the muscles of the face, and he believed that exophthalmos and retraction of the lids were partly the result of a lack of proper action of the orbicularis. The headache quite frequently present in this disease could often be removed by the correction of the slight degree of hypermetropia present. He did not believe that the muscle of Müller was a factor. The course of the disease was generally slow, and he did not believe that any patients recovered completely. The duration of a recoverable case had been stated to be two or three years, but many patients died of some intercurrent disease, while in others the disease remained stationary. Post-mortem examinations on cases of exophthalmic goitre had been singularly barren of results. The death-blow to the thyroid theory of exophthalmic goitre was to be found in the fact that all of the symptoms may exist without enlargement of the thyroid. The treatment of exophthalmic goitre was necessarily the treatment of its symptoms.

Dr. Francis J. Quinlan said that he had observed cases of exophthalmic goitre only in connection with laryngeal symptoms, produced by pressure from a very large thyroid. The disease was greatly aggravated by shock or emotional excitement. It had been shown by competent observers that there had been an absolute subsidence of the symptoms as a result of cauterization of the turbinates and medication of the vault of the pharynx.

Dr. W. M. Leszynsky said that, in view of the fact that some of these cases presented no exophthalmos whatever, it seemed to him not incorrect to denominate the affection Graves' or Basedow's disease. The toxic theory of the disease had been continually gaining ground, and had now many able supporters. This theory included not only toxæmia from the secretion of the thyroid gland itself, but also from toxins absorbed from the intestinal canal. When the Fiske-Bryson symptom had been first introduced to the profession, he had had an opportunity to study this subject, and he was certain that there was nothing distinctive in this symptom. Certainly this view was quite generally shared by the neurologists of to-day. The diminished chest expansion was no more than was to be expected in such neurasthenic subjects. Personally he had never secured any relief in these cases from the correction of errors of refraction. One danger to which patients suffering from exophthalmic goitre were subject was the exposure of the cornea by the retraction of the eyelids. In his experience, the Graefe symptom had been absent in a large proportion of the cases. He had seen a number of recoveries from this disease, the prognosis being favorable in cases of not very long standing, provided the patients could be properly controlled, and could be kept absolutely at rest. Some patients had been known to recover spontaneously. The prognosis became very bad when the heart was involved. He had seen three deaths in connection with this disease from dilatation of the heart.

Operative Treatment.—In a few of his recent cases a portion of the thyroid gland had been removed by operation. It must be remembered that death not infrequently followed the operation, supposedly from thyroid intoxication. One of his patients had died in this way within a few days after operation, and another had been cured. The statistics from the operative treatment were not favorable.

Dr. Claiborne, in closing, said that he had intended to say that the correction of errors of refraction in these cases only relieved the symptoms due to asthenopia. He objected to the name exophthalmic goitre, because in this disease neither goitre nor exophthalmos was always present.

A Fallacious Test for Albumin of the Urine.—Dr. Ogden C. Ludlow read a paper with this title (see page 3).

Dr. Louis Faugères Bishop said that he had a very high opinion of the nitric-magnesian test. He had employed it extensively for a number of years, and looked upon it as not only capable of revealing minute traces of albumin in the urine, but as a thoroughly reliable and satisfactory test.

Dr. James Cameron Mackenzie said that, while possibly the cold nitric-acid test might not be quite so delicate as the nitric-magnesian, it would be found sufficiently sensitive for all practical purposes if the test was performed in a proper manner. By this he meant that the nitric acid should be first poured into the test-tube, and then the urine allowed slowly and gently to trickle down upon the acid. This was best accomplished by inclining the tube, and then letting the urine flow from a pipette against the side of the tube. This method gave a much clearer and sharper ring of coagulated albumin at the line of contact of the urine and acid than was obtained by the very common but slipshod way of first putting the urine into the test-tube and then introducing the acid to the bottom by means of a pipette passed down through the urine. An experience with the nitric-acid test in many thousand specimens of urine had convinced him that this test was in every way worthy of the confidence of the profession. There was only one possible source of fallacy, and that was in urines of high specific gravity containing a considerable quantity of urates. Here, a white cloud of urates was sometimes observed, precipitated by the nitric acid, but this reac-

tion could be differentiated from that given by albumin by the fact that the precipitated urates form a cloud, or haze, considerably above the line of contact of the acid and urine, and not at this line, as is the case with albumin.

DR. LUDLOW, in closing the discussion, said that he could heartily indorse what Dr. Mackenzie had said regarding the best mode of applying the cold nitric-acid test. He did not wish to be understood as asserting that quantities of albumin in the urine which were too small to be detected by the nitric-acid test were of any special clinical significance, in the light of our present knowledge; but a more delicate test, such as the nitric-magnesian, was nevertheless occasionally useful—notably in those not infrequent disputes which arise between the family physician, his patient, and the examiner for life insurance.

A Gangrenous Appendix.—DR. FREDERICK HOLME WIGGIN exhibited a vermiform appendix that he had just removed from a patient whose condition, although presenting comparatively slight evidence of constitutional disturbance, was really a very grave one. A large abscess had already formed, and the appendix was gangrenous.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

DEATH OF SIR WILLIAM JENNER—CHRISTIAN SCIENTISTS AND PECULIAR PEOPLE AGAIN—ABORTIONISTS—LIGATURE OF THE ILIACS—THE PINEAL BODY.

LONDON, December 16, 1898.

SIR WILLIAM JENNER died on Sunday at his Hampshire residence, nearly at the close of his eighty-third year, for he was born in January, 1815. His death does not seem to create the blank in London consultants that occurred ten years ago when he retired from practice and went to live in the country. We have had to do without him during these ten years, and he had assumed, even to those who remembered him well, a somewhat historical aspect. Nevertheless, his decease, though expected, calls out fresh regret, and wherever we meet he is the subject of our conversation. Perhaps to you across the Atlantic his figure may loom up as a medical classic, and some may feel almost surprised that he only this week died. That is the feeling expressed here by some of the junior members of the profession—young men who have learned from other teachers what were the views that he taught and the work that he did.

Jenner took the M.D. Lond. in 1844. In 1849 he contributed to the *Edinburgh Medical Journal* the paper on fever which was reprinted the following year. He had followed up the work of the late Dr. A. P. Stewart in separating typhoid and typhus, and carefully worked out a series of cases proving the distinction between the two diseases. In 1852 he became physician to the Hospital for Children; in 1853, physician to the Fever Hospital; and the following year to the University College Hospital, where he had previously held minor offices. Here it was that he established his great repute as a teacher. He was "no orator," or at least no rhetorician; he was not as fluent a lecturer as many, but he had a way of conveying to his pupils facts and principles in words they could not easily forget. Scattered all over the country are men who for years have spoken of him with reverence and affection as "our great clinical teacher," and who are this week mourning that at length his long life has closed. He dies "full of days" and full of honor. His funeral is to-day.

To shine on such a brilliant staff as University then had was no slight distinction. To be recognized as the teacher among such a list of professors would alone be proof that his emphatic, forcible, nay even dogmatic manner impressed young men with confidence that he knew from his own researches and experience what he was telling them, and that he was devoting all his power to make them understand.

Jenner did not attain the highest rank without hard work and long waiting. In his early days he was a general practitioner, and after becoming a physician and teacher he had to feel the *res angusta domi*. He wrote articles for the journals and conducted for a short time the *Medical Times and Gazette*—since defunct. When his lectures were appearing in that paper, I was chatting with him on its prospects, and he told me he had written nearly the whole of the current number himself.

His attendance on the Prince Consort brought his name prominently before the public, and as he had so thoroughly established his views on fever every doctor, on being asked about the Prince's case, was able to assure the inquirer that he was in the hands of the greatest authority. A little later Dr. Jenner was in the full tide of success as a consultant. He was physician to the Queen and Prince of Wales, was made a baronet, a K.C.B., and eventually a G.C.B. Probably he might have been the first medical peer had he been wealthy enough. He had a son, and the succession to a peerage requires money. He was F.R.S. For seven years he was president of the Royal College of Physicians, a term exceeded only once in modern times. The repeated re-elections show what a hold he had on the fellows of the college. Oxford, Cambridge, and other universities gave him honorary degrees.

Since his retirement Sir W. Jenner reissued those of his lectures and essays which he had any desire to preserve; but there are many contributions to journals and societies which deserve collecting by his followers and admirers.

The "Christian Scientists" who were charged with the manslaughter of Harold Frederic were discharged on Wednesday, the prosecution offering no evidence. The judge explained to the jury that it was not his fault that the case was not tried. If he had been supplied with the depositions taken before the coroner or the magistrates, he might have assented or dissented; as they were not referred to him, he could do neither. The prisoners have accordingly escaped punishment; but this will hardly be a precedent, for the "Peculiar People" case has ended in a verdict of guilty, with a sentence of four months' hard labor. In this case the judge said he need not discuss the tenets of the prisoners; it was enough to say that they conflicted with the law which determined parental obligation. There were people who conscientiously thought that weakly or deformed children should be left to perish for the benefit of the race, and if the views of the Peculiar People were allowed as an excuse for breaking the law those others would claim equal treatment.

This is no doubt good law, but the contrast of the result in the two cases reminds one that justice does not always tread with equal steps. Here is a man who let his child die rather than avail himself of medical help, because he believes the text on which he relies forbids him, and he is too ignorant to understand any other interpretation and too obstinate to learn. But with all his fault as a parent he does not exploit his opinions for what he would consider "filthy lucre." On the other hand, there are people profaning the words Christian and science by monstrous pretences and professing to heal diseases by occult methods, and for money. Which is the criminal—the conscientious objector or the money-getting impostor?

There has been increased activity in tracking abor-

tion-mongers lately. Perhaps the conviction of Collins and that of Whitmarsh partly account for this. The contrast in the sentences of these two convicts has given rise to great dissatisfaction, and a case that has since been tried accentuates the demand for equal treatment of the same crimes. Another medical man was tried last week on the accusation of a woman, but he was acquitted, and his neighbors were so convinced of his innocence that they gave him quite an ovation on his return home.

"Accessory before the fact" has not a very pleasant sound, and some conductors of newspapers have been evidently disturbed since it was suggested in the course of a trial that the publication of abortionists' advertisements might give rise to such a charge. It is intimated that the hint is likely to be followed up, and some of the papers are more careful as to what they admit. But the worst offenders are still open at a high scale, and it is to be hoped a few will be put in the dock. The blackmailing case has opened the eyes of many to the iniquity of these incitements to abortion by advertisements of quacks and other scoundrels, and the time for action seems to have come.

On Monday Mr. Bernard Pitts brought before the Medical Society two cases of ligature of the iliacs. One was in a man forty-one years of age with a swelling on the right buttock which was taken for either pulsating sarcoma or aneurism. The operation was begun for tying the internal iliac, but it could not be found, and what was thought to be the common iliac was therefore ligatured. Pulsation continued, and it was found that the internal artery ran an abnormal course. This was then tied, and pulsation ceased in the tumor, which proved to be a sarcoma, but the patient lived until amputation was required for spontaneous fracture of the femur, and died a year later from congestion of the lungs.

In the second case a gentleman who had had a number of abscesses in various parts had one in the right groin, followed by recurring hemorrhages. As the internal was embedded in inflammatory products the common iliac was tied with stout silk. A year later suppuration recurred and the ligature was discharged. The man is now well. Mr. Cripps thought the ligature had been too thick; hence the trouble. Mr. Ballance said that specimens in St. Thomas' Hospital museum showed that in one case a ligature from an ovarian operation was absorbed, except the knot, in eighteen months, and in another everything had disappeared in three years. Dr. Brunton said silk ligatures often contained an admixture of jute.

At the Pathological Society there was quite a collection of lesions of the pineal body, no less than ten specimens being exhibited by the members. Most were cystic, but there was glioma, sarcoma, syphilis, etc. The symptoms were those of pressure on adjacent parts, and in no way suggested that this body separated an internal secretion. Cyst formation is not uncommon in rudimentary bodies.

Gastric Ulcer.—Paint it with iodine by having the patient take five drops of the tincture in a wineglass of water three times a day. Professor T. R. Fraser, of Edinburgh, has adopted a modification of this treatment. He gives chromic acid, or, to speak more correctly, bichromate of potassium. The dose he employs of this salt is one-twelfth of a grain three times a day. He states that it should be given fasting, and in as empty a condition of the stomach as possible. It is usually given in a pill or in simple solution in water, flavored with orange. I have used this method of treatment largely and can confirm Professor Fraser's statement, but I prefer the tincture of iodine.—WILLIAM MURRELL, *The Therapist*, September 15th.

Therapeutic Hints.

Diet in Gout.—The conversion of azotized food is more complete with a minimum of carbohydrates than it is with an excess of them—in other words, one of the best means of avoiding the accumulation of lithic acid in the blood is to diminish the carbohydrates rather than the azotized foods.—DRAPER.

Gynæcologic Teachings.—Give iron when the menses are scanty and lack color; give arsenic when the flow is too profuse, prolonged, or frequent.—FORDYCE BARKER.

Chronic leucorrhœa of long standing can be cured only by persevering in frequent local use of astringents through a speculum, together with hot vaginal injections.—MUNDÉ.

All pelvic congestions are venous, and the term "chronic inflammation," so far as it applies to the organs in that cavity, is a misnomer, because the arterial vessels are not involved in that process.—EMMET.

The most common displacement of the ovary is dislocation downward into the retro-uterine pouch, to which the name of prolapse has been improperly given.—TAIT.

Cancer of the womb usually begins on the vaginal portion of the cervix, and consequently has to bear the brunt of the insults of coition and parturition.—GOODELL.

Tepid vaginal injections, so generally recommended and inadvertently used by patients in place of hot injections, have no positive therapeutic effect whatever.—BARNES.

Treatment of Snake Bite.—Treatment is general and local. The Australians were first to use nitrate of strychnine intravenously. It is given this way hypodermically every twenty minutes until its physiological effects are produced, or until coma is overcome. Hypodermic injections of alcohol, digitalis, atropine, and nitroglycerin are all more or less beneficial. The wounds produced by the teeth should be injected with a one-one-hundredth-per-cent. solution of chromic acid, as should the surrounding swollen parts also. Chloride of gold or permanganate of potassium may be substituted for chromic acid. Massage of the swollen parts is highly beneficial, as are also washing out the stomach and the use of diuretics and diaphoretics. Jaborandi is also one of the most efficacious remedies.—B. MERRILL RICKETS.

Remedies for Acute Otitis Media.—Politzer in the latest edition of his text-book mentions the following as appropriate remedies: (1) Acetate of morphine, 0.2; olive oil, 10; applied as drops to the affected ear. (2) Oil of hyoscyamus, two and one-half drachms; aqueous extract of opium, twelve grains; as ear drops. (3) Opium salve; externally to mastoid and along canal. (4) Olive oil and chloroform, equal parts; as ear drops. (5) Aqueous extract of opium and water, equal parts; put in the ear. (6) Ten-per-cent. carbolized glycerin. (7) Five-per-cent. cocaine; in the nose, so as to reach the Eustachian tube, opening and influencing the ear from this direction. (8) Warm poultices to the whole aural region. (9) Tincture of opium and water in varying proportions; in the ear as drops. (10) Cover the whole head with hot moist cloths. (11) Anodynes internally. (12) Leeches in front of and behind the ear.

Intestinal Hemorrhage in Typhoid Fever.—In the vast majority of cases when hemorrhage occurs during typhoid fever, there is a history of the patient having walked around during the illness. When there is free hemorrhage from a vessel I believe ergot does harm.

It raises arterial pressure and thus increases the hemorrhage. Calcium chloride is worth trying in these cases. Give it in five-grain doses, well diluted in water, every two or three hours. This drug decreases hemorrhage by increasing the coagulability of the blood.—HARE.

Painless Vesicant Plaster.—

℞ Menthol,
Chloral hydrate.....āā 1
Spermaceti..... 4
Ol. theobrom..... 2
S. Spread on piece of linen.

In Hemorrhoids.—

℞ Extr. fluid. hamamel. virgin.,
Extr. fluid. hydrast. canadens.,
Tinct. benzoini comp.....āā 16
Tinct. belladonnæ..... 4
Ol. olivæ carbolisat. (five per cent.)..... 32
S. External use.

—ADLER.

In Bronchorrhœa.—

℞ Acid. benzoic..... 0.3
Tannin..... 0.15
For one powder. Give four times daily.

—MARAGLIANO.

Follicular Tonsillitis.—

℞ Trichloracetic acid ..... gr. iss.
Sodium ..... gr. iiiss.
Iodide of potassium..... gr. viiss.
Glycerin..... ʒ iss.
Distilled water ..... ʒ iiss.
M. S. After incising, paint with the above.

—*Gazzetta degli Ospedali e delle Cliniche*, August.

Tetany of Gastro-Intestinal Origin.—

℞ Bismuth salicylate ..... gr. ivss.
Benzonaphthol..... gr. iiss.
Sugar..... q. s.
M. Four such powders to be taken in twenty-four hours.

℞ Potassium bromide..... gr. xlv.
Chloral hydrate ..... gr. xv.
Distilled water ..... ʒ iij.
Syrup of bitter-orange peel ..... ʒ iss.
M. S. Three dessertspoonfuls to be taken in a day. For a child two or three years of age.

—TORDENS, *Progrès Médical*, June 25th.

Epilepsy.—

℞ Sodii bromidi,
Potassii bromidi,
Ammonii bromidi .....āā gr. v.
Syr. aurantii..... ♏ lxxv.
Aq. destill.....q.s. ad ʒ ss.
M. S. Three times a day for a child ten years old.

—FREYBERGER.

Gastro-Intestinal Choleriform Catarrh.—During the acute stage and before stupor comes on or collapse is threatened:

℞ Creasoti ..... ♏ xij.
Tr. opii camph ..... ʒ ss.
Bismuthi subnit..... ʒ iij.
Pepsini (scales) ..... ʒ i.
Syr. aurantii cort..... ʒ ss.
Aquæ menth. pip.....q.s. ad ʒ iij.
M. S. Teaspoonful every two hours for a child one year of age; vary with age and severity of symptoms.

Move the child to the country in summer whenever possible, especially if under three years of age. Do not think it necessary that food be given during the height of the disease; it is better to give no nourishment for twenty-four hours than to risk aggravating symptoms. Be in almost constant attendance on the patient. Give stimulants from the beginning, but no opium if the least sign of stupor presents, especially not hypodermatically. The strictest hygiene must be observed. —EDWARD L. DAVID.

Dysentery.—If the ipecacuanha dose has acted efficiently you will not be left in doubt of that fact, because, after the lapse of five or six hours, the patient will void a very large pultaceous feculent motion of about the consistence of porridge, and not unlike it in color. This we know by the name of "ipecacuanha stool," which is quite characteristic, and may be regarded as the signal that treatment has conquered.—JOHN ANDERSON.

Corneal Ulcer.—

℞ Santonin ..... gr. i.
Hydrarg. chlor. mit..... gr. iv.
Sacch. lact..... q.s.
M. ft. cht. No. iv. S. One every hour, and then a dose of castor oil, and restrict the diet.

—HANSELL.

In Convalescence as Tonic.—

℞ Liq. arsenici chloridi ..... ʒ ss.
Tinct. ferri chloridi..... ʒ iss.
Cinchoninæ sulphatis..... ʒ ij.
Strychninæ sulphatis..... gr. ij.
Syrupi,
Aquæ .....āā q.s. ad ʒ vi.
M. S. Teaspoonful in water three times a day before meals.

Chronic Gastritis.—

℞ Infus. rhei ..... ℥ ss.
Tinct. gentian..... ♏ xxx.
Sod. bicarb..... gr. x.
Spir. chloroform..... ♏ x.
Aquæ menthæ pip.....ad ʒ i.
M. S. To be taken before meals.

—CARPENTER.

In Acute Rhinitis.—

℞ Cocainæ muriat..... 0.2
Mentholi..... 0.1
Sacch. lactis..... 3
M. S. A small quantity to be blown into the nostrils.

—SAENGER.

In Acute Gonorrhœal Cystitis.—

℞ Sodii biboratis 20
Sodii bicarbonatis..... 10
M. S. Two teaspoonfuls in a litre of lemonade to be taken in the course of a day.

—BALZER.

In Gout.—

℞ Lycetoli 1
D. tal. dos. x. S. One powder three times a day in sweetened seltzer water.

—JAHN.

In Gonorrhœal Arthritis.—

℞ Sodii salicylatis..... 10
Sodii bicarbonatis..... 30
M. S. Two teaspoonfuls in one litre of lemonade.

—BALZER.

For Cancer of the Uterus, when inoperable, to ward off hemorrhage, fetid leucorrhœa, and pain, and to prolong life:

℞ Arsenious acid..... gr. iv.
Cocaine ..... gr. xx.
Water..... ʒ iiiss.
Inject a syringeful into the growth two or three times a week.

—HUE.

Acute Diarrhœa.—

℞ Sodium bicarbonate ..... ʒ i.
Aromatic spirit of ammonia ..... ʒ iij.
Compound tincture of cardamoms..... ʒ vi.
Cinnamon water..... ʒ vi.
Dose: Two tablespoonfuls every two or three hours.

—DR. BURNEY YEO.

Phototherapy.—In treating measles Chatinière (*Presse Méd.*, September 10th) has reported good results in four cases by excluding all light excepting the red rays from a photographic lantern. The eruption is said to disappear promptly, followed by rapid recovery.

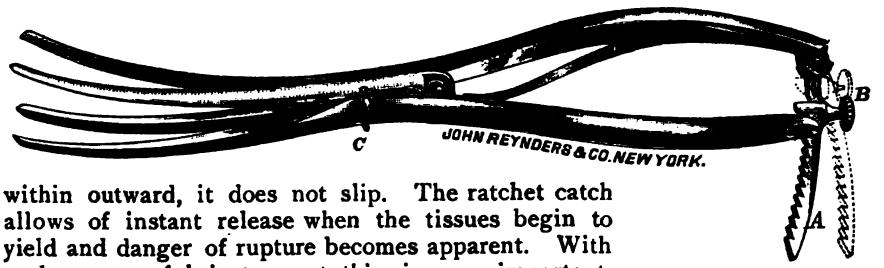
Sleep.—I would always rather hear that a sick person had slept than that he had taken regularly the prescribed medicine during the sleeping hours.—SIR BENJAMIN W. RICHARDSON.

New Instruments.

A FOUR-BLADED UTERINE DILATOR.

By O. S. PHELPS, M.D.,
NEW YORK.

I AM so well pleased with the uterine dilator shown herewith that I feel prompted to call general attention to it. The idea of dilating in four directions, as compared with bilateral dilatation, will readily appeal in a certain class of cases to the practitioner. This instrument is very powerful, and, as it dilates from within outward, it does not slip. The ratchet catch allows of instant release when the tissues begin to yield and danger of rupture becomes apparent. With such a powerful instrument this is very important, as it must respond immediately to a highly trained delicacy of touch. For wide dilatation to permit of exploration of the uterine cavity with the finger, I think this four-bladed dilator will be found most serviceable.



Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 30, 1898:

	Cases.	Deaths.
Tuberculosis	126	173
Typhoid fever	18	9
Scarlet fever	141	11
Measles	142	9
Diphtheria	155	25
Laryngeal diphtheria (croup)	16	11
Cerebro-spinal meningitis	0	11
Chicken-pox	11	
Smallpox	3	

A Wonderful Operation.—The following veracious story appeared recently in an English weekly journal: "Yes, sir," said the American surgeon, "I have performed some wonderful operations. Perhaps the most surprising and most successful was after a railway accident. One of our prominent citizens was absolutely disembowelled by a fragment of the car. I was on the spot. There were some sheep grazing near by, and in a moment's time I had transferred the inside of one of those sheep to the palpitating form of the man and sewed him up!" "That man recovered, sir?" "Yes, sir; and he had lambs in the spring."

Quackery at the Cape and its Punishment.—Freedom as understood over here and at the Cape differs widely. Here any ignoramus can treat patients and receive money for so doing, without let or hindrance. The treatment may be something tangible, as in the case of massage houses, or it may mean nothing at all, as in the case of the "Christian scientists." Now in democratic South Africa they will not stand this sort of thing. Only recently a laborer was charged with practising without having a license, as required by law. A gentleman who suffered from internal pains was treated by the defendant, who gave him a medicine composed of herbs, and he soon got better. The witness' father gave defendant a heifer as a fee. Another patient said that the defendant had treated him but that he got no better. He had promised to give him a heifer, but as he did not get better he didn't pay. Eventually the defendant was fined £5 ($25).

Suicidal Mania Among the Unmarried.— An English weekly journal says that advocates of early marriage will be pleased to learn that bachelors and spinsters are far more liable to suicidal mania than husbands and wives. For instance, during the five years ending December, 1896, the total number of suicidal patients admitted between the ages of twenty and twenty-four was four hundred and twenty, of whom no fewer than three hundred and fifty-five were single. On the other hand, those who believe that the weather affects the mind will probably be surprised to learn that the maximum number of sixty-three patients per diem is admitted during the month of May, while the minimum daily number of fifty-two only in reached in November of each year.

A Governor's Opinion.—Governor Adams, in his opening address before the American Medical Association, said of physicians: "With all their ability they are as modest as they are skilful. Doctors are ever tolerant, indulgent, and generous, unless called to consult with a member of some rival school. There are several systems of medicine and curing, and my experience with legislative bills relating to recognition and practice has given birth to a suspicion that the first principle of each school is that the others ought to be abolished, compelled to cease work, or go to jail. Personally, my condition has much to do with my faith in schools and systems. When I feel lonesome and forsaken; when the newspapers, the politicians, and the disappointed turn their pens, tongues, and scalping knives upon me, just because I was not so wise as they would be in the conduct of my office and in making appointments; then I feel the need of the soothing, sympathetic treatment of the Christian scientist and faith cure. When, in what you might call the loafing, novel-reading degree of invalidism, I call to my homœopathic friends. Their remedies seem as pleasant as their gentle touch and manners; their dissertation upon the powers of atoms is as fascinating and convincing as a chapter from Tyndall or Hugh Miller. But so powerful is the influence of youth and early training that when I am stricken with a real ache and feel that there may be a call to close my account, I send for the old regular calomel doctor, and I want him quick."—*The Atlantic Weekly.*

The Hour of Birth and of Death.—From an analysis of 36,515 births and 25,474 deaths, in which the time of day was accurately noted, Dr. Rasovi (*Klinisch-therap. Wochenschrift*, No. 43, 1898) concludes that the maximum number of deaths occurs during the afternoon hours (between two and seven o'clock), and the minimum in the hours before midnight. The time of the maximum number of deaths corresponds to the hours during which, in the healthy person, the pulse frequency and the body temperature are at their height. He attributes the fact that the maximum number of births takes place in the early morning hours to two causes: (1) During these hours the accumulation of CO_2 in the body reaches its height, because oxidation takes place slowly, and under the influence of bed rest and warmth the CO_2 is slowly eliminated; and as

a result of the diminished blood pressure at this time there is an accumulation of CO_2 in the uterine venous plexus. (2) The inhibitory action of the cerebral and spinal centres on the sympathetic system is less marked at night, so that the impulses of the latter are expended with greater effect. The inhibitory power of the central nervous system is at its height during the early afternoon hours, or at the time when births are least frequent. The writer also claims that the early morning frequency of asthmatic and epileptic attacks may be ascribed to the diminished inhibitory action upon the sympathetic system at this time.

Birth of a Fœtus per Vias Naturales in a Case of Extra-Uterine Pregnancy.—This very rare instance of an extra-uterine gestation terminating in an almost normal delivery is reported by Dr. Malinowski (*Meditsinskoye Obosrenye*, 1898, Bd. xlix., Heft 2) as occurring in a multipara, thirty-eight years old. When examined at the time of labor, the abdomen presented, besides a large median tumor corresponding to the pregnant uterus, a smaller one situated close to the former and on the right side. As the patient was exhausted and the pains were feeble, forceps were applied to the already presenting head to hasten delivery. Being unable thus to extract the fœtus, the writer resorted to perforation of the cranium. Even after the removal of the child, the smaller tumor maintained its original size and form; so the writer inserted his hand into the uterus, but found it empty. He then traced the umbilical cord to the right Fallopian tube, the uterine opening of which was dilated to such a degree that it easily admitted the hand. Here in the distended tube lay the placenta, which was extracted without difficulty. Recovery was complete and uneventful.

The Medical Profession and its Drawbacks.—At the opening of St. George's Hospital School in London, on Saturday, October 9th, Mr. G. R. Turner, surgeon to that institution, in delivering the introductory address, gave so true an account of the present position of the medical man, that although the remarks were intended to apply to the profession in Great Britain, yet many of his words can be applied with equal force to those of the same class here. So much has been said and written on the subject of late, that it may be thought it is in danger of being overdone, but at the same time the fact should be borne in mind that it is only by thus ventilating the matter and by continually bringing the existing abuses before the eyes of the public at large and of the medical profession in particular that there will be much chance of healthy reforms being undertaken. Referring to the gratuitous work done by medical men, Mr. Turner said that inquiry at the various metropolitan general hospitals, which yearly spent nearly $2,500,000, proved that a total sum of under $65,000 was paid to the medical men, resident and non-resident—that is to say, a little more than two and one-half per cent. of the money expended. Only four hospitals paid anything to their visiting staff, and the other eight paid a trifle to thirty-eight out of their two hundred and forty medical officers. So-called pay hospitals were too much patronized by the comparatively rich, whose fees were thus stopped from entering the pockets of the general practitioner. Evidence at inquests and multitudinous certificates were constantly given by medical men, without fee or reward, though in such giving their reputation was at stake. The law demanded this gratuitous, irksome, and responsible work from young hospital officers. What other profession was required by law to work for nothing? The profession was infested by quacks, forestalled by prescribing chemists, sweated by clubs and medical-aid associations, and the hospitals that were so largely and gratuitously served by its members lent themselves, however careful might be their supervision, to an abuse that diverted many a fee from the struggling practitioner. A medical man must look for his compensation to be other than pecuniary—the consciousness of work well done, even if unappreciated, the knowledge that he has relieved suffering and distress. The modern medical man was deserving of more respect than he obtained, and now that his services on the score of charity were demanded and not requested, it was his duty to resist these claims and to see that an abuse, admitted by all, was not allowed to spread. Reform was urgently needed in the relations of the profession with the outside public. Although, as we have said before, there is a difference in the conditions ruling matters medical in this country and in Great Britain, yet Mr. Turner's remarks referring to the large amount of gratuitous work done by medical practitioners will touch a responsive chord in the breasts of many professors of the healing art in America. This will be especially so with respect to the abuses of the pay-hospital system, where the evil is much more prevalent and widespread. However, after all, the remedy is in the hands, at least to a large extent, of the medical profession itself. If its members will band together and determine to stand up for their just rights, much can be done, and the hordes of quacks and Christian scientists, which now infest the land, will soon be compelled to hide their diminished heads.

An Indian Doctor's Advertisement.—The following account will give an idea of the manner in which the pious Hindoo or Mohammedan, as the case may be, who has become the proud possessor of a British qualification, makes use of the same when he returns to his native heath. This copy of a placard, which has been put up on all the principal roads and at all the public places in Lucknow, was printed in the *Indian Medical Gazette*:

"Dr. M. S. Varis, M.B., C.M. Edin., consulting physician and surgeon. Consultation, all hours free, 9–11 A.M. Share Darvoza.

"Notice.—Dr. Sayad Mahomed Varis, surgeon. 'Good news to thee, O heart; a Jesus-like man has come.' Be it known to the seekers after bodily health and to those in the clutches of deadly diseases that the Aristotle of the times and Galen of the universe, Dr. Sayad Mahomed Varis, M.B., C.M., after learning the art of medicine and practising it in Great Britain, has come to this town (Lucknow). He studied for six or seven years in modern Athens, viz., Edinburgh, which is the capital of Scotland, and he obtained the diploma of a physician and surgeon; and there for three years he established himself in practice and performed Christ-like miracles. It is our good fortune that he has established himself here. It is hoped that whosoever will apply to him for treatment will fill his pocket with pearls of health. He lives close to Kaisar Bag, near Share Darvoza, opposite the telegraph office, in house No. 1. Patients can consult him all day."

The Hygiene of the Theatre in England.—"We learn," says *The Lancet*, "that the authorities at Drury Lane Theatre, acting on the advice of Mr. Edwin O. Sachs, are setting the example of improving the hygiene of the mysterious regions of the theatre behind the curtain, by introducing constructional ironwork to replace woodwork as much as possible, and wire cables to replace the ropes. This should materially affect the accumulation of dust on the stage. The propelling power which Mr. Sachs has introduced is to be electricity, and a great deal of manual labor will henceforward be avoided, and thus the overcrowding of the stage should be less. To-day a pantomime requires some one hundred or one hundred and fifty

stage hands alone, quite irrespective of property men, and improved forms of stage construction are already being employed on the European continent, hydraulic power being in general use. The dampness occasioned by the constant leakage of water has, however, in Mr. Sachs' opinion, counterbalanced some of the benefits of improved construction, but he hopes that the substitution of electricity will obviate this defect. The hygiene of the stage is somewhat neglected, and the amount of illness among the employees, especially in the provinces, is particularly heavy. We are all concerned in improvements which make the theatre warm and wholesome and airy for the audience, but we are apt to forget that the producers of our entertainments have arduous work to do, often in a very unsatisfactory environment."

Pay Wards in Brussels Hospitals.—According to the report of the Conseil des Hospices in Brussels, it appears that last year nearly eleven hundred persons were admitted to the public hospitals as paying patients, the tariff varying from three francs to fifteen francs per diem, for which everything, including professional services and even important operations, was provided. The total amount received last year was seventy thousand francs. The medical journals are beginning to complain that the system of admitting paying patients is very unfair to medical men, and that reform is needed, which must take one of the following shapes: (1) The total abolition of paying wards, or (2) the permission for paying patients to select their own professional attendants, who must be allowed to have free access to them. It is suggested that the Brussels College of Medical Practitioners should take the matter up.—*Lancet.*

The Use of Morphine in Bright's Disease.—*The Lancet* says: "In 1873, in the New York MEDICAL RECORD, Dr. Loomis stated that he had treated uræmic convulsions by the hypodermic administration of morphine, with marked success; in *The Lancet* of August 3 and 10, 1889, Dr. Stephen Mackenzie confirmed his conclusions. At the recent annual meeting of the American Medical Association Dr. Sydney Ringer, of London, read a paper on this subject, "The Use of Morphine in Bright's Disease," which was published in the *Journal of the American Medical Association* on October 8th. Dr. Osler writes concerning uræmia: 'For the restlessness and delirium morphine is indispensable. Since its recommendation by Stephen Mackenzie I have used this remedy extensively, and can speak of its great value in these cases. I have never seen ill effects or tendency to coma follow.' Dr. Ringer entirely confirms these statements. He finds that morphine hypodermically employed is of conspicuous benefit in uræmic dyspnœa and in uræmic asthma. But of course dyspnœa due to dropsy of the lung or fluid in the chest is not benefited. Also the headache and sleeplessness of uræmic patients can generally be removed. Dr. Ringer has not employed this treatment in uræmic convulsions or coma, but has largely used it for other uræmic troubles, and is certain that it may be employed in these cases, without risk and with even prospect of benefit."

Two Brigades of Artillery Poisoned in Italy.—At Brescia some thirty soldiers of the sixteenth artillery, having had their usual supper, were immediately thereafter seized with violent abdominal pains accompanied by vomiting. Verdigris in the cooking-utensils was at once suspected, but no trace of it was to be found, and the food prepared and served in the same apparatus was next evening followed by the same symptoms. The food itself was next analyzed, but no deleterious matter was detected in it. Poisoning, however, of a serious kind there has undoubtedly been, and, pending still more searching inquiry, the medical officers of the regiment suggest that the "pasta" or farinaceous element in the rations has been partially acidified, probably by the urine of rats in the storerooms—a cause not unknown in barrack experience. Such "accidents" as the above are all too frequent in Italy. Mushroom poisoning is of more than weekly occurrence from the consumption of doubtful or deleterious fungi among the lowest classes too poor to be fastidious or even careful. Ptomain poisoning due to the ingestion of unsound fish destroyed nearly a whole family in Florence not so long ago, and infective pneumonia communicated from parrots became wellnigh epidemic in Genoa till the Uffizio di Sanita stamped it out by a veto on the harboring of these household pets.—*Lancet.*

A Public-Spirited Medical Man.—Dr. Calmette, Pasteur's well-known pupil, who was recently appointed as chief organizer of the Pasteur Institute at Lille, and who has won much fame by his researches into the question of immunity for serpent venom, has made another discovery of a more purely commercial nature. By this discovery he was enabled to manufacture alcohol very much purer and stronger than is usual at a distillery, and at the same time much more cheaply. He sold his secret to a large factory near Lille, and very soon realized the handsome sum of 250,000 francs. This sum he has handed over absolutely to the Pasteur Institute, over which he presides, although he is not personally a wealthy man. This act of munificence, which has been noticed solely by the medical press and ignored by the political journals, is considered as a protest against the recent action of Dr. Behring.—*Lancet.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending December 30, 1898:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Colorada, Pueblo	December 10th to 17th	4	1
Kansas, Hillsboro*	December 24th	9	
Newton	December 24th	2	1
Seneca†	December 24th	1	
Kentucky, Louisville‡	December 21st	1	
New York, New York City	December 24th	1	
Oklahoma, Guthrie§	December 17th	4	
Pennsylvania, Bedford	December 20th	9	
Enid, Fulton County	December 20th	Present.	
Robertsdale, Huntingdon County	December 20th	Present.	
Tennessee, Memphis	December 20th	1	
North Carolina, Wilmington‖	December 24th	1	
Virginia, Norfolk¶	December 24th	7	

* Reported as imported from Russia.
† A member of the Seventh California Volunteers.
‡ Origin not known. § Total to date five.
‖ Workman employed on repairs at Marine-Hospital station; origin of disease unknown.
¶ Unofficially reported that five cases were sent to county pest-house from the village of Berkeley.

SMALLPOX—FOREIGN.

Belgium, Antwerp	December 4th to 12th	3	4
Brazil, Bahia	November 19th to December 3d.	46	3
Rio de Janeiro	November 4th to 18th	30	11
Equador, Guayaquil	November 4th to 12th	..	1
India, Bombay	November 22d to 29th	..	1
Italy, Rome	November 5th to 12th	..	1
Russia, Moscow	November 25th to December 3d.	13	4

YELLOW FEVER.

Brazil, Rio de Janeiro	November 4th to 18th	8	5
Mexico, Vera Cruz	December 8th to 15th	..	4

PLAGUE.

India, Bombay	November 15th to 22d	..	33
Bombay	November 22d to 29th	..	43
Madras	November 19th to 25th	..	1

CHOLERA.

India, Calcutta	November 5th to 12th	..	2
Madras	November 19th to 25th	..	5

DYSENTERY.

Japan: During the period from October 21st to November 17th there were 9,746 cases of dysentery and 2,856 deaths. The entire empire now seems to be saturated with the poison of this disease, and its annual recurrence may be fairly anticipated.

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Original Articles.

PERSONAL EXPERIENCE WITH BOTTINI'S OPERATION IN THE RADICAL TREATMENT OF HYPERTROPHY OF THE PROSTATE.[1]

BY WILLY MEYER, M.D.,

PROFESSOR OF SURGERY AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL; ATTENDING SURGEON TO THE GERMAN AND NEW YORK SKIN AND CANCER HOSPITALS; CONSULTING SURGEON TO THE NEW YORK INFIRMARY.

MR. PRESIDENT AND GENTLEMEN: To-night I want to lay before you the experience which I personally have had so far with Bottini's operation for the radical treatment of the hypertrophied prostate. Perhaps some of you will remember that in the early part of this year (March 5th) I published an article in the NEW YORK MEDICAL RECORD on Bottini's operation. In it I dwelt at length on the history, necessary instruments for, and the technique of the operation. I also mentioned the great merit of Dr. A. Freudenberg, of Berlin, in having revived and improved this operation, which had been known to the medical profession for the last twenty-two years.

At the time of publication of my article my personal experience with the multiple galvanocaustic division of the prostate was rather limited. I had then operated four times upon three patients:

CASE I., a man, fifty-eight years of age, with a very small prostate on rectal palpation, but clearly a prostatic on cystoscopic examination, who urinated every fifteen to thirty minutes day and night with most excruciating pains, was subjected to the operation twice, on October 7th and December 18th. At the first sitting Bottini's original incisor, manufactured by the firm of W. A. Hirschmann, of Berlin, was used. Its platinum knife was heated by too small a storage battery, the best I could get here for the purpose at the time. The grooves through the prostate, it appeared to me later, were also cut rather fast, certainly much faster than I cut them now. These conditions may have been the reason for the imperfect result obtained from the first operation; for, six weeks afterward the patient urinated just as often as before, however without any pain. After four weeks more he passed water not quite so often as before in the daytime; at nights, only three to four times. Residual urine had not decreased. The second operation was performed with Freudenberg's modified incisor, made by R. Kiss, of Berlin, and an imported storage battery. Eight weeks later the patient was very much improved. Personally he considered himself cured. He voided the contents of his bladder four to six times during the day, once only during the night. He had no pain whatever, had greatly improved in weight and general strength, and was back at work. Still, on examination, there was a residual urine of 180 c.c. (before the operation voluntary urination had been 25 c.c.; residual urine, 300 c.c.).

On October 20th, two weeks ago, the patient again presented himself at my office. He stated that he urinated four times during the day, two or three times during the night; there was no more pain during or after micturition. He felt well. He had emptied his bladder half an hour before I saw him. When requested to try again, he passed 5 c.c. and the catheter withdrew 250 c.c. The urine was still somewhat murky. Irrigating water returned clear after two washings. Of 200 c.c. then injected the patient passed 75 c.c. voluntarily.

The patient certainly is very much improved. The amelioration of the different symptoms is entirely due to Bottini's operation, because, in conformity with the patient's wish, no after-treatment had been employed.

It is of interest that this man, who was only improved by Bottini's operation, nevertheless got rid of the principal subjective symptoms, viz.: tenesmus and frequency of calls. The explanation for this fact would seem simple: by cutting with the galvanocaustic knife through the sphincter vesicæ muscle and its immediate neighborhood at different spots, this muscle is put at rest. Its irritability ceases; that means, the frequent calls stop; it cannot contract spasmodically any longer, consequently the tenesmus disappears. The effect of Bottini's operation in this respect, it seems to me, is the same as the forcible stretching or the cutting of the sphincter ani muscle in cases of fissure. Very much, of course, is gained therewith for the patient. He considers himself cured. But the doctor cannot pronounce him so as long as he has residual urine. The removal of this objective symptom is imperative. That we are able to do this, also by Bottini's operation, was nicely demonstrated in one of Freudenberg's patients, who had suffered from complete retention for five years and was operated upon three times. The first operation had no effect whatever. After the second the man began to urinate, but still had to use the catheter twice in twenty-four hours. After having submitted to a third operation five months later, he could lay aside his catheter. Seven and one-half months after this last operation he urinated four to seven times within twenty-four hours, and his vesical catarrh had completely disappeared.

I have now advised my patient to undergo a third operation.

CASE II., that of a man seventy-three years of age, was a desperate one. He suffered terribly without cessation, and appeared to be extremely weak, not far from death's door. Yet, in view of the fact that the operation does not require general anæsthesia, but can be performed under the local administration of cocaine, better eucaine, I thought he would be able to stand it. My expectation was not realized, however. The operation was done on December 23d. The patient stood it very nicely, but did not experience any visible effects from it during the following weeks. He died about six weeks later in one of our public hospitals. Perhaps he did not live long enough to enjoy a beneficial result from the interference. He certainly died not in consequence of, but rather in spite of, the operation.

The history of Case III. was given in great detail in my article referred to above. The patient, sixty-four years old, had been ailing for two years. A mild chronic sepsis was present, principally due to a bilat-

[1] Read before the New York Academy of Medicine, November 3, 1898.

eral pyelitis. He died, as it seemed, from acute sepsis, by way of the kidneys, thirty hours after the operation, which latter had been done throughout under strict aseptic precautions.

That I was much depressed by such an unexpected occurrence is obvious. Yet, in reviewing other operative procedures so far devised for the radical treatment of this grave trouble, I could find consolation in the fact that every one of them had been accompanied by a lower or higher mortality. This fact cannot surprise us, if we take into consideration that, at least up to date, such operations were generally carried out on patients who had been treated for years with catheterization and local irrigation—sometimes for a long period by themselves—who, almost without exception, had an infection of the bladder, often also of the pelvis and parenchyma of the kidneys. I, therefore, was resolved to try Bottini's operation again, being convinced that the principle underlying it, viz., the mechanical division of a mechanical obstruction to the outflow of the urine at the neck of the bladder, was good and sound.

Soon Case IV. presented itself. This was a man, sixty-four years of age, who had just been discharged from the wards of one of our hospitals with the advice to continue catheterization, as had been done by him for the last three years. In addition to the vesical trouble the patient suffered from a large irreducible inguinal omental hernia of several years' standing. The urinary disease had set in seven years ago; at first slight, it had become much aggravated within the last four years. He urinated with a great deal of pain three to six times during the night, oftener still in the daytime, although he withdrew the urine per catheter three times in twenty-four hours. If this was not done, he had to urinate every few minutes. Residual urine, 10:200. Urinary analysis: Chronic cystitis, kidneys not involved. The patient was tired of this life and asked for relief. I made him fully acquainted with my last experience. This did not deter him, however. On February 1st he entered the Post-Graduate Hospital. There for three weeks his bladder was carefully irrigated, and internal medication in the shape of urotropine and salol three times a day, eight grains each, was employed. On February 23d, cystoscopy gave a brilliant picture of a trabecular bladder; there were many large and small diverticula, especially on the anterior and right lateral vesical wall; the inner fold showed the characteristic (deep) groove; there were irregular prominences on base of the bladder, near to and more to the left than to the right of the internal urethral orifice. On February 26th, at the Post-Graduate Hospital in the presence of the matriculates, I did Bottini's operation on this patient under local eucaine anæsthesia, three per cent.; rigid asepsis was practised. One posterior cut was made 3.5 cm. long, one through the left lateral lobe of the same length at about an angle of forty-five degrees to the median line, and one anterior cut of 1.5 cm. The bladder had been emptied before the operation was begun. The night after the operation there was a slight chill, followed by rise of temperature up to 103.6° F.; pulse, 120. Within two days both dropped to normal. There was slight incontinence during sleep, lasting for one week. The bladder was washed daily. On the last day of the patient's stay at the hospital, March 22d, some difficulty was experienced in introducing the catheter. The patient bled slightly from the urethra and soon developed a very painful unilateral orchitis and epididymitis. On March 31st, five weeks after the operation, he appeared at my office with the following statement (I quote from my note-book): "Patient urinates now three to four times in the course of the day, once during the night, in a good stream. The catheter has not been used since the operation. The former pains, present for over four years, have entirely disappeared." Having urinated shortly before he came to my office, he passed only 50 c.c. The catheter introduced found no residual urine. Epididymitis and orchitis of the right side were much marked. April 19th, the right testicle was swollen as before, very painful; he urinates somewhat oftener. Irrigation of bladder with solution of nitrate of silver, 1:5,000. was done. At last 180 c.c. of the solution was thrown in, and the catheter was withdrawn. The patient passed them voluntarily in an ample stream, up to the last drop. On April 26th he did the same with 250 c.c. On April 30th, my esteemed colleague, Dr. L. Bolton Bangs, of this city, at my solicitation, kindly came up to my office to witness the patient's performance. The patient first emptied his bladder voluntarily; then the catheter was introduced. There was not a drop of residual urine. After irrigation with a two-per-cent. sterilized boric solution, 200 c.c. of a solution of nitrate of silver 1:5,000 was injected with a graduated syringe. The patient passed the same without any effort in a good strong stream, exactly up to the mark (200 c.c.) in the graduated glass. He even squirted out in short jerks the very last amount, as healthy men generally do. The testicular abscess was incised and drained on April 30th; it healed within a few weeks. Since June 13th, when he was still in the same good condition, I had not seen him, when on November 18th he came to my office with the statement that he urinated three to four times during the day, nights once, without any pain whatsoever. He said that he felt well, but was much bothered by his hernia. He passed 150 c.c. in a good stream. The catheter at once introduced did not find a drop of residual urine. After some irrigation 300 c.c. of a two-per-cent. sterilized boric solution was injected. They were easily retained and then passed in an uninterrupted, forcible stream up to the very mark of the graduated glass; two short jerks at the last. There was still some vesical catarrh. The patient being too poor to buy any drugs, internal medication had not been employed for the last four months.

It is evident that, in this case, Bottini's operation has successfully overcome the prostatic obstruction and re-established thorough vesical drainage. The bladder, severely sacculated as it was before the operation, as demonstrated by the cystoscope, has been made to resume its function. The case furnishes another instance to be cited in disproof of Guyon's teachings, viz., that senile prostatic hypertrophy is a lesion dependent upon general arterio-sclerosis which also involves the bladder.

Case V.—On February 27th of this year a doctor friend from a city in the northern part of this State brought down to me a "puzzling case," a partial catheter slave with intermittent incontinence, residual urine of 150 to 180 c.c., and other clinical symptoms of prostatic hypertrophy, although rectal palpation showed the gland to be small, certainly not enlarged. A soft-rubber catheter always entered the bladder with ease, almost dropped into it. The patient, fifty-nine years of age, had suffered from increased frequency of micturition for the last four years. In course of the year 1896 the trouble had become very much aggravated; the call came about every half-hour, day and night.

The family physician advised the use of the catheter. It was continued up to date and rather often employed on account of some incontinence, whenever the bladder became filled up to the extent of 150 to 180 c.c. On careful examination a few weeks ago a residual urine of 180 c.c. was found, but no enlargement whatever of the prostate was revealed on rectal palpation. The catheter entered the bladder with the greatest ease. Why then was there residual urine? Stric-

ture near the neck of the bladder was thought of and accordingly divulsed up to thirty-five French gauge. The interference was followed by urethral fever and some hæmaturia, and broguht no relief. Marked painful irritability of the bladder appeared, which disturbed the patient's night rest and made him miserable.

When I saw him at my office, heard the doctor's interesting history of the case, and found the residual urine of 200 c.c., and a small prostate on rectal palpation, I at once thought of the fact, and thus expressed myself to the doctor, that a small prostate gland can give rise to the gravest clinical symptoms, whereas a very large one need not produce any characteristic sequelæ. I went at the examination of the case with the presumption that I had to deal with prostatic enlargement. The point was, to prove it and explain the peculiar concomitant symptoms. In order to get at the correct diagnosis, I followed the method of examination always employed by me in such obscure cases.

Urinary analysis revealed the presence of a chronic cystitis, no kidney lesion. After some preparatory treatment cystoscopy was resorted to on the 15th of March. The instrument did not meet with the least resistance at the neck of the bladder. The handle did not require any pressing down in order to make the beak slip into the viscus, as we invariably find it necessary in prostatics. This fact greatly surprised me. But my astonishment increased after the light had been turned on, and I viewed the interior of the bladder. I then tacitly agreed with the doctor's statement, viz., that we had to deal here with a "puzzling case." There was the clear, unmistakable picture of trabecular bladder with the mucosa in chronic catarrhal condition. But on withdrawing the prism of the cystoscope to a spot just within the ring of the internal sphincter muscle, in order to search for the cystoscopic characteristics of hypertrophy of the body of the gland, there was not to be seen that pathognomonic groove at the internal urethral fold. In fact, I did not see the internal urethral fold at all. Then turning the cystoscope so as to view the fundus, I observed a picture as I had never seen it before in the eleven years of my cystoscopic experience. I looked through a kind of gateway of brilliantly illuminated tissue into a deep, long valley, so to speak, its base covered with a longitudinally striped membrane. And at a far distance, as it appeared in the picture, I observed a small, isolated protuberance with a dimple in its centre, exactly in the median line of the valley, resembling a urethral orifice, though somewhat changed by disease. There was furthermore to be seen on the left side of the valley an irregularly protruding mass of dark-red color of about the size of a small cherry.

A cystoscopist with a vivid imagination might now have diagnosed almost anything. He might have thought of an irregularly shaped and grooved vesical tumor, or of an hourglass-shaped bladder, or of prolapse of the displaced mouth of the ureter, etc., or, eventually, he might have abstained from making a diagnosis at all and insisted on a suprapubic incision. As it was, I tried, after some deliberation, to thus explain the picture: There existed a paresis of the internal sphincter muscle, as proven by the intermittent incontinence and the great difficulty in retaining the urine as soon as the call for urination came. This paresis accounted for the fact that the sphincter muscle was not snugly adjacent to the cystoscope as it usually is, thereby in this case not presenting to the observer the characteristics of the internal fold. Instead of being tonically contracted, as we find it in the healthy individual, it was here insufficient and gaping. Thus I was looking with the cystoscope in a retrograde way directly into the posterior urethra. I saw the inner sides of the much magnified lateral lobes of the prostate, I saw the longitudinally striped mucous membrane on the floor of that portion of the channel near the colliculus seminalis; I saw the latter itself. And between the colliculus and the entrance into this miniature notch I detected more on the left than on the right side of, and projecting into, the urethral canal, partially blocking its lumen, that small, irregular mass mentioned above. This I took as being of prostatic origin, springing from the left lateral lobe of the prostate and representing in this case a part of the obstruction to the outflow of the urine. I was sure in my mind that this was the proper explanation of the "puzzling case." To repeat briefly, I diagnosed that we had to deal here with a partial retention of urine due to an irregularly hypertrophied prostate combined with a paresis of the sphincter vesicæ muscle.

And what was it that had enabled me to make so striking and definite a diagnosis and to refer all the peculiar symptoms of this case and the exceptional cystoscopic picture to a hypertrophy of the prostate that could not be recognized by palpation with the finger in the rectum nor with the beak of the searcher in the bladder? It was the fact that I had seen through the cystoscope the classical picture of a beautifully developed trabecular bladder, which means: mechanical obstruction to the outflow of the urine. Now the patient never had had gonorrhœa; he never had sustained a trauma in the perineum; he had himself easily introduced into his bladder a soft-rubber catheter for over two years. Conclusion: The obstruction to the outflow of the urine could not be located in the course of the urethra; he had no stricture; the seat of the trouble had to be looked for near the neck of the bladder. That meant, with other words, that there must be present a "prostatic hypertrophy." Certainly that small projecting mass, exceptionally seen here within the posterior urethra, was an interesting find, especially as far as the indication for the proper operation was concerned. But I wish particularly to emphasize that also without its presence the diagnosis by means of the cystoscope was definite. Thus the electric cystoscope alone, *and nothing but the same*, had placed me in a position definitely to diagnosticate the presence of a prostatic growth about the prostatic urethra and about the vesical neck.

I thought it proper to emphasize once more this point here in view of the controversy I had on "The Value of the Electric Cystoscope in Hypertrophy of the Prostate Gland"[1] in the early part of this year.

In view of this diagnosis I advised the patient to submit to an operation. I might here mention that I had considerable hesitancy about doing a Bottini operation on my patient, considering the meagre personal experience I had thus far gathered. Yet, in view of the simplicity of the interference, I nevertheless concluded to try it as the first of the operations that would probably have to be done, and the only one that would enable me to attack directly the growth within the prostatic urethra. Consequently I advised the patient to have Bottini's operation performed on him, and so informed his doctor. I stated in my letter to the latter that I wanted to do a "gentle Bottini," meaning thereby that I would try to destroy with the galvanocaustic knife principally that small obstructing growth which I had seen within the prostatic urethra, and, furthermore, to divide its continuation toward the entrance into the bladder. But my colleague was opposed to this procedure. He wrote me not to do the operation, but to send the patient home and there let him see how best he could get along with catheter and urinal for the remainder of his life. I now found myself in a rather embarrassing position. I sent for a

[1] Conf. New York MEDICAL RECORD, 1898, Correspondence, vol. liii., pp. 395, 464, 502, 537.

relative of the patient who is a physician in New York and explained matters to him. At his solicitation and urgent appeal I put the whole matter before the patient himself. I gave him the cold facts, mentioning my firm conviction of having correctly diagnosed his case as one of prostatic enlargement, the comparative uncertainty as to the result of Bottini's operation, especially in view of the paretic condition of his sphincter muscle, and the certain amount of risk involved in the same. I further spoke of an eventual improvement by one of the sexual operations, and stated the order of his doctor to send him home to get along there as best he could. The patient decided to undergo Bottini's operation regardless of consequences. It was done two days later, on March 28th, under strict asepsis.

One cut, 2.5 cm. long, was made straight backward, and a second cut at about an angle of forty degrees, as nearly as could be gauged, through the obstructing growth. An anterior cut was omitted so as not to transform the existing paresis of the internal sphincter muscle into a paralysis. The patient stood the operation nicely. There were no untoward consequences. Two days afterward he got up. But he suffered now from absolute incontinence night and day. I made him wear a urinal and allowed him some outdoor exercise daily. I continued to wash his bladder and also at times its neck, as done before the operation, the latter with very little pressure. On the tenth day after the operation he stated that he had passed some blood. Irrigation of the bladder and its neck was repeated very carefully. The hæmaturia did not become less. I kept him in bed. Suddenly a vesical hæmaturia with retention and severe spasms of the bladder set in. At intervals large clots were pressed out of the urethra. There was, I felt convinced, a hemorrhage from the grooves in the prostatic tissue. The bladder was catheterized; but the calls came so frequently that I left the catheter *in situ*. From this moment on improvement set in. For three days and three nights the permanent catheter remained in the bladder unchanged. Then I removed it. The same day the patient passed 240 c.c. at one time spontaneously. This favorable state of affairs, however, did not continue; 60, 90, or 120 c.c. were the average amounts, voided rather often. Hemorrhage did not recur. On April 28th, just a month after the operation, the patient went home. The reports which soon reached me were very encouraging; continual improvement was noted. On May 2d his doctor wrote as follows:

"Mr. X—— has returned home well satisfied with the result so far, and, I think, in more ways than one improved. He does not use the catheter. If there is residual urine, the amount must be very small. He passes water every hour or two during the day into the urinal; at night, every two hours. He feels the desire sufficiently strong to make him get up at night, but when awake and out of bed in erect posture there is less desire, and it amounts to incontinence. The urine is clear and acid. He can, nevertheless, get along better with incontinence and the urinal than with retention and the catheter. . . . It really is too early to expect a pronounced result, especially so as the cause is as yet *sub judice*. Nevertheless, his condition is improved, thanks to you," etc.

At times I felt much worried about this continued incontinence, as I did not know whether it would become a permanent feature or not. But remembering the experience others had had in this direction, I hoped for improvement with the progressing cicatrization, and must say that I was more than happy to find my expectations soon realized.

On June 1st, the doctor's report reads thus: "Mr. X—— continues to improve. The urine is normal. He gets up three or four times during the night and passes water. The desire is strong enough to wake him up, and he has control enough to reach his bath-room. In the daytime he can go three to four hours and also has time to reach a closet. Only occasionally, if taken at a disadvantage, a little urine does pass before he can reach a secluded place. I have discontinued the urinal. It made him careless. He now gets along just as well without it. I have not used the catheter a single time and do not propose to do so. If there is residual urine, it is certainly a very small amount."

On October 18th, I received the following answer to my inquiry:

"Mr. X—— continues to do well, at least as well as when he left you. Urine is clear and normal. No pain on urination. He empties his bladder once every six hours; lies dry at night; does not use a urinal. But occasionally, when excited, he voids a little urine involuntarily. He has not used a catheter since his return, and is attending to his work."

In view of the great interest I have taken in this case in all its phases—diagnosis, indication of the operation, operation itself, after-treatment, and result—I thought it might not be amiss to report it as extensively as possible.

In this case the hemorrhage was most probably produced by my having irrigated the posterior urethra. I should strongly urge to leave these patients alone as much as possible after the operation, and not to trouble them or one's self with bladder irrigations, especially not with irrigations of the vesical neck no matter how often the call may come. If partial or complete retention of urine sets in, the catheter must be repeatedly introduced or left in place.

The temporary incontinence of urine was probably cured by the cicatrization of the wounds through the vesical sphincter. The successful result of the case in this respect suggests the possibility of improving or even curing vesical incontinence occurring in a certain number of non-prostatics by means of Bottini's incisor.

Case VI.—S. F——, fifty-two years of age. In August, 1896, after ingestion of a great deal of ice-cold liquid, he first experienced trouble in micturition. A physician advised sounding and irrigation of the bladder. Infection followed, also inflammation of the right testicle. There was a call for micturition every half-hour to one hour day and night. At one of our public hospitals vesical irrigation was carefully carried out for many weeks. In December the right testicle was removed. After the operation the patient was somewhat improved. The frequency in micturition decreased and the urine cleared up. But in April, 1897, recurrence of the former symptoms with considerable pain in the suprapubic region set in. Urination occurred about every forty-five minutes; dysuria was present. Little improvement followed, though the bladder was continually washed for a whole year.

When I saw the patient on April 28th, he urinated every fifteen to thirty minutes in the daytime; nights every hour to an hour and a half. With some effort he passed at my office 150 c.c.; residual urine, 175 c.c. The catheter, left within the bladder, after the latter had been thoroughly irrigated until the water returned clear, soon gave exit to a small amount of turbid urine. There surely existed pyelitis. The prostate on rectal palpation was found to be equally enlarged in both lateral lobes, and sensitive. Its upper border could be reached. As a result of urinary analysis a diagnosis was made of secondary hyperæmia of the renal parenchyma or more marked lesion; chronic cystitis without alkaline fermentation. Cystoscopy showed a large prostate, trabecular bladder; probably pyelitis on the left side, as the urine expelled from the left ureteral opening appeared cloudy.

May 7th, Bottini's operation was performed at the German Hospital.

Shortly before doing this operation I had the pleasure of assisting (by invitation) Dr. Freudenberg, of Berlin, at a Bottini operation, which he did here in New York on a gentleman from the West. We had at that time frequent opportunity of exchanging our views on this subject of mutual interest. I learned from the doctor that at a time when he was in the habit of operating within an *empty* bladder he once had the great misfortune to hook a transverse vesical fold with the point of the instrument, and then, by pressing the curve of the beak snugly up against the gland—hugging it, as I called it in my first article—to divide this fold and the prostate with the galvanocaustic knife. Result: Perforation of bladder; death from sepsis. Since that time he had operated with the bladder filled, the same as originally done by Bottini. The latter, however, gave it up after some time, thinking that the galvanocautery would take better effect in the dry medium. But we know from the working of Nitze's operating-cystoscope that the heated galvanocaustic snare or knife is effective when made to cut within water. The knife of Bottini's instrument must therefore do the same; besides, it enters the prostatic tissue immediately after the beginning of the operation, when with the patient in a slightly recumbent posture, it most probably will come into contact with the water to a small extent only.

Having done my first Bottini operations within an empty bladder, I now, in this case, injected 150 to 180 c.c. of a sterilized two-per-cent. boric solution before introducing the instrument. The operation was done under local eucaine anæsthesia (three per cent.). Three incisions were made—one directly backward three and one-half inches long, one through the right lobe, and one through the left lobe, both at an angle of ninety degrees from the median line. The operation, done with the bladder filled, satisfied me very much, especially also as to the ability of the patient voluntarily to pass some of the injected fluid immediately after the operation. This, it seems to me, may help avoid consecutive urethral fever, due to absorption of septic material from the posterior urethra, into which it would probably be pressed out of the prostate during the operation. From this time on I have done my further operations with the bladder filled, always to my greatest satisfaction.

B. Lewis, of St. Louis, recently recommended the advisability of filling the bladder with air. One of his patients, on whom he had to operate for a second time, maintained that there was no pain whatever after air had been injected into the bladder, while when it had been filled with water previous to the first operation the pain was considerable. I should not, however, indorse vesical inflation with air. The experiments of Lewin and Goldschmidt[1] have shown that, owing to some unforeseen gaping of the ureteral openings, the air may ascend from the bladder into the pelvis of the kidney and then pass, by way of the renal vein, into the general circulation. Death from an aerial embolism into the pulmonary artery may set in. If it be desirable to inflate the vesical viscus, it would better be done with carbonic acid. Dr. A. Rose, of this city, has recently called my attention to the need of more frequent use of this gas in our therapeutic efforts, especially when dealing with urinary disease. If some carbonic acid should enter the blood on its return to the heart, it will not act as an embolus, but will be promptly absorbed. However, the use of gas or air instead of a fluid involves the loss of a very important prophylactic advantage, namely, that of getting the patient to pass some, if not all, of the injected fluid immediately after the completion of the operation.

[1] Deutsche medicinische Wochenschrift, 1897, Nos. 38 and 52.

The first two days following the operation the patient felt very much benefited. Whereas he had had to get up during the night every hour to an hour and a half to urinate, and that always with pain, micturition now was at once rendered easy. Thus the report of the night from the 18th to the 19th of May was: The patient voided urine voluntarily between 10 and 11 P.M.; next between 3 and 4 A.M.; and next at 6 A.M. Using the patient's own words, he "certainly passed the best night for the last twenty months." On the third day the traumatic irritation of the gland began to produce greater frequency of micturition; then incontinence appeared for a short time, most prominent during sleep. There was no vesical irrigation; urotropine was administered internally. A short time after the operation the patient left the hospital. He had no further local treatment. On June 15th he reported at my office. He urinates every hour and a half to two hours during the day, but he could wait longer if he wished; during the nights, he waits about three to four hours; at times he has to strain rather long before the bladder is completely emptied. The former pain has disappeared. He feels and looks better, and has gained in weight. On September 22d he stated as follows: In July and August he was in the country, where he became much improved. He now urinates three to four times during the day, once or twice during the night. He passes at times 300 to 360 c.c. He voided at my office 175 c.c. of clear, gold-yellow urine, with residual urine, 125 c.c.; 250 c.c. of boric solution was injected into the bladder and afterward passed voluntarily, without pain or trouble, in a good, strong stream, up to the very mark of the graduated glass. October 24th, the same good condition continued. He urinates from four to six times in twenty-four hours, and believes that, with some patience, he always empties the bladder. He passes 325 c.c. of perfectly normal urine within about two minutes; residual urine, 75 c.c. Of 350 c.c. of two-per-cent. sterilized boric solution then injected he discharges 225 c.c. in a forcible uninterrupted stream, and then, with two short intermissions, 125 c.c. more. Not a drop is retained. I advised the patient to drink less, to urinate oftener, and to take strychnia.

CASE VII.—Mr. B. A——, of St. Louis, sixty-eight years old, was first seen by me on June 2, 1898. Increasing frequency of micturition was first noticed in September, 1896. In February, 1897, there was retention; the water was drawn for two weeks; he used the catheter since then once or twice per day, always before retiring. In the summer, 1897, prolonged irrigation of the bladder was done. At present he urinates every fifteen to thirty or sixty minutes when up, and about twice in the latter part of the night. He passed, by voluntary micturition, 30 c.c.; residual urine, 300 c.c. The prostate appeared very large on rectal palpation, especially the right lateral lobe. June 6th, he was examined by cystoscopy: There was no stone; a deep groove was at the internal fold. In retracting the instrument just far enough to be able to view the tissues surrounding the neck of the bladder, both lateral lobes appeared as thick, round prominences lying in the shade; no median lobe present. Urinary analysis: Chronic cystitis; no renal lesion. June 8th, Bottini's operation was done under eucaine. The bladder was filled as usual; the current was gauged so as to make the platinum knife red-hot. Three cuts were made—one backward 3.5 cm., one through the right lobe 3 cm. at an angle of ninety degrees from the median line, and a third cut through the left lobe at the same angle; no anterior cut. No general untoward symptoms followed, but extreme vesical irritability, marked tenesmus, and incomplete retention. There was no

relief from anodynes and vesical irrigation. June 22d, a permanent catheter was put in for three days. After its removal, he had the same trouble as before. With a view to enhancing the beneficial effect of the operation, it was repeated on June 26th. The knife, when tested before the operation, was almost white-hot. One cut was made posteriorly 3.5 cm., one at an angle of forty-five degrees through the right lateral lobe 3 cm., and one anterior cut 2 cm. long. At first the patient had the same local irritability. Greatest amount of urine passed was, 1 to 1½ ounces; regular catheterization was done. July 3d, he had a chill and urethral fever for two days. Six days after the second operation the amount of urine voided voluntarily commenced to increase. At last 240 c.c. were passed at one time. The patient was discharged on July 19th. Status: He urinates about every four hours during the day; nights, once or not at all. Catheter laid aside. September 15th, the patient reported at my office: He had been at various watering-places during July and August and had gained considerably in general health and weight. Frequency of micturition: every three to four hours during the day; nights, once; that is to say, if he empties his bladder on retiring at 10 P.M., he has to get up some time between 3 and 5 A.M. The catheter has not been used since the chill in July. When examined at my office, he passed 10 c.c., having urinated two hours before; residual urine, 10 c.c. The urine is still slightly turbid. The irrigating water returned clear after two fillings; 175 c.c. of boric solution then injected is passed into the graduated glass in a continuous, strong stream up to the very mark, the last amount being squirted out in jerks. September 29th, the same good condition continued. After urination the catheter does not find a drop of residual urine in the bladder; the irrigating fluid returns clear at once; 250 c.c. of boric solution then introduced is passed entire. So far the patient is cured. On November 5th he reports the same good condition from his home in the West.

CASE VIII.—W. M——, sixty-eight years old, for many years a sufferer from prostatic trouble, has been for some time the patient of one of New York's surgeons for chronic cystitis with occasional acute exacerbations. The doctor kindly furnished me with the following history: Two years ago ligation of both vasa deferentia was performed; improvement did not follow. Six months later, removal of the left half of the prostate through the perineum. Again the patient's condition remained unchanged. In the early part of this year local and constitutional disturbances were so marked that, on March 17th, the bladder had to be opened by the suprapubic route. At this time the prostate was palpated and inspected, and it was found to present a uniform ordinary collar enlargement. One week later bilateral orchidectomy was performed. On May 12th, as there was no improvement, Bottini's operation was done by the doctor under ether. Three cuts were made—2 cm. long in the median line below, 2 cm. through the right lateral lobe, 1.5 cm. above. The posterior cut was not made very deep down to the base of the bladder for fear of injuring the rectum; the handle of the incisor had been depressed rather than raised. Early in June the doctor asked me whether I was willing to do a second Bottini operation on the patient, who then passed a few drops of urine by the normal route about every half to two hours, and lost the rest through the suprapubic fistula which had persisted since the operation in March. June 10th, cystoscopy: Prostate large; the beak of the cystoscope slips over a number of prominences before it enters the bladder; the median lobe is developed; there is marked trabecular bladder. June 11th, Bottini's operation was done at the German Hospital, under eucaine; there were no untoward consequences. For two days after operation the patient was able to void his urine through the urethra at will without any exertion or strain. Then the suprapubic fistula, which had temporarily closed, opened again, probably in consequence of a more pronounced obstruction at the internal urethral orifice, due to the reactively swollen gland. Most of the urine escaped above the pubes; little or none passed per urethram. I thought of putting in a permanent catheter, but abstained, hoping that a reduction in the size of the gland would soon again give free exit to the urine and eventually bring the suprapubic fistula to a close. Perhaps the latter was so obstinate because, as it appeared to me, the mucous membrane of the bladder was in direct apposition to the skin. Soon afterward I left the city for my vacation. As to the future development of the case Dr. G. H. Semken, then house surgeon to the German Hospital, reports as follows: "In the intervals when the fistula was not patent, all the urine was voided through the urethra as in the beginning, without distress or great difficulty; or, at other times, part came through the fistula, part through the urethra. The general condition of the patient was good. Two months after the operation, appetite and health began to fail, and an ascending affection of the kidneys developed. The patient died five days later, on August 25th, of acute septicæmia."

I regret that I could not observe this patient any longer. The question as to whether we can bring to a close with Bottini's operation an obstinate suprapubic fistula, resulting from lithotomy or incision of the bladder for the sake of drainage in prostatics, is certainly an interesting, but an open one; in fact, it has not been approached as yet. I think such a task might be accomplished, provided the patient passes the greater amount of his urine again through the urethra. This is an absolute necessity; for only the regular and repeated passage of urine through the grooves cut with the galvanocaustic knife, and that under pressure of the detrusor vesicæ muscle, will insure the intended result from the operation. These fistulæ have often been a source of great annoyance to me in my practice, and I am sure also to many other surgeons. I have asked myself whether we should not more frequently do litholapaxy in prostatics suffering from stone. If successfully carried out, Bottini's operation might then follow and thus the patient be cured by intravesical interference throughout—that is to say, without a cutting operation. If the prostatic urethra is too sensitive or the stone too hard, so as to forbid running the risk of litholopaxy, or if the patient is too old, so as to render inadvisable lithotomy with partial or total prostatectomy, it would be of very great value to know that a Bottini operation, properly carried out, might bring to a close such a rebellious suprapubic fistula in the event of its appearing. We would then simply cut for the stone and add Bottini's operation as soon as the greater amount of urine is again passed through the urethra. In this way prostatics even beyond the age of seventy, suffering from stone in the bladder, could yet derive the benefit of a radical cure of their complicated trouble.

CASE IX.—A man, sixty-four years of age, married, of strong physique, suffering for the last nine years from some obstruction to urinary drainage and increasing frequency of micturition. He has been worse since October, 1896, when cystitis appeared; he was treated by irrigation; he had a severe chill at that time which much aggravated the trouble. There was much tenesmus. He commenced to use the catheter, first twice, then three times, in twenty-four hours. When first seen, he urinated 30 c.c. spontaneously; residual urine, 300 c.c. On palpation the prostate is found to be very large, about the size of an apple; its upper end cannot be reached with the finger; the pulse is markedly intermittent. June 13, 1898, he was examined with

the cystoscope. There was some difficulty in entering the bladder, the prostate bleeding freely. With the help of irrigation the characteristics of the disease could be well distinguished. Urinary analysis: Cystitis; no pyelitis; a suspicion of quiescent chronic nephritis. June 15th, Bottini's operation was done under eucaine, three per cent., and with a full bladder 180 c.c. Three cuts were made—one posteriorly, 3.75 cm. long, and two lateral cuts at right angles to the first, each 3.5 cm. long. The patient was asked to pass some water directly afterward, but was unable to do so. Six hours later he had a severe chill. Temperature soon rose to 104° F.; pulse, 120. Slightly sanguinolent urine was voided in small quantities at short intervals. June 16th, his condition was improved, but absolute retention continued; catheterization was performed with a Mercier every six hours, followed by vesical irrigation. June 19th, the patient was still feverish; bladder very irritable. A permanent catheter was put in, but was pressed out the next day; it was reintroduced for another twenty-four hours. June 22d, his temperature was again increasing. The prostate was very painful on rectal palpation, larger than before. Regular catheterization was necessary; much tenesmus. Morphine was poorly borne, affecting the stomach; local anæsthetics also brought no relief. The patient, who had never been sick in bed for a day during his whole life, was very restless and begged for permanent relief in order to save him the pain of catheterizing. There was only one way to do this: suprapubic incision. But I hesitated to do it, for it meant the certain annulment of any possible benefit from Bottini's operation as far as the original trouble was concerned. On the other hand, the patient was still feverish; perhaps a thorough drainage would bring not only local, but general relief. I also was under the necessity of leaving the city, and felt in duty bound to help the patient before going away. Under such pressure I yielded to the patient's continuous demand and did the suprapubic operation. It was done in a few minutes under incomplete general anæsthesia. The half-conscious patient pressed down continually, so that I had to abstain even from inspecting the prostate and the vesical neck through the wound, eager as I was to do so. We certainly will not often have a chance to view the result of Bottini's operation on the living so soon after it has been done. Rapidly the T-tube was inserted, the skin wound closed partially, and the patient brought to bed. His lips were blue, his pulse was more intermittent than before. Scarcely five minutes after he had left the table he suddenly turned deep blue in the face, and his eyes bulged forward. Then he rose in bed, gasping for air, and fell back dead. I deeply deplore not having been able to obtain permission to perform a post-mortem examination on the patient. But the body had to be embalmed and sent home South. What was the immediate cause of the patient's death? I believe it was some defect in the proper working of the heart muscle, a real heart failure. The ten days of more or less fever after the operation, combined with the necessity of administering general anæsthesia, were too much for the heart, already affected by myocarditis; the organ simply gave out. Another explanation would be embolism of the pulmonal artery originating from a thrombosis of the prostatic and iliac veins, disturbed during the struggling of the patient. In thinking of the case later, I very much regretted having acceded to the patient's wish for prompt relief at all hazards. For when the gauze bandage, which compressed the urethra during the operation, was removed, quite a quantity of pus oozed out of the external meatus mixed with a number of burnt shreds of tissue. I think I am not mistaken in assuming that a suppurating prostatitis, a prostatic abscess, had developed consequent to the operation, and on account of the greater pressure it had been subjected to by the continual resistance on the part of the patient during the operation it ruptured into the urethra. In the light of this further reflection the chill which set in six hours after the operation was then to be looked upon as the beginning of an exceptionally intense reactive inflammation of the prostate. I believe this opinion to be all the more correct, as diminution in the quantity of urine, so often seen in the so-called urethral fever, was not noticed. The prostate of this patient was very large and soft; its upper border could not be reached on rectal palpation, a fact noticed in patient No. 3, who, too, had had a chill followed by fever during previous treatment. At that time I was not aware of the fact that the large shreds from the prostate are generally pushed off between the twelfth and twentieth day after operation. It is only since I have been making the cuts through the gland with the galvanocaustic knife at almost white heat that I have especially observed this phenomenon. In future, I think I shall, in patients with very large and soft prostates, who have previously had an attack of acute infectious fever, strongly urge vasectomy to precede Bottini's operation by about two weeks. I believe that this would be a good method to reduce the possible appearance of complications; yet with more practical experience I may modify my views. I am convinced that one of the principal factors in avoiding post-operative complications is a reliable, well-working battery. The platinum knife must be well heated during the entire operation; it must always burn the prostate, never cut it.

From the case as such I draw this conclusion: It is not wise to yield to a patient's demands for relief (persistent though they be) by doing a suprapubic incision after Bottini's operation, certainly not before the sixteenth or twentieth day after it has been performed—*i.e.*, the time when the burnt shreds of prostatic tissue cease to be discharged. Unless there be imperative contraindication to such delay, all means at our disposal in the way of palliative measures should first be exhausted. Only in cases in which it becomes absolutely unavoidable—and their number, I am sure, can be much lessened by properly observing all points of importance during the operation—should further operative interference be resorted to. And then it should be a second Bottini operation rather than a suprapubic incision.[1]

Case X.—F. R——, sixty-six years of age, urinates oftener than usual since the last eighteen months, lately with much pain. He was seen by me the first time on June 6th. Frequency of micturition: every ten, twenty, or sixty minutes during the day, three to five times during the night. The calls are very sudden; he is unable to retain the urine; wears urinal. Continued irrigation brought some improvement. The patient passes voluntarily 30 c.c.; residual urine, 30 c.c. The bladder is much contracted, holding scarcely 90 c.c. The prostate is very large; its upper border cannot be reached with the finger. The patient has lost fifteen pounds within the last three months. The urinary analysis gave a diagnosis of marked chronic cystitis, no fermentation, no evidences of a pyelitis; some uric-acid deposit. Cystoscopy June 10th: 90 c.c. of boric acid solution thrown in; the handle of the instrument must be well pressed down before the the beak slips into the bladder. There is a deep groove at the internal fold running obliquely; the right lateral lobe is evidently much larger than the left; the trabecular bladder is little marked; no stone is present. Suddenly hæmaturia from the prostate set in, which rendered further examination impossible. June 22d, the operation was done: three cuts were made—one 3.75 cm. long posteriorly, one at an angle of ninety

[1] Conf. above, Case VII.

degrees with median line through the right lateral lobe 3.5 cm. long, and one anteriorly 2 cm. long. The knife, as tested before operation, was red-hot. No reaction took place. Three weeks after operation improvement began: the patient urinates less often than formerly; the temporary incontinence has stopped; he can retain more and longer, and has put urinal aside. October 31st, he urinates in a strong stream and without pain every two to three hours during the day, three times in the night; he has gained in weight. When asked to pass water at my office, he discharged 85 c.c. of a slightly turbid urine. A catheter then introduced found 10 c.c. On irrigation, the water soon returned clear; 100 c.c. of a sterile two-per-cent. boric solution was promptly passed up to the last drop. I might count this patient as cured "so far," if the bladder would retain a larger quantity than it does at present. He certainly is much improved.

Case XI.—M. B——, sixty-two years old, with characteristic bladder trouble since five years. Two years ago he had fever without apparent cause. He lost weight. The prostate was found enlarged and hard; malignant growth of the gland was suspected. Rest and careful nursing, however, soon improved the general condition. Within the last two years the frequency of calls has increased, particularly during the night. Three weeks ago he had retention for the first time.. For four days regular catheterization was done by the attending physician; then the patient used the instrument himself three times in twenty-four hours. Ten days later the bladder resumed its work; the catheter was laid aside, but calls came very frequently, every twenty to thirty minutes during the day, half-hourly during the night.

When first seen by me, on September 14th, he was weak and reduced in flesh; he urinated 100 c.c.; residual urine, 50 c.c. On irrigation, 150 c.c. can hardly be retained; if more is injected, the catheter is forced out. Prostate on rectal palpation is painful to the touch, large; its upper border can be reached; no epididymitis. Urinary analysis: Chronic cystitis, no fermentation, slight pyelitis. Cystoscopy September 19th: Deep groove at internal fold, vessie à colonnes, no stone. September 22d, Bottini's operation was done under local anæsthesia and strict asepsis. The bladder was filled as usual. The current was gauged so that the platinum knife turned almost white-hot. Four cuts were made—one 3.5 cm. long posteriorly, one 3.25 cm. long through the right lobe at an angle of forty-five degrees, another 3.25 cm. long through the left lateral lobe at an angle of ninety degrees; anterior cut 1.5 cm. On removing the instrument (Kiss' make, Berlin) some difficulty was experienced. When at last withdrawn, it was found that the platinum knife had not re-entered the groove of the female part, but had become bent sideways at an angle of fully forty-five degrees. I had a similar experience with the same instrument once before, but then the knife had but slightly deviated from the axis of the instrument. This, of course, is an annoying accident and may produce trouble. Freudenberg asserted that the alloy of platinum and iridium as brought out in this platinum knife manufactured by Kiss, as well as its improved attachment to the male part of the instrument, would obviate this possibility. Since this experience I have laid aside the Berlin instrument and made use of the American make only. Bottini's incisor, as manufactured by the Kny-Scheerer Company of New York, gives the impression of great durability in all its parts. The patient stood the operation well. When asked to pass some of the injected fluid immediately afterward, he could not do so. Two hours later he commenced to void it. Medication: urotropine and salol three times a day, eight grains each. For the first two days not more than 30 to 60 c.c. was passed at a time, every thirty to sixty minutes day and night. The urine, at first bloody, soon cleared up; macroscopically it was free from blood on the morning following the operation. A slight rise of temperature without a previous chill set in soon after the operation; 103° F. was reached on September 23d at noon; the pulse remained below 100. September 24th, vesical irritation is continually decreasing; already 100 c.c. is passed at one time. September 26th, temperature normal; to-day 150 c.c. is the greatest quantity passed. The patient is out of bed. September 28th, patient says that micturition is easier in the horizontal position; he can then also resist the call for almost one hour and has less tenesmus. During the night the bladder holds 180 c.c. at one time, a quantity which could not be retained during the last few years prior to operation. A few shreds of burnt prostatic tissue were passed with the water. This continued for the next six days. The average quantity of urine voided within twenty-four hours was 1,800 to 2,400 c.c.; October 7th, greatest amount retained, 240 c.c. October 12th, no more residual urine was found by catheter. This was the first time the catheter was used after the operation. October 14th, the patient called at my office. He urinates in a strong stream, short jerks at the end; the catheter finds not a drop of residual urine; he holds urine for about three hours during the day; nights, two hours. November 11th, he urinates six times during the day, three to four times in course of the night; amount within twenty-four hours, 1,860 to 2,000 c.c., produced by the continued diuretic treatment. The vesical capacity is 360 c.c.; the stream is excellent, with not a drop of residual urine. The patient looks well and has gained in weight. The urine passed between the sixth and twelfth day was strained, and the shreds passed therewith were submitted to Dr. Fred. E. Sondern of this city for microscopical examination. Under date of November 3d he reported as follows: "The shreds are found to consist of hypertrophic tissue of the prostate gland, the increase being in the fibromuscular structure; the glandular structure is normal and shows no evidence of atrophy or cystic degeneration. Near the eschar are found evidences of fatty change and some inflammatory exudate. No evidence of a neoplasm could be found."

I have purposely given *in extenso* all points worthy of note observed after the operation, as this case so well illustrates the gradual and continuous improvement in the patient's general and local condition after Bottini's operation. The patient remained under my personal observation; his bladder had at no time been interfered with, except when the presence of residual urine was ascertained; not once was vesical irrigation carried out. The entire after-treatment consisted in internal medication by means of urotropine and salol.

Case XII.—C. S. I——, fifty years of age, claims to have had a poor stream of urine all his life. He has had chronic constipation for the last three years. For six weeks there has been somewhat increased frequency in micturition; nights, five to six times; no stream; the urine passes in drops; the patient has to strain a good deal; he has pain in glans; he has lost fifteen pounds within nine months; he looks cachectic, so much so that his family physician sent him to me with a diagnosis of suspected malignant tumor of the prostate. He was first seen by me September 17th. Residual urine, 30 to 100 c.c.; the prostate, palpated per rectum, is slightly enlarged, not sensitive to the touch; the patient complains of some pressure between the xyphoid process and the umbilicus; no growth was palpable in that region. His appetite is poor; no vomiting. September 20th, cystoscopy: The median lobe is present; the characteristic groove at the internal urethral fold is probably for that reason missing; a groove, however, is observed on either side of the median lobe. The picture

did not exactly correspond to that usually found in prostatics with or without the median lobe; this, however, I did not consider a sufficient reason for diagnosing malignant growth of the gland. The trabecular bladder was excellently developed, with acquired diverticules plainly seen in the right posterior part of the fundus and on the upper part of the left vesical wall. Bottini's operation was advised, and was done on the 4th of October at the German Hospital. Four cuts were made—one posteriorly 3.75 cm. long, one through the right lateral lobe at an angle of forty-five degrees 3.5 cm. long, one through the left lateral lobe of same length at an angle of ninety degrees, the fourth anteriorly 2 cm. in length. A battery with amperemeter, as now manufactured by the Kny-Scheerer Company, was used. Particular attention was paid to the point that every one of the four cuts was made with that amount of current which, at the test before the operation, had produced a marked degree of white heat in the knife. On the return trip of the knife the amount of current was still more increased, according to Bottini's advice, which I have faithfully followed in every one of my operations. On removal of the instrument not a particle of unburnt prostatic tissue adhered to the knife. I was positive that in each of the four cuts the knife had ploughed its way through the gland burning, and that in the necessary degree, never cutting. The patient was made to pass some of the injected liquid immediately after the operation; he could do so. As always seen, the water was slightly tinged with blood. There was no reaction whatever; the temperature and pulse remained normal. The patient was out of bed the third day; the catheter was never introduced. October 20th, he called at my office for the first time and brought a bottle containing many shreds of tissue that had been passed with the urine. The urine had been strained and the shreds preserved in alcohol, in accordance with my instructions given the patient before leaving the hospital. The shreds had first appeared on the thirteenth day after the operation, and some were discharged with each micturition since then. A few drops of pure blood weer squeezed out at the end of each discharge; then there was pain in the glans. The bladder was still irritable. At my office he passed 50 c.c. spontaneously; the catheter immediately introduced found no residual urine; 130 c.c. injected into the bladder per syringe (the largest quantity the patient could conveniently retain) was passed in a powerful stream up to the very mark of the graduated glass. October 27th, the patient held water up to four hours in the daytime; night calls still came once in two hours; he brought a second large collection of tissue-shreds passed per urethram since his last call on October 20th; the last drops when urinating were still bloody, and there was some pain; otherwise he was free from pain; stated that he felt somewhat stronger, but still looked bad and cachectic as before the operation. The quantity and size of the shreds passed seemed so extraordinary to me (weighing, dried, 1.8 grams=28 grains) that when sending the specimens to the laboratory I expressed the suspicion of the presence of a malignant growth. The report received reads as follows: "The specimens made from shreds passed from October 17th to 20th, on microscopical examination, are found to consist of a marked increase in the fibromuscular tissue of the prostate gland, with considerable atrophy of the glandular structure. Near the eschar are the usual evidences of fatty change and inflammatory infiltration. The shreds passed between October 20th and 27th consisted of the same tissue, showing, however, a marked inflammatory infiltration and large numbers of small hemorrhagic areas. A careful search failed to show any evidences which might be considered suspicious of a neoplasm."

It will be interesting to observe whether the discharge of such a large amount of prostatic tissue is the rule when care is taken to draw the four cuts in their entire length with the knife at white heat. November 26th, the patient is still pale, but feels better; he says that shreds ceased to be passed with the urine on October 30th, or on the twenty-sixth day after the operation. He urinates two to three times during the day; nights, once or twice (before the operation, every two hours); he claims that he does not remember having ever had a better stream of urine than he has at present.

The results obtained in these twelve cases are such that they cannot be ignored, especially if we consider those of other surgeons who have tried Bottini's operation. I certainly did not expect to see such good results; they were as great a surprise to me as they were a delight to the patients. I can assure you that I approached the whole subject rather skeptically. For the last months I always worried when I had to do a Bottini, being mindful of the sad experience in Case III. I could not rid myself of the apprehension that I might be doing on my patients a new and somewhat dangerous operation, perhaps without in any way improving their condition.

All the more surprised, nay elated did I feel when, after my return to the city in September, one patient after the other who had been operated upon in May and June of this year appeared at my office and reported entire recovery or at least very marked improvement. And my patients were not selected cases, but were operated upon as they came along. Every one of them, except, of course, the one with suprapubic fistula, suffered from incomplete retention. As you have heard, I count six cures "so far," two marked improvements, two deaths independent of the operation, one death with Bottini's operation as the remote and one as the immediate cause. That is to say, 50 per cent. were cured "so far," 16.6 per cent. markedly improved; mortality directly due to the operation as well as indirectly, 8.3 per cent. each (or, including my thirteenth case, also cured and operated upon November 12th, 53.8 per cent. of the patients were cured; 15.4 per cent. markedly improved; mortality directly due to the operation, as well as indirectly, 7.7 per cent. each).

Of course I am well aware that these numbers are by far too small to justify us in basing any conclu sions thereon, at least so far as the calculation of percentage is concerned. But even these small numbers have some weight, if we reflect for one moment that the results were obtained without subjecting the older men to a serious operation, without the administration of general anæsthesia, without keeping the patient in bed for any length of time, and without any real special after-treatment; that they were obtained without disturbing in the least the important tissues situated around the vesical neck in their normal anatomical relation. Indeed, had I not personally carefully and conscientiously observed these patients in every phase of their trouble before and after the operation as long as they were under my care, I simply should not have believed that such improvement had been accomplished by Bottini's method of operation. But here one point of great importance must be mentioned, namely, that other authors have seen equally good results.

In perusing the literature of the subject with special reference to this point, we find that in a series of fifty-seven cases operated upon by Bottini, partly with the cauterisator, partly with the incisor, he had thirty-two cures and eleven marked improvements; in his last twenty-three cases operated upon with his improved incisor exclusively, he hardly had a failure;[1] Bruce

[1] Conf. Berl. klin. Wochenschr., 1897, p. 321.

Clark had one patient much improved;[1] Freudenberg, out of thirty-two cases, had thirteen cures and eleven improvements;[2] Drs. Weber and Torek had one patient much improved;[3] Czerny, of Heidelberg, had four cures and one much improved out of eight cases;[4] Morton had five cases, with three cures and two marked improvements;[5] Hanč reports one cure and three marked improvements out of five cases;[6] Viertel, nine cures out of ten patients;[7] Lohnstein had twelve patients, with six cures and four marked improvements;[8] Jemoli and Marconi, two patients, both cured; Floderus, three cases, with two marked improvements; Casper had five cases, all of which were markedly improved; Lewis, two patients, one cured and one improved;[9] Downes, one case, cured.[10]

In arranging the cases so far reported as having been operated upon by this method, we obtain the table printed in the adjoining column.

Thus we have, in a series of one hundred and sixty-four cases, eighty patients, or 48.8 per cent., cured; forty-four patients, or 26.8 per cent., markedly improved;[11] twenty-six patients, or 15.8 per cent., little or not at all improved; eight deaths directly due to the operation, or a direct mortality of 4.9 per cent.; six deaths independent from, rather in spite of, the operation (chronic pre-existing pyelo-nephritis), or 3.7 per cent.

I think I ought to state here what, with my present experience, I consider a cure after Bottini's operation. I class as cures:

(1) Cases in which patients are able to dispense altogether with the catheter and in which not a drop of residual urine is found after voluntary urination.

(2) Cases in which the patients are able to get along without the catheter, but in which some residual urine is still found if the patient is made to urinate without having any desire for it; while when a certain amount of liquid, say 180, 240, or 300 c.c., is injected into the bladder, it is afterward passed by the patient to the last drop, and the last few drachms of the injected fluid are squirted out in jerks, as we are wont to see it in perfectly healthy subjects, thus proving that the bladder is being emptied voluntarily to the very last drop. I do not call a man improved only, if he had, for instance, 10 c.c. or some more of residual urine when requested at my office to pass his water without a natural call. It seems to me that especially prostatics require nature's call for the act of proper urination; often they require seclusion in order to empty their bladder at will. Thus, as mentioned above, my patient in case No. VI. stated, when I saw him again three months after the operation, that he generally passed 300 to 360 c.c. at a time. When requested by me at the office to urinate, he passed in a strong healthy stream 175 c.c., yet had a residual urine of 150 c.c. When I then after short vesical irrigation injected 250 c.c. of a two-per-cent. boric solution, which he could retain without any discomfort, he passed it up to the very mark of the graduated glass. On October 24th, he passed at my office 325 c.c. of absolutely clear urine; residual urine, 75 c.c. Thereupon, 350 c.c. having been injected, he passed 225 c.c. at once in as strong a stream as could be expected in a healthy subject, and then, after a short stop, 125 c.c. more. Thus not a drop of liquid was retained in his bladder. The patient stated that with some patience he thought he could always empty his bladder entirely. The condition as found in this patient at present seems to me to be produced by voluntary vesical overdistention. In view of the fact that he had one month before passed 250 c.c. in one uninterrupted stream down to the last drop, I advised the patient to ingest less liquid (he drank two to three gallons a day) and, further, to empty his bladder oftener than heretofore. Another patient, No. 4, often said, when made to urinate at my office, "Doctor, that is all I can pass," and when I urged him to go on and pass more, he continued very soon and did his work so well that the catheter, immediately afterward introduced, did not withdraw a drop of residual urine.

No.	Operator.	Cases.	Cured.	Much Improved.	Little or Not Improved.	Death Directly or Indirectly Due to the Operation.	Death Independent from Operation.
1	Bottini[1]	57	32	11	12	2	..
2	Bruce Clark	1	..	1	..	..	..
3	Freudenberg[2]	32	13	11	3	3	2
4	Czerny	8	4	1	1	..	2
5	Willy Meyer	13	7	2	..	2	2
6	Weber and Torek	1	..	1			
7	Morton	5	3	2			
8	Hanč	5	1	3	1		
9	Rochet[3]	2	..	..	2		
10	Viertel	10	9	..	1		
11	Lohnstein	12	6	4	2		
12	Jemoli and Marconi.	2	2	..			
13	Lennander	4	1	..	3		
14	Floderus	3	..	2	..	1	
15	Casper[4]	5	..	5			
16	Wossidlo[5]	1	..	..	1		
17	B. Lewis[6]	2	1	1			
18	A. J. Downes	1	1				
		164	80	44	26	8	6

[1] Verhandl. d. X. International. med. Kongr., Berlin, 1890, Abt. vii., pp. 95, 96.

[2] Private communication to the writer, dated Nov. 26th, 1898: "On thirty-three patients the operation was performed forty-one times (on six twice, on one three times. Five died; in three of these, death was due directly to the operation; [(1) embolism into the lungs; (2) perforation of the bladder, the operation having been done with the bladder empty; (3) pyæmia on the twentieth day after operation]; the other two succumbed to pyelo-nephritis which had previously existed, twenty-four days and four and one-half months, respectively, after the operation. Three patients were not improved; in one of these the presence of a stone was ascertained after the operation; the searcher had failed to strike it before and cystoscopy had been impossible. After the prostatic bar had been well cut down to the floor of the bas-fond, the searcher struck the stone. One case was operated upon too recently to permit of being included in the following table."

[3] Med. News, Apl. 16, 1898, p. 481.

[4] O. Simon: "Zur Behandl. der Prostata-Hypertrophie mit d. Bottini'schen Operation." Centralbl. f. Harn- und Sexual-Organe, 1898, No. viii. Two patients died from causes not connected with the operation, one of nephritis, the other of pyelo-nephritis which had existed before the operation. One case was not improved.

[5] New York MEDICAL RECORD, September 17, 1898.

[6] "Ueber galvanocaustische Radikal-Behandl. d. Prostata-Hypertrophie nach Bottini." Wiener med. Presse, 1898, July 31st and August 7th.

[7] Allgem. med. Central-Zeitung, 1898, p. 68.

[8] Monats-Berichte über d. Gesammt-Leistungen aus d. Gebiete der Krankheiten des Harn- und Sexual-Apparates, 1898, vol. iii., No. 11, p. 633.

[9] "The Radical Treatment of Hypertrophied Prostate by Electro-incision." Philadelphia Medical Journal, vol. 2, No. 24, December 10 1898.

[10] "The Bottini Operation for Enlargement of the Prostate Gland." Philadelphia Medical Journal, Vol. 2, No. 26, December 24, 1898.

[11] It is to be expected that some patients who, at the present time, are only improved by Bottini's operation, will be found to have been entirely cured at a later period.

[1] With reference to Bottini's last twenty-three cases it is to be regretted that, owing to the absence of any information further than the indefinite remark made by Dr. Freudenberg (*loc. cit.*) that Bottini "hardly had a failure in his last twenty-three cases," they could not be embodied in this table.

[2] One case has been too recently operated upon to permit of being included in this table.

[3] "Traité chir. des prostatiques retentionistes." Annal. des Mal. Gén.-Urin., 1898, No. 1.

[4] See (5).

[5] Cases 12 and 16 inclusive are quoted from a paper by Dr. H. Wossidlo, Berlin: "Die moderne Behandlungs-Methode der Prostata-Hypertrophie mit spezieller Berücksichtigung der sexuellen Operationen und der Bottini'schen Operation." Deutsche Praxis, vol. i., No. 15, p. 564.

[6] See (2).

Further observation of these patients must and will show whether this my definition of a cure from Bottini's operation can stand or needs modification. Of course the cure is still more perfect and gratifying if the vesical catarrh disappears. But the cystitis is the consequence, not a symptom of prostatic enlargement. The successful removal of the mechanical obstruction to the vesical drainage will alone in many instances be the signal for the beginning of improvement or disappearance of the vesical catarrh.

I want to lay stress on the fact of my having above added to the term "cure" the words "so far." That Bottini's operation may cause to disappear all the pathologic symptoms generally produced by prostatic hypertrophy, and eventually also cure a present pyelitis, is to me an established fact. In the light of this fact it clearly belongs to the radical operations known for this trouble to-day. The only important point that has not been definitely settled as yet as to the final result of the operation is: Will the good results thus far obtained by the operation be permanent, or will the former trail of symptoms return after a certain time? Bottini says he never observed a recurrence, and his experience covers over twenty-three years. The personal experience of all other authors who have done the operation is of too brief a duration to allow of any statement in this respect.

As said before, I do not believe that we shall see many recurrences in patients who have been cured "so far" by a Bottini operation. It certainly is not easy to understand how it should happen that deep grooves within the prostatic tissue, produced by the direct loss of thoroughly burnt substance (as proven by the large masses of necrotic shreds passed with the urine between the twelfth and sixteenth day after a properly performed operation)—I say, it is not easy to understand how these cuts should fill up again sufficiently to furnish an obstruction to the outflow of the urine. It must be remembered in this connection that the borders of these grooves necessarily must cicatrize, and that all scar tissue has the tendency to contract. Such a contraction can only tend to produce a wider gaping of the grooves. How, as it has been feared by some authors, a marked "stenosis" at the vesical neck could ever follow the operation, I cannot understand. It must further be remembered that at least five to six times within twenty-four hours a larger quantity of water is forced through these cuts. Are we not justified, therefore, in expecting that as long as this physiologic action continues, such gateways, once established, will remain open? Whether this reasoning is correct and borne out by facts, the future observation of the cases operated on will demonstrate. But suppose a part of the former symptoms should reappear after one, two, or more years; suppose we should again find residual urine in the bladder of a man who had before been relieved from the same by Bottini's operation—improbable, though, as this would appear to me to-day—but suppose the various symptoms should return; what objection could there be in such an event to repeating the operation? Why should a possible recurrence, if likely to be removed again successfully by the same interference, be a valid reason to reject the whole operation? Surely the indication for one of the sexual operations or for prostatectomy is not yet established if Bottini's operation, done on a patient once or even twice, should not improve the condition. In the light of what has been done by others and what I have seen in my own cases, I would advise a patient suffering from prostatic hypertrophy rather to undergo Bottini's operation three times than to submit to vasectomy, castration, or prostatectomy after one unsuccessful attempt at bringing relief by the multiple galvanocaustic division of the gland. Now a word as to the—

Indications for the Operation.—Should we select our cases? With other words, have we gathered sufficient facts up to date to enable us to distinguish which class of subjects with hypertrophy of the prostate should be subjected to Bottini's operation and which should not? First of all be it said and emphasized, that the age of the patient is absolutely immaterial. Patients of over ninety years may as well be and have been as successfully treated by Bottini's operation as younger individuals. The condition of the bladder will also not be a contraindication. Even patients with a badly sacculated bladder, as shown by the cystoscope, emptied their viscus entirely, and that soon after the operation. Nor do I believe that grotesque form or the size of the obstructing gland has special bearing on the feasibility and successful issue of the operation. In cases of purulent cystitis preparatory irrigation and internal administration of urotropine and salol are indicated.

A complicating pyelitis would, of course, increase the danger of any kind of intravesical interference, be it instrumental or operative. Cystoscopy, prostatectomy, even simple catheterization, would involve additional risk in such a case; and the same would naturally be true of Bottini's operation. Yet, with my greater experience, I have come to share Freudenberg's opinion, namely, that pyelitis is not to be considered a contraindication to the operation. My case No. VI. had a pyelitis beyond doubt, and still to-day his urine is absolutely transparent. Freudenberg had the same indisputable experience. Of course the patient or his relatives should, in such an event, be made aware of the increased danger of the operation.

With reference to the pathologico-anatomic condition of the gland, I do not at present agree with Dr. Henry H. Morton, of Brooklyn, who recently suggested that only patients with a dense, hard prostate could be relieved by Bottini's operation, and not the group of cases in which the prostatic enlargement is due to an overgrowth of the glandular elements. In my opinion, it does not make the slightest difference whether the obstruction be due to connective-tissue hyperplasia or an adenomatous condition of the gland. As mentioned above, my cases were not selected on any such lines, nor were those of Bottini and Freudenberg. After my somewhat more extended experience I am to-day ready to advise every patient with non-complicated prostatic enlargement to submit to the galvanocaustic treatment just as soon as resort to continued self-catheterization has become imperative. A single or even repeated retention, in which case catheterization will generally be attended to by a physician, does not furnish an indication for the operation. Such patients may again remain unmolested for a long period. However, continued self-catheterization involves so many risks to the patient, in fact, has so often been the cause of incurable disease of bladder and kidneys, that the dangers connected therewith are in reality greater than those of Bottini's operation. There now remains but one question with reference to indication open in my mind, a question which I have already referred to in my first article on this subject, viz., whether it is wise, in patients with a very large, soft, and easily bleeding prostate, to perform Bottini's operation at once, or whether it would not be better to precede it by ligation of the vasa deferentia, doing Bottini's operation two or three weeks later. The more I have reflected on this question, the more convinced have I become that the latter would be the safer procedure in this class of cases. Depletion of the gland would follow the first operation; its engorged veins would become smaller, and the danger of a far-reaching thrombosis with consequent pulmonary embolism would thereby become reduced.

There are a few other points which I should like to emphasize:

A very important step before doing Bottini's operation is cystoscopy. I have lately paid special attention to the question of what can be seen with the cystoscope in prostatic enlargement, besides permitting us to diagnose the presence of a median lobe and of a prostatic growth about the prostatic urethra and about the vesical neck. I can assert as a fact, that very frequently one is able to make out whether projecting masses of the gland are present, where therefore a division with the galvanocanstic knife will do the most good. The perpendicular or oblique direction of the pathognomonic groove at the internal urethral fold will tell us which of the two lateral lobes is principally enlarged, and which therefore should be divided at an angle of forty-five degrees to the median line. But the principal object in urging cystoscopy before carrying out the operation is to detect the possible presence of a quiescent stone. We know that a stone can lie in the post-prostatic pouch for a long time without producing any marked symptoms, or, rather, that the symptoms produced by it are often masked by those of the prostatic enlargement. Thus, within the last months, three prostatics were referred to me for galvanocaustic radical treatment, and in each of them direct vesical inspection demonstrated the presence of a stone which had not been detected before. I no longer use the stone-searcher in these patients, but at once resort to the cystoscope, that instrument enabling one to palpate and inspect the interior of the bladder at the same time. With regard to the

Operation itself, it is most essential that the cuts should be made slowly, very slowly. In fact, the wheel of the instrument should be turned as if we had to overcome a tremendous resistance. On the return trip of the heated knife one may first go somewhat faster, slackening up within the last centimetre off the groove in the beak of the female part of the instrument, so as to be sure that the knife re-enters the same. Further, the knife when tested before starting the operation ought to be, as repeatedly stated above, almost at a white heat, not red-hot as Bottini proposes, who, it must not be forgotten, operates with the bladder empty. But when operating with the bladder filled the platinum knife, surrounded as it is by more or less of the injected water, cannot, in my opinion, do efficient work—*i.e.*, burn the tissues thoroughly right and left and in front—unless it be at white heat. This fact was demonstrated to me when observing the heated platinum tip of the Paquelin burner when operating, for instance, upon hemorrhoids with the clamp and cautery. As soon as the red-hot tip is put into action its glow disappears; if at white heat before, it turns red. Of course this is due to the immediate loss of heat caused by the destruction of the tissues. If red-hot, it will be noticed how very slowly the work is done.

It is only since I have paid particular attention to this point of properly heating the knife that I have observed the discharge of the burnt prostatic tissue in large shreds about the twelfth or sixteenth day after the operation; only since then did I find no more residual urine as early as two to three weeks after the operation. And had I tested the bladder earlier for that purpose, I am sure, I should have found perfect urinary drainage re-established still sooner after the operation. The resistance on the part of the prostatic tissue itself as a guide for gauging the amount of the current is not to be relied upon. I have repeatedly wondered how soft prostatic tissue may be, and how easily it can be traversed even by a knife that is but imperfectly heated, if pulled by the powerful screw of the instrument. I am sure that in the two operations done on my first case I did not use one-third of the necessary intensity of the current. For, when making my test before starting, I set the battery so as just to turn the platinum knife red-hot. On removing the instrument, a mass of unburnt prostatic tissue was found adhering to it. The case of Drs. Weber and Torek also furnishes a good illustration of this point. As will be remembered, in this case the current had at first not been turned on at all, and yet the knife traversed the prostatic tissue without any trouble.

The question as to how many cuts had best be made, and at what angle to the median line, is still an open one. The posterior cut in the median line down to the fundus of the bladder is certainly the most important one. The urethral floor must be lowered at its beginning to the floor of the bas-fond. But I do not consider it a wise procedure to make only this one posterior cut and no more, as done by a few surgeons. I am convinced that it is the multiple division of the gland which will insure not only the subsidence of the subjective symptoms, but also a rapid reduction of the residual urine to nil. I will not deny the possibility that the posterior cut alone, if properly carried out, could effect a cure. I do believe this to be possible. However, it is obvious that three or four cuts will afford the patient a better chance for thorough urinary drainage than a single one. It was with a view to this result that, in my last two cases, I divided the prostate at four different spots; and I have no reason to regret my procedure. On the contrary, both patients had the smoothest, least painful, most rapid and uninterrupted recovery of all my twelve cases. As will be seen, I made one incision—the longest—in the median line; one through that lateral lobe, which on rectal palpation and cystoscopic examination appeared to be the larger of the two, at an angle of forty-five degrees from the median line; a third through the other lateral lobe at ninety degrees, both a little shorter than the first one; and a fourth short incision anteriorly. Freudenberg lately has advised that the latter be omitted on account of the risk of hemorrhage connected with it. The prostate is, of course, thinnest at the upper circumference of the internal urethral orifice; the knife may thus easily cut into the paraprostatic tissue which carries large veins. I personally have had no reason so far to anticipate danger from this source, and have, therefore, continued the anterior short incision. To repeat: I believe the four cuts, made at one sitting with the knife at almost white heat, and at angles to be determined by the cystoscope and rectal palpation, will best insure a rapid and successful issue and thus avoid the necessity of a possible repetition of the operation. The latter would become necessary if after a certain time vesical drainage should not have become perfect as a result of the first interference. The length of the incisions must, of course, vary according to the size of the gland. This question of determining their proper length, it seems to me, is one of the most difficult points in the entire operation. Freudenberg's advice certainly is a very good one, namely, to introduce the finger into the rectum after the beak has hugged the prostate, and then be guided by the size of the gland in the patient. A middle lobe may at this moment have turned backward, thus increasing the longitudinal diameter of the gland during the operation. A soft gland can be compressed a good deal and will then show a reduced size in the antero-posterior direction. The finger in the rectum will also insure the proper position of the instrument within the bladder before the operation is begun. I have always controlled the tip of the beak of the incisor before I definitely turned on the current. But, I confess, it is not easy to determine the exact length of the incisions required for the given case. To diagnose correctly the longitudinal diameter of the gland in this way will, in fact, often be impossible. I personally believe that it is better to make the incisions too long rather than too short. I do not fear in this connection the appearance

of permanent incontinence, as mentioned by Casper and Freudenberg. Since I have seen my patient No. 5 regain entire control over his sphincter vesicæ muscle, paretic as it was before the operation, although he suffered from absolute incontinence for quite a while after the operation, I consider dribbling—so often seen after Bottini's operation—a passing phenomenon, and not one that would justify us in fearing that it may become permanent. On the contrary, it seemed to me that patients who developed incontinence for a time had a comparatively easy recovery. Further practical experience may, of course, possibly induce me to change these views. To leave the finger of an assistant within the rectum and let him press the prostate against the moving knife during the operation, I also consider inadvisable, if not dangerous. Such pressure might easily bend the heated knife and thus prevent it from returning into its groove.

With reference to the battery, I fully agree with Freudenberg that it ought to be provided with an amperemetre. This latter will always keep us posted as to the strength of the current. It makes our invisible work visible, so to speak. The battery which I lately brought out with the help of the Kny-Scheerer Company of this city is a very good one and answers all purposes. In places where the street current or other electric power can be utilized, a portable alternator with amperemeter may be attached. This will do away with the storage battery. Such an arrangement will be most useful for hospitals. In private practice it will not help us much as yet, since we will be mostly called upon to operate at the patient's home; and comparatively few residences are so far provided with electric light. It is, of course, also welcome in office work. But I should not think it right to do a Bottini operation at my office and then send the patient home in a carriage, although I believe it might often be done without injury to the patient. However, if untoward consequences should result, the surgeon would be subject to blame by the patient.

After-Treatment.—If patients are able to empty their bladder soon after the operation, no matter how frequently the calls for urination may come, and if percussion does show a tympanitic sound immediately above the symphysis as a sure sign that there is no retention to any great extent, I consider absolute non-interference the best after-treatment. From what I have seen in my own cases, vesical irrigation does not relieve the patients at all, if they should suffer after the operation. We should by all means abstain from washing the prostatic urethra, to avoid a resulting hemorrhage, such as I experienced in my case No. 5. Irrigation, no matter how gently it be done, is apt to push or tear off the eschar from the burnt prostate and thus expose the tissue, which bleeds so easily and is so well provided with blood. The elimination of the escharotic tissue should be left to nature, as I have seen this take place between the twelfth and twentieth days. At that time a granulating tissue covers the incisions. If not disturbed, the latter will not bleed to any extent, even though the outflowing urine is pressed through and over them. This evidently does not affect them. Hence, I consider after-treatment in such cases directly harmful. "Hands off" must be the law so long as the patient empties his bladder.

But a doctor who thinks that the cure of prostatic hypertrophy by Bottini's operation always means simply to introduce the instrument, burn by its help grooves through the gland, and then withdraw it, may at times be annoyingly disappointed. A reactive inflammation, set up in the prostate soon after the operation, may tax the experience and dexterity of the surgeon to a very great extent. He must be prepared to meet the same obstruction to successful catheterization or evacuation of the bladder as may confront him when he is suddenly called to a patient with absolute retention due to prostatic enlargement, where a number of other doctors before him tried in vain to bring relief. The surgeon who performs Bottini's operation must know how to proceed and how to succeed in such instances; he must be in possession of the necessary instruments for such an emergency; he must be able to do absolutely aseptic work.

As a perusal of the above-cited cases will show, the patient may have a call every few minutes and then be able to void a very few drops only under most intense and painful tenesmus, and this may go on day and night, wearing out the patient gradually. If in such instances catheterism is difficult and painful, the permanent catheter is indicated. It will bring relief so long as it is retained and not obstructed. If removed too soon after the operation, the former trouble will reappear. We should therefore be prepared to continue the permanent drainage through the urethra for a number of days; if necessary, up to the time of the elimination of the eschar. So far I have never had to continue so long.

I cannot help thinking that a good deal of the painful micturition, partial or total retention, and tenesmus might have been avoided in most of my first ten patients, had I earlier recognized the important point that the platinum knife must be at almost white heat during the entire operation. The correctness of this was very forcibly brought to my mind in the case of a thirteenth patient, operated upon recently (November 12th). The battery had been specially charged, but evidently not sufficiently. The first posterior cut in the median line was made with the proper strength of the current throughout, turning the knife to white heat as indicated by the needle of the amperemeter and according to my test before introducing the instrument. When the knife was on its return trip, making the second cut through the right lateral lobe, the needle of the amperemeter dropped ten points, more during the drawing of the third groove, and still more while the short anterior incision was made. I felt sure that during the last two incisions the insufficiently heated knife did more cutting than burning; because the blade, when extracted from the bladder, was covered with some unburnt tissue. Within twenty hours a reaction set up in the gland, entirely obstructing the urinary outflow. The permanent catheter had to be resorted to. From the eighth day vesical drainage was free and continually improving. It would be interesting if future experience should show that troublesome symptoms after the operation could be in part avoided by the proper heating of the knife.

I am now trying to ascertain the exact time and amount of electricity required for charging the new battery. It was constructed with a view to retaining sufficient electricity after one charging to render it absolutely reliable for two to three operations. I feel positive that this is feasible.

If all essential points enumerated above for performing the operation are observed, it is to be hoped that we shall not hear of many failures or of additional operations on the bladder which otherwise might become imperative. If they are not adhered to, a collective investigation of results from Bottini's operation, performed by various surgeons, will fail to show gratifying results or will even exhibit an unexpectedly high mortality, and thus bring into disrepute an operation which deserves a better fate.

Certainly we still have much to learn with reference to Bottini's operation. It will take some time before even the principal points at issue will become definitely settled. It is also true that the operation should not be advised and done in every case of prostatic enlargement. But, as it appears to me, we may

confidently expect that its usefulness will extend, and that contraindications raised to-day will vanish before more extended experience.

Still a word with regard to the—

Dangers of the Operation.—The operation certainly is not entirely void of danger, as has been repeatedly mentioned before. This drawback, however, it has in common with all other operations so far devised for this trouble. Its two principal dangers are, I repeat, first, sepsis or pyæmia, and, second, embolism of the pulmonary artery or its branches. In the first case streptococci enter the circulation by way of the kidneys or from the proximal pole of the thrombus or thrombi which have formed in the prostatic veins. And in the second, far-reaching thrombosis within the prostatic venous plexuses and within the interior iliac or common iliac vein having occurred, a part of this thrombus by some unfortunate cause is torn loose and thrown into the circulation.

The future must show how these dangers may be reduced to a minimum, or even be entirely averted. At present, it would seem we are justified in stating that the larger the prostate, the greater its blood supply, especially the more enlarged its venous plexuses, the more pronounced the purulent catarrh of the prostatic urethra as well as of the bladder and even of the pelvis of the kidney—the more dangerous is the operation. In other words, the smaller and less succulent the prostate, the more normal the bladder and upper urinary tract, the less is the risk.

In the light of such reasoning I should not be surprised if we should soon be able to see the indication for doing Bottini's operation on prostatics sooner than we do at present. We surely could advocate early operation if we knew that Bottini's method would induce shrinkage of the gland in incipient prostatic hypertrophy; that is to say, at a time when some annoying clinical symptoms, as increased frequency of calls, smaller stream, after-dribbling, etc., have begun to appear, but before continued instrumental vesical interference had become imperative. The operation done as early as that would then cut short the whole train of suffering which is so sure to come to the victim of this disease. Indeed, it would be an undertaking that would well compensate one for the trouble of performing Bottini's operation with a properly modified instrument on animals, dogs, etc., in order to study from a pathologic standpoint the remote effects of the multiple burns through normal prostatic tissue.

From a theoretical point of view one might almost feel justified in predicting that a continuous diminution in size must be the inevitable result of the far-reaching destruction and elimination of glandular tissue. A further cause of such diminution is found in the disturbance of the blood circulation within the prostate. This is principally caused by the subsequent obliteration of a large portion of the venous plexuses of the gland. Should this reasoning be sustained by future experimental and clinical research, the indication for Bottini's operation at an early stage would be given. Its risks, comparatively slight to-day, would then most probably be reduced to nil. In my patients so far operated upon I have been unable to detect a diminution in the size of the gland on rectal palpation. But the latter test is very inaccurate. In order to determine this point, we should have to measure the distance from the external meatus to the entrance into the bladder before and about one year after the operation. Of course the median cut through the body of the gland may influence the correctness and value of this sort of examination. The cystoscope also might enable us to determine shrinkage. I shall certainly pay attention in the future to this interesting point.

At present, as said above, I advise the operation as soon as the trouble has so far advanced as to render it necessary to place the catheter in the hands of the patient in order to keep him comfortable, but not before.

Mr. President and gentlemen, nine months ago I closed my first article on Bottini's operation, repeatedly referred to, with this sentence:

"Should Bottini's operation really prove to be of such great value in the greater number of cases of this dreadful, so frequently in its remote consequences fatal disease, it will become our duty to give this operation not only a firm place, but one of the first places on the stepladder of operations so far devised for the radical cure of hypertrophy of the prostate gland."

To-day, after a careful, conscientious, and unbiased observation of the twelve patients operated upon by me, I venture to say that Bottini's operation bids fair to lead the van among the many operations so far devised for the radical cure of hypertrophy of the prostate.

A REPORT OF TWO CASES OF GUNSHOT WOUNDS OF THE ABDOMEN.[1]

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PROFESSOR OF ABDOMINAL AND CLINICAL SURGERY IN TOLEDO MEDICAL COLLEGE AND SURGEON TO ROBINWOOD HOSPITAL, TOLEDO, OHIO.

THE operative treatment of gunshot wounds of the intestinal tract is of very recent date, an outgrowth of abdominal surgery during this later period of its phenomenal development.

According to Coley, in the *Boston Medical and Surgical Journal* for October, 1888, Jean Baptiste Lucien Baudens, at one time professor of surgery in the hospital of Lille, France, and afterward at Val de Grace, in 1836, while serving as a military surgeon in Africa, was the first to operate for gunshot wounds of the abdomen. His first case was a fatal one, but he soon after operated with success. His last was a case of perforation of the transverse colon. The second recorded success, according to Wyeth's "Surgery," was in this country, in the year 1847, when Dr. Newell, of New Brunswick, N. J., "made an incision into the abdomen and sutured the intestine in a case of gunshot wound, cleansed the cavity, closed the wound, and the patient recovered." From this time on there are no others recorded, as far as I am aware, until in the year 1883, when that great master of surgery, without doubt the greatest in Europe to-day, Prof. Theodore Kocher, of Berne, Switzerland, operated on a case of gunshot wound of the stomach, his patient recovering. A year later Dr. Kollock, of South Carolina, repaired two wounds of the intestine, made by a pistol-shot, with success. The next year, or in 1885, W. T. Bull, of New York, reported his now celebrated case, in which he repaired seven perforations, due to gunshot wound, his patient recovering, and soon after this he operated again with an equally brilliant result.

These operations by Dr. Bull are often spoken of as the first successfully performed in America, but, as it appears above, this is not true. Without doubt, however, the prominence given them by the journals of the country has had much to do with establishing in America the operation as a recognized curative procedure for gunshot wounds of the intestines, though it must not be forgotten that the paper by J. Marion Sims, entitled "Surgical Invasion of the Abdominal Cavity for Penetrating Wounds," read before the New York Academy of Medicine in 1881, did much to prepare the minds of the profession to profit by these

[1] Read before the Northwestern Ohio Medical Association, at its meeting in Lima, Ohio, December 9, 1898.

successes which so soon after followed. And that the profession has profited is evidenced by the fact that there is to-day hardly a city of any size in the country, but has one or more cases of recovery to report. I do not mean by this that it is at all usual, even now, for success to follow operation. I think it is yet the exception rather than otherwise. I will instance. In a private letter Dr. N. Senn says: "Four operations for gunshot wounds of the abdomen fell under my observation during our late war with Spain. These operations were performed by a volunteer surgeon, during the siege of Santiago, and the cases were all fatal."

In a recent conversation my friend, Dr. P. L. Myers, of Fostoria, Ohio, said: "I have witnessed several operations for accidental gunshot wounds of the abdomen, at Chickamauga Park and elsewhere, but they have all terminated fatally." Dr. Lessèr, of the Red Cross medical work, makes the statement in the MEDICAL RECORD that he saw but little abdominal work for this class of injury during our late war, but all the cases he did see operated upon died. There is, however, a single case reported of the recovery of a sailor, that was given at the time a great deal of prominence by the lay journals of the country. I do not have at hand either the name of the operator or the details of the operation. You are all doubtless familiar with the case to which I have reference.

In the face of such mortality following it, operation could hardly be justified, were it not for the recognized fact that gunshot wounds of the intestines are almost uniformly fatal if left to themselves. In substantiation of this statement, it is only necessary to quote a few well-known statistics, and no recent observations have modified their teachings. During the war of the Crimea, of 124 perforating wounds of the abdomen, 115 died, or 92.7 per cent. During the war of the late rebellion, of 3,717 penetrating wounds of the abdomen, 3,031 died, or a death rate of 87.2 per cent. Practically nine out of ten died. Dr. Otis, after his elaborate investigations of this class of injury, occurring during our late rebellion, in speaking of gunshot wounds of the small intestine, says: "It may still be considered doubtful if an incontestable instance of recovery was observed; that most of the reported cases of recovery were perforations of the large intestines" —and I may add, or not intestinal perforations at all. A few years since, conducting a series of experiments upon dogs with my friends, Drs. Byron Robinson, now of Chicago, and C. S. Miller, of Toledo, among many other interesting facts, we learned that in five per cent. of cases a ball would pass through the abdominal cavity without ever perforating the intestine at all. Of ten dogs shot through the abdomen and left to themselves, every one died that sustained a perforation of the small intestines; one recovered, however, from a perforation of the stomach.

From all the known facts we have, perforations of the stomach and colon are not from necessity fatal, but perforations of the small intestines are almost uniformly so. It has been my fortune to operate within the past few months on two of these cases, with one death and one recovery.

CASE I.—June 18, 1898, I received a telephone message from Drs. Riggs and Long, of Bryan, Ohio, to come to that place without delay, prepared to operate upon a case of gunshot wound of the abdomen. I reached Bryan by special train, accompanied with a nurse, Miss E. Hayward, at about 10:30 P.M., and found a Hebrew gentleman, forty-seven years of age, with very fat, thick abdominal walls, who had sustained a gunshot wound at very close range. He had a few hours previously picked up a gun by the muzzle, when it discharged, the bullet entering his abdomen to the left of the umbilicus and very close to it. His pulse, when I reached his bedside, was very rapid and feeble. The sensorium was evidently much dulled, with profuse sweating and restlessness, with other indications so marked as to give evidence unmistakable of internal hemorrhage and grave injury. Drs. Riggs and Long had made a diagnosis of probable perforation of the intestine, with profuse hemorrhage, and with this diagnosis I at once concurred, as well as with the opinion that the only possible chance for his recovery, and that a very slim one, was by operation. Drs. Riggs and Long, recognizing the importance of operating without any delay, if operation was decided upon at my arrival, had everything in readiness, and we at once proceeded with the preparation of the patient for it. At midnight I began the operation. Pure chloroform was given, and I have never seen a patient take it worse; although six ounces were administered, at no time was he fully under its influence.

I opened in the median line, making a rather free incision, and found the abdomen full of fluid and clotted blood. I sponged this out as best I could, when it was quite evident that hemorrhage was yet in progress. After some considerable search, I found a mesenteric artery bleeding; as soon as this was controlled I ran the intestines rapidly over my fingers, and soon came to two perforations of the small intestines—one made by the entrance and the other by the exit of the ball. These openings were repaired with the Czerny-Lembert suture, and, though the intestine was examined throughout its entire length, no others were found. The thickness of the abdominal walls and the patient's taking chloroform so badly made the operation exceedingly difficult and trying. It lasted about one hour and thirty minutes, when the patient was placed in bed and the usual stimulants were administered, but his condition was exceedingly bad, and it was very evident that death would soon supervene. He lived about ten hours.

In view of this outcome, the question naturally suggests itself, Would it not have been better to have waited for a time, with the hope that nature would control the hemorrhage, and to have operated after he had rallied somewhat from its effects been successful?

CASE II.—At about five o'clock on the morning of September 25th last, I was called by telephone to Blissfield, Mich., by Dr. R. M. Eccles, who directed me to come prepared to operate on a case of gunshot wound of the abdomen. In company with my friend, Dr. C. S. Miller, of Toledo, and my assistant, Dr. H. L. Green, with nurse, Miss E. R. Pettigrew, I reached Blissfield at about 8 A.M.; and found a young man, a bank cashier, aged twenty, who had received at midnight just previous a pistol shot in the abdomen, from some burglars who were endeavoring to rob the town post-office, and whom he had very pluckily attacked. The young man, after the shooting, walked a block and upstairs for help, when Dr. Eccles was called, who found him with a pulse of 100 and suffering severely. I found the bullet, a 38-calibre, had entered the abdomen below and to the left of the umbilicus, a distance from it of perhaps two inches.

The pulse at the time of my arrival was 120, and its condition, together with the boy's appearance, led me to the belief that there had been a very considerable amount of hemorrhage, and from the direction the bullet had evidently taken there was without doubt intestinal perforation.

The opinion of the gentlemen present, with which I concurred, was that the symptoms and indications made it imperative to open and explore the abdominal cavity, and as soon as the patient could be prepared I proceeded with the operation, with the assistance and advice of the attending physicians, Drs. Eccles and Dumbauld, of Blissfield, Dr. Kirkpatrick, of Adrian, together with Drs. Miller and Green, Dr. Miller giving the anæsthetic, a mixture of chloroform and ether. I

made an incision about six inches in length, parallel to the median line, and half-way between the umbilicus and the opening made by the bullet; the middle of the incision was opposite the point of entrance of the bullet. I found the abdomen, as I had anticipated, filled with blood. This I sponged out as rapidly and thoroughly as possible, but found no active bleeding points of consequence. I then ran the intestines over the fingers, returning them at once within the abdomen, having marked the point at which I began with a silk thread passed through the mesentery.

By this method of eventration I discovered five perforations of the small intestines and two of the transverse colon, near its hepatic flexure, making seven in all. As fast as a perforation appeared it was closed with the Czerny-Lembert suture. I found some difficulty in bringing the descending colon into the incision sufficiently to examine it thoroughly, and was compelled to make a transverse incision, two inches in length, from the middle of my first one and at right angles to it, over the colon, when the colon was very readily brought up and examined. The abdomen was closed, without flushing, two glass drainage tubes were left in, and the patient was placed in bed, with a pulse of 144.

The operation had taken about one hour to complete. Two hours after the pulse had dropped to less than 120, and the patient went on to recovery without any untoward symptoms of importance. There was, however, at the end of a week the formation of a small abscess, indicated by a rise of temperature and pulse, which discharged at the end of ten days, by the rectum, when both pulse and temperature returned to normal and remained so thereafter. On the second day after the operation, gas for the first time passed the bowels; they freely moved on the fourth day as a result of the administration of a dose of castor oil and a turpentine enema.

There have been performed in this vicinity two other successful operations for gunshot wounds of the intestines, both worthy of record and mention. One was a very remarkable case, in the hands of Dr. James A. Donnely, of Toledo, who in 1885 operated upon a lad, in which he repaired a very large number of perforations made by a 22-calibre bullet. The doctor did not count them, but estimates there were ten or twelve. The lad made an excellent recovery.

The second operation was performed by Dr. J. C. Tritch, of Findlay, Ohio, who repaired four perforations of the intestine and two of the mesentery, made by a pistol bullet; the patient, a young man, making a good recovery.

In this connection I think it proper to mention a case operated on by Dr. S. S. Thorn, of Toledo, the first operation in this vicinity for gunshot wound of the abdomen. On June 12, 1892, he operated upon a German, repairing two perforations of the sigmoid flexure with the Lembert suture, and a two-and-one-half-inch laceration of the ileum with a series of stitches, together with yet another perforation of the ileum, and above this last the intestine was nearly severed. It was united by anastomosis with a potato plate. This patient, however, succumbed to the great loss of blood about twelve hours after.

SANITARY ARRANGEMENTS FOR COUNTRY HOUSES.

By HARVEY B. BASHORE, M.D.,

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In the average country or village house very little attention is paid to sanitary requirements. The "moss-covered bucket" and the old-fashioned privy still reign supreme. To condemn the village pump is to place one's self beyond the pale of a reasonable being, yet almost every town pump yields a water grossly polluted.

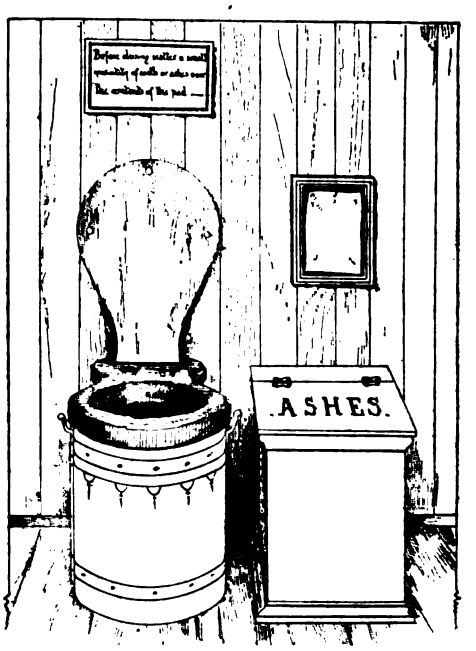

Fig. 1.—A Modern Dry Closet.

To put such places on a sanitary basis we need a complete change of existing conditions, and the old privy is probably the place to begin. This should, without any exception whatsoever, be abolished and a dry closet substituted. This may readily be done by closing the floor underneath the seat and putting up a closet such as is shown in Fig. 1. This consists simply of a seat, a galvanized-iron pail, and a box to hold the ashes or dry earth. The one figured in the plate is rather elaborate, yet it can be made almost anywhere for three or four dollars. When the pail is filled it should be emptied directly on to the garden

Fig. 2.—Drain Made from a Tin Roof-Gutter.

bed and a little earth raked over it. In two or three weeks, depending on the season, all the filth will be destroyed by the nitrifying bacteria and nothing left but a dark, rich humus. A dry closet such as this may be used in any vacant room in the house, for it is cleanly and odorless. In the absence of water service and sewers, a dry closet is the only proper thing to use.

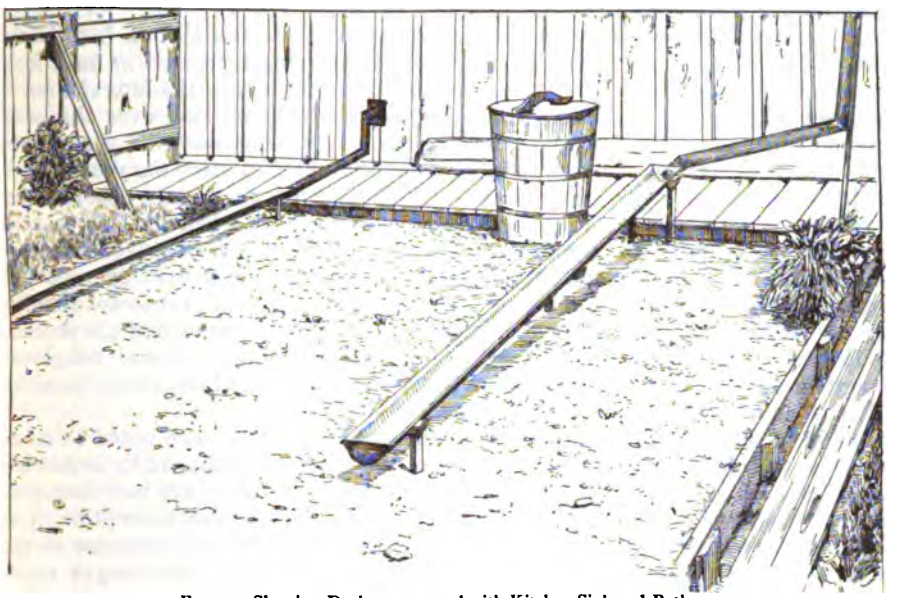

FIG. 3.—Showing Drains connected with Kitchen Sink and Bath.

The drinking-water offers another problem for solution. Well water, the kind almost always used in rural districts, very rarely approaches purity; that it does not contain disease germs is simply because the germs have not come in its way. Sooner or later, and generally sooner, all wells become foci of disease. The safest water for rural dwellers to drink is cistern water, and if it is collected from a roof kept moderately clean, it will be clear and palatable. I know of a small town in Pennsylvania where cistern water is almost exclusively used, and, as a result, typhoid fever —the great water-borne disease—is practically unknown.

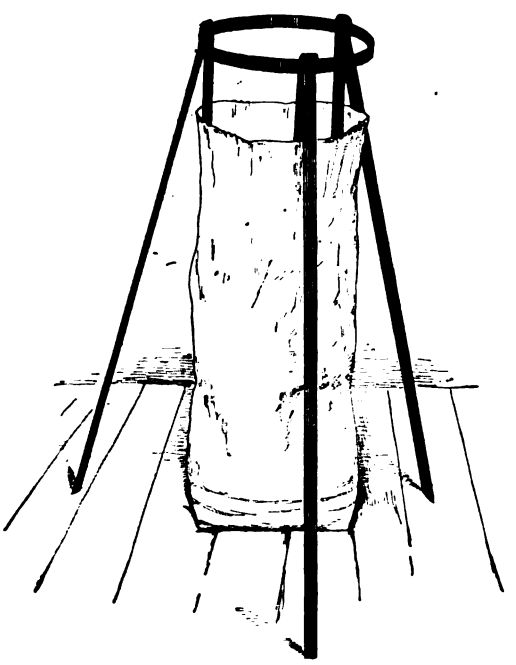

FIG. 4.—Showing Support for Flour-sack, when used to hold Rubbish or Ashes.

Now, another point deserving our attention in country homes is the disposal of waste water from the kitchen, bedrooms, baths, etc. The most general method in vogue is simply to throw it into the street or the backyard—an unsightly and unsanitary procedure.

In the small towns where there is no water service, there are no kitchen sinks or sewers, and the best way is to collect the waste water in buckets and run it through perforated drains, suspended over a cultivated garden-bed.

To do this we need a galvanized-iron box or bowl placed at the corner of the bed, as a receiver for the water; from this an old roof-gutter extends in any direction available; all this is apparent by reference to Fig. 2. The gutter is perforated by three-sixteenth-inch holes at intervals of a foot or so. For a family of four or five the drain should be about twenty feet long and have a fall of about one inch in four feet.

Fig. 3 shows a more elaborate drain made for a house having a kitchen sink and bathroom. Of course the bed over which these drains are suspended must be cultivated and kept loose and porous by raking.

There is another part of household refuse—namely, the solid kitchen waste (known technically as garbage), which is composed of scraps of meat, potato parings, melon rinds, etc. What becomes of this will be apparent to any one who will take the trouble to wander through the back streets of any of our small towns.

The best method of garbage disposal—that is, in small towns—is to dig a hole two or three feet deep on the garden bed, and throw the offal into this; every day or two a little earth may be thrown over the top of the refuse, and when one hole is filled another is dug, and so on around the bed.

The bacteria of nitrification work continually on such material, and when the time comes around for cultivating the bed, all the decomposable material will have been changed into humus.

There is in all households another kind of waste known as rubbish—paper, rags, old shoes, bottles, tin cans, broken crockery, scraps of metal, etc. This material should be divided into at least two groups—a combustible and a non-combustible—and for doing this nothing answers so well as flour-sacks supported by iron frames, as shown in Fig. 4. The combustible part may be disposed of by fire, or, what is better, sold to the junkman, who is known in the rural districts as the "ragman." The non-combustible part may be dumped into some gully which needs filling.

Ashes should be collected in a sack or a barrel, and used for making paths, which are so much needed in all villages.

Pasteur Institute for India.—Some idea of the need for the establishment of a Pasteur Institute in India may be formed from the fact that since July 1st no less than nineteen British soldiers, as the *Times* of India states, have been sent to Paris at the estimated cost of about one thousand rupees per head. We hope to see the day when there will be an institute furnished with a bacteriological laboratory and all appliances for the scientific investigation of the diseases in India in each of the three presidencies. Some institution of this kind might well form part of a sanitary or public health department for India.—*Lancet.*

CHRONIC PERICHONDRITIS OF THE NASAL SEPTUM.

By LEWIS S. SOMERS, M.D.,
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Localized perichondritis forming a spur on the nasal septum is of frequent occurrence and usually develops in proximity to sutural lines, while general inflammatory thickening of the soft tissues and cartilages occurs in but a small proportion of nasal affections and constitutes a most intractable disease. The portion of the septum immediately concerned consists of the quadrilateral cartilage, the nutrition of which is limited, as there are no capillaries, but the vessels dip into the cartilage from the perichondrium. This tissue is firmly attached to the cartilage, while superimposed upon it is the mucous membrane common to all parts of the nasal chambers, but differing in thickness in various locations and here being of extreme tenuity and loosely attached. The erectile tissue lies below the submucosa, and we also find aggregations of lymphoid cells with albuminous and mucous glands, but small in size and comparatively few in number.

The pathological changes vary with the degree of irritation producing the primary increase of nutrition to the part. At first there are local congestion, increased glandular activity, and dilated blood-vessels, followed by hyperplasia with increase in the number of cells. The cartilage may so increase in size that the respiratory channels are considerably diminished, and at the same time there is a perpendicular increase, causing the septum to become deviated. The soft tissues are also involved, forming hard or soft hypertrophy, depending upon the tissue especially affected; this is generally glandular, and may readily be distinguished from the hyperplasia of the supporting tissues by its consistence, the latter being firm in character.

The most frequent cause of chronic chondritis is direct or indirect traumatism, the former being represented by a blow on the nose, while indirect traumatism is illustrated by the action of deflected air currents. Falls and blows on the nose are common in childhood, and although not productive of any marked symptoms at the time, yet are frequently the initial cause, gradually producing the changes characteristic of this affection. Inflammation produced by deflected air currents is responsible in at least twenty per cent of the cases; the column of inspired air being deflected from the hypertrophied turbinal against the septum, instead of passing backward to the naso-pharynx. Another frequent factor is the habit of inserting the finger into the nostril; as a result of this habit changes take place, usually limited to a small portion of the tissues and with an outgrowth of cartilage at the point of greatest irritation. Various nasal affections are also responsible, by irritating the parts by direct pressure, such as polypoid degeneration of the turbinates, or the nasal affection may produce the septal changes by indirectly increasing the blood supply. Constitutional affections, such as rickets, may be productive of chondritis, or it may result from serious general affections. In nearly all cases, however, and especially in children, the so-called scrofulous diathesis plays an important part in the etiology, being the underlying condition responsible for the pathological alterations.

As the following case presents the main features of the affection, it will be described somewhat in detail: N. J——, female, aged seven years, applied on May 14, 1895, for treatment of "nasal catarrh" which had existed since babyhood. There was hypertrophic rhinitis with vasomotor relaxation, but no change of the septum except moderate congestion. The patient improved within a few weeks and was not seen again until April 6, 1897, when she complained of excessive nasal discharge stained with blood, constant dull pain, diminished olfaction, and the formation of small crusts, while the general health was below par. The middle and inferior turbinates on both sides were sclerotic, while the mucous membrane over the septum was thickened, congested, and eroded, and bleeding on the slightest touch. The cartilage was much thickened, measuring over one-fourth of an inch in the lateral direction, but not being increased in bulk from above downward. The increase in the lateral area of the cartilage was regularly distributed over the anterior portion, except at its junction with the vomer, where a moderate-sized shelf existed, the vomer itself being normal. The case was frequently observed until the last report on April 20th, when she was in good physical condition. There were no subjective symptoms referable to the septum, but the cartilage was still thickened and irregular, several exostoses having formed near the base. The appearance of the mucous membrane was improved, although it was congested and eroded in several places, while other portions were attenuated.

The prominent symptoms have been noted in relating the history of the case, but occasionally others are present, or some of those mentioned are more conspicuous. In nearly all there is undue susceptibility to attacks of coryza, and during the entire course of the affection there is subacute rhinitis, the coryza seemingly being but exacerbations of the latter. There is also excessive tenderness of the mucous membrane, in the majority amounting to severe pain even on the slightest manipulation, and a small number complain of a dull ache, intensified at times. Occasionally the only subjective symptom will be slight discomfort, and when the parts are examined there will be a moderate degree of congestion, but on passing a probe over the cartilage it will feel irregular and rough. When this is observed, the affection assumes a chronic form and lasts for a number of years before more marked symptoms become well defined.

More or less abrasion of the epithelium is present, being most marked on the right side, this portion probably receiving the greatest amount of traumatism from the insertion of the finger. The minute ulcers may undergo resolution or increase in size and coalesce, forming large areas of denudation, and, as a result, epistaxis is frequent, severe bleeding rarely taking place, but the discharges are nearly always stained with blood. Should the entire cartilage undergo change, partial loss of smell results, while aprosexia is observed, especially in children, and frontal headache is frequent. A symptom of considerable importance, and the only one of reflex origin that I have noticed, is an irregular cough, which may be elicited by touching the affected region with a probe. External evidences of the pathological changes are not present, the nose retaining its normal contour, notwithstanding much thickening of the perpendicular support.

Chronic chondritis must be differentiated from soft hypertrophy of the mucous membrane, simple ulceration, and deviation with spurs. Hyperplasia of the soft tissues is readily differentiated by yielding to the probe and reduction in dimensions when cocaine is applied, this therapeutic test not reducing the perichondrial hyperplasia. Simple ulceration is unattended with thickening of the cartilage; tissue destruction is limited to the mucous membrane, and it is frequently attended with similar changes in other portions of the nasal chambers. Reference has been made to the resemblance of septal deviation capped at the point of greatest bending with a spur, to the affection under consideration; no trouble should be experienced, however, in differentiating this condition, as the vomer is usually involved in the general twisting

of the septum; there is an absence of inflammatory symptoms, and the cartilage is excessively thin in various areas.

On account of the prolonged course of the affection and the irritation of the parts with the finger, treatment is more or less unsatisfactory, and, unless persisted in, not attended with desirable results. Cleanliness and the elimination of irritation are the chief elements necessary to the successful combating of the disease. Alkaline antiseptic sprays may be used, but the most satisfactory method is gently to cleanse the septum with cotton saturated with the solution. After being cleansed, the septum may be covered with ointments containing ichthyol, boric acid, yellow oxide of mercury, or calomel, lanolin being used as a base. In place of ointments, liquid vaseline may be applied in the same way, either warm, at the natural temperature, or medicated.

It is very important to correct any affection of the nasal chambers, such as a concomitant catarrhal condition, while examination should be made of the upper respiratory tract, and any deviations from the normal be rectified. Constitutional measures are usually indicated, attention also being directed to the environment and food and the administration of such drugs as may seem necessary.

1514 North Broad Street.

THE RELATIONSHIP OF THE DISTRIBUTION OF THE ARTERIAL AND VENOUS BLOOD IN THE HEART CHAMBERS TO THE DEVELOPMENT OF ENDOCARDITIS.

By C. SIGMUND RAUE, M.D.,

PHILADELPHIA.

The almost invariable occurrence of endocarditis upon the left side of the heart during extra-uterine life, and a similar selective affinity for the right heart in fœtal endocarditis, is a clinical fact, the explanation of which has been attempted upon purely mechanical grounds, not taking into consideration the etiological factor of the endocardial inflammation and its relationship to the character of the blood found at the seat of the affection. To understand this phenomenon it is necessary to recognize endocarditis as an infectious condition.

Fœtal endocarditis is rare, especially the verrucose variety; but nevertheless there is sufficient evidence to show that the right heart is attacked by preference in all cases.

Rheumatism stands at the head of all etiological factors in the production of endocarditis, and by accepting acute rheumatism as an infectious disease, the result of specific bacteria which attack with preference the serous membranes with which they come in contact, we can readily interpret this strong relationship between the two conditions. But not only rheumatism is responsible for endocarditis, as it may exist alone or complicate a variety of other affections, notably pneumonia, diphtheria, nephritis, and septicæmia. Sanger and Fraenkel have been able to demonstrate the staphylococcus in cases of simple endocarditis, and in malignant endocarditis the various pyogenic micrococci and the pneumococcus of Fraenkel have repeatedly been found; indeed, Eichhorst expresses the opinion that no line of distinction can be drawn between the group of micro-organisms capable of exciting the ulcerative variety in one case and simple endocarditis in another.

The mitral valve is affected more frequently than the aortic, which is quite reasonable to suppose, as its surface area is far greater than that of the aortic cups, besides being composed of a greater variety of structural elements. The generally accepted explanation for the development of the process of endocarditis upon these valves has been based upon a purely mechanical theory, which to my mind cannot satisfactorily explain the phenomenon on the one hand, and must necessarily take for granted the existence of a condition which cannot be proven, on the other. Thus it has been supposed that the greater strain brought upon the left ventricle to sustain the circulation would of itself predispose to an endocarditis, or through the existence of certain lesions, either independent or resulting from the above condition, the invasion of micro-organisms was invited. Osler inclines to the view that fœtal endocarditis is found more frequently upon the right side, because developmental abnormalities are more frequently seen here. Referring, however, once more to the bacterial origin of endocarditis, it would seem most plausible to suppose that the germs which excite the inflammatory reaction in the endocardium can thrive only in a medium of arterial blood, which is offered in the most perfect manner in the left auricle and ventricle. The endocardium itself is poorly supplied with blood, and for this reason the bacteria find it impossible to develop in the right chambers of the heart, which receives a most impure blood from the general circulation. During fœtal life, however, the right auricle obtains the freshly oxygenated blood directly from the placenta, and so we have a preponderance of endocardial inflammation upon the right side, until this mode of circulation becomes altered by the establishment of pulmonary respiration.

Clinical Department.

NOTES ON A CASE OF ALCOHOLIC NEURITIS.

By E. R. HOUGHTON, M.A., M.D.,

VISITING PHYSICIAN OF GOOD SAMARITAN DISPENSARY, NEW YORK.

A young man, native of the United States, had always enjoyed good health until four years ago. He never had measles, scarlet fever, diphtheria, or any of the diseases of childhood. The patient is an iron-worker, subjected to very severe labor, causing violent perspiration even during the cold months. He was not in the habit of changing his clothes at noon or even at night, but kept them on until they dried on him. He habitually drank to excess Saturday night, though rarely drinking during the rest of the week. He drank some whiskey, but usually beer which was pumped up through lead pipes. He has always been a strong man, also somewhat of an athlete. His family history is good, his parents, brothers, and sisters are all living and well. He denied any venereal disease; was married at seventeen years of age and has three perfectly healthy children. His wife had never aborted.

About four years ago he went on a spree, and the next day he felt a numbness and weakness of the limbs which increased for four days until he became completely paralyzed in his legs, arms, and hands. He had a partial paralysis of the muscles of the throat, chest, and back, causing difficulty in swallowing and breathing. This condition continued for four months without any appreciable change. He drank freely during this period, because, as he stated, he had no other pastime. Gradually improvement set in, so that he could sit up in bed. In two weeks' time he walked on crutches, and in two weeks more he was well. During this time he was, to use his own words, "giving nature a chance," and nature took it, seeing that he was not under the care of any other physician.

Some four years later, on a Monday morning, after being on a drunk all day Sunday, he awoke feeling tired in his legs and feet. His walking was interfered with by a numbness in his legs, a weakness and on inability to co-ordinate, and pain on attempting to walk. The pain was in the muscles, not in the joints. This grew progressively worse until Thursday, when he took to his bed, which he did not leave for several months. The next week his hands, arms, and chest gave signs of a partial paralysis. At this time I was called in. The symptoms obtaining on my first visit were as follows:

As to the nervous system, he had no hallucinations, no dreams, no delirium, but a persistent insomnia. His wife said that he rarely slept more than a half-hour at a time. His circulatory system was in good condition; there were no fever, no heart trouble, the pulse was full, regular, and quiet. The partial paralysis of the respiratory muscles caused him much trouble. He could cough but feebly, and, as he expressed it, "it felt like a load of iron to get a deep breath." His breathing, though superficial, was regular. At the inception of the attack he had what he called dyspepsia, which was an inability to digest certain things. He had persistent vomiting for one day, but none before or since. The control of the bladder and rectum were not interfered with, but he had absolute loss of sexual power. His muscular system was greatly affected. He had ankle and wrist drop and marked paralysis of the extensors. In the first week, while he was still able to walk, he suffered greatly with muscular pains on motion, which pains entirely ceased when he was at rest. The muscles were not painful nor sensitive to touch. Knee-jerk and ankle-clonus were entirely lost. Among other things the muscles of the tongue and pharynx were affected, so that he was afraid to drink or eat, as both food and drink were apt to go down the wrong way. The larynx seemed to collapse on inspiration, causing great distress. The extensors of the hand were completely paralyzed, the flexors incompletely. The muscles of the arm and chest were considerably affected, but were not wasted and flaccid as were those of the lower extremities.

The skin seemed dry and hard, with several anæsthetic spots on the limbs, but otherwise the skin was hyperæsthetic; the cutaneous reflexes were lost. There was a slight bed-sore on the buttock. He had no tingling or formication, and no œdema of the legs.

His hearing was not affected, but his eyesight was very much so, he being unable to read more than a line or two of the newspaper. Taste and smell were entirely lost.

After being two weeks under treatment he suddenly developed an attack of pneumonia, probably due to the inhalation of some particle of food. He was in great distress and seemed likely to die any minute on account of the interference with breathing and coughing. His temperature was 105° F.; pulse, 125; respiration, which was very superficial, 35. It was only by putting a tight band about his chest that he was able to cough at all.

Five days later his pneumonia began to resolve and soon cleared up altogether, but his paralysis did not improve. After a month more with no improvement, although I tried all the varied treatments suggested by my medical friends, the patient asked me to kill or cure him. He was put on one-tenth of a grain of strychnine four times a day, and the improvement, so long delayed, began at once. In two weeks he was about on crutches, and in two weeks more walking about. He then discontinued treatment, and at the present time (two years later) he is entirely well and working at his old trade. He has had no return of the old trouble, but he is strictly temperate.

APOMORPHINE IN ACUTE ALCOHOLIC DELIRIUM.

By J. EDWARD TOMPKINS, M.D.,

FREDERICKSBURG, VA.

The articles on apomorphine in recent issues of the Medical Record have been read with interest by me. It is somewhat surprising, however, that none of the gentlemen who so admirably brought forth the merits of this valuable drug should have mentioned its usefulness in acute alcoholic delirium. Here we have rigidity of the muscles, convulsions, a full bounding pulse, and usually a stomach filled with an irritant—just the condition to be counteracted by the physiological effects of apomorphine.

For this form of alcoholism it gets in its work in minutes, whereas it takes hours for bromides, chloral, and the like to have the same effect. It is a drug far superior to morphine in this condition, for, while morphine dries up the secretions, apomorphine eliminates the poison.

A case in point: Some weeks ago I was called about midnight to see a man said to be in convulsions. Upon entering the room, I beheld a man on the floor, with five others holding him down. His face was flushed, pulse bounding, and every few minutes there occurred a violent tonic convulsion. He was well known to me as an habitual drinker, and a strong odor of alcohol pervaded the room. I at once injected hypodermically one-tenth grain apomorphine hydrochlorate. In four minutes free emesis followed, rigidity gave way to relaxation, excitement to somnolence, and without further medication the patient, who before had been wild and delirious, went off into a quiet sleep.

This case is similar to a number of others treated in a like manner and with like good results. While it acts admirably in these cases, its use is generally contraindicated in genuine cases of delirium tremens, in which we usually have a weak heart.

ABSCESS OF THE APPENDIX DISCHARGING THROUGH THE UMBILICUS.

By JOHN A. WYETH, M.D.,

NEW YORK.

The instances in which an abscess resulting from appendicitis opens through the umbilicus are so rare that I submit the following case for record.

M. S., male, thirty-four years of age, was admitted to the Polyclinic Hospital September 27, 1898. Three months before admission he had suffered a very severe pain in the right iliac region, the pain radiating toward the umbilicus. This pain lasted about ten days, when the symptoms subsided so entirely that he considered himself in perfect health. About the 10th of September he was again seized with a similar attack which was somewhat more severe than the first. There was great and persistent pain over the abdomen and up as high as the navel, accompanied by high temperatures and several well-marked chills evidently due to septic infection. In three or four days a hard swelling was felt at and to the right of the umbilicus. The patient was at this time seized with vomiting and had also well-marked diarrhœa. When admitted to the hospital his oral temperature was 103° F.; pulse, 100. There was marked tenderness over the central and right lower portions of the abdomen, which was slightly distended. The integument in and immediately about the navel was red and doughy on palpation. I saw him for the first time on September 30th, and recognized what I believed to be a suppurative appendicitis, the abscess cavity of which was pointing at the umbilicus, through which there was a very slight discharge of pus. In-

troducing a probe, it passed into the cavity of the abscess. The patient was put under an anæsthetic and an incision made, which gave discharge to quite a quantity of pus and to two or three small hard fecal concretions or enteroliths, such as are not infrequently found in the appendix. The subsequent history of this case as far as the appendicitis was concerned was uninteresting. His condition improved to such an extent that on October 10th, at his request, he was discharged, as he desired to spend his convalescence at his home in this city. Just as he was walking out of the building he suffered the rupture of a vessel in the brain and died quite suddenly from compression of the brain.

The gangrenous stump of the appendix was found in the abscess cavity which had opened through the navel.

14 East Tenth Street.

Progress of Medical Science.

The Surgical Treatment of Pericarditis. — Dr. Brentano has made a study of the cases of pericarditis in the surgical department of the City Hospital at Urban in Berlin, under the directorship of Dr. Körte. He believes (*Deutsche med. Wochenschrift*, No. 82, 1898) that operative interference is indicated only in exudative pericarditis, and here only when the life of the patient is threatened or a purulent inflammation is suspected. He classifies the methods of operation as follows: (1) Puncture; (2) incision through an intercostal space; (3) incision preceded by resection of a rib. There is no point at which puncture can be made with positive safety to the heart. As regards the position of the heart in pericarditis with effusion, experience in the Urban City Hospital has shown that in a pericardial sac filled with fluid the heart assumes a position against the anterior chest wall unless held in some other position by adhesions. The coronary arteries are therefore in danger of being injured during puncture, but much more frequently the pleura is threatened; in fact, in the majority of cases pericardial paracentesis is made through the healthy pleura. This under certain conditions may lead to pleural effusion. Moreover, a pericardial exudate can rarely be entirely removed through a single puncture. Dr. Brentano has therefore totally discarded this procedure, as well as the operation by simple incision, because in the latter the internal mammary artery and the pleura are apt to be injured, it is difficult to obtain a clear view of the deeper structures, and adhesions cannot be adequately surveyed. On the other hand, the opening of the pericardial sac after resection of a rib is such a simple operation that it may often be attempted without narcosis and carried to completion under local anæsthesia alone. The fifth left costal cartilage is the proper one to be resected, and after being stripped of its intercostal muscles should be separated close to the sternum and at its junction with the rib. The mammary vessels crossing the body of the triangularis sterni muscle are to be doubly ligated and divided. The fibres of the muscle are then separated by blunt dissection, the overlapping pleura is retracted, and an incision made in the whitish, glistening, pericardial membrane. The fluid escapes in spurts, because the heart shows a tendency to close the opening. In purulent exudation, irrigation with sterilized water is recommended. The incised edges of the pericardium should be sutured to the skin incision, and the cavity drained by strips of iodoform gauze. In purulent cases the sac is irrigated daily with sterilized water. According to Dr. Brentano, in cases operated upon by this radical method intrapericardial adhesions are less apt to occur. In the five cases thus operated upon, only one recovered, but the others were markedly relieved by the operation and death resulted from the causative disease, and not from pericarditis. Pericardiotomy with resection of the fifth rib in two cases of purulent pericarditis, due to osteomyelitis, did not prevent a lethal termination.

Functional Hypertrophy of the Arteries.—Dr. Morkotun (*Wratch*, 39, 1898), as the result of numerous experiments, concludes as follows: (1) Under the influence of gymnastic exercise not only do the muscles undergo hypertrophy, but the arteries which nourish them also increase in size. This enlargement occurs in the transverse as well as in the longitudinal diameter. (2) It is very likely that a functional hypertrophy of the arteries in all the other organs may occur as soon as they are called upon to increase their functions. (3) The functional hypertrophy of the arteries demonstrates to a certain degree a physiological process which renders the work of the organ somewhat easier. If, however, the increased function of the organ lasts for any length of time, then the arteries may well become insufficient and give rise to aneurismal dilatation. It also appears that greatly hypertrophied arteries form a fertile soil for the development of sclerosis, even though it be a fact that sclerosis may develop in arteries which show no trace of functional hypertrophy.

Essential Paroxysmal Tachycardia.—Dr. S. B. Laache (*Deutsche Medizinal-Zeitung*, November, 1898) makes the following remarks: The disease may in general be looked upon as a neurosis, but not infrequently it is associated with evident changes in the heart valves or myocardium. The attack begins suddenly as a rule. In spite of the increased frequency, the pulse is regular. Perhaps the lowering of the blood pressure plays an important part. The temperature is normal as a rule, though at times a febrile condition exists. The attack stops as suddenly as it began, whereby the patients experience a precordial concussion, which Martius considers a sign of the sudden contraction of the heart following a previous dilatation. The duration of the attack varies from a few minutes to hours or even days. The prognosis for a single attack is good. Recurrences will very likely take place. Instances of cure have been recorded. The diagnosis is generally easy. The neuralgic pains of angina, as well as the dyspnœa of asthma, are lacking. Abdominal pain without the existence of any symptoms of abdominal disease is very striking. The pathologico-anatomical condition of the affection is thus far but little understood. Changes in the valves or myocardium have been found. The disease attacks men most frequently, but quite often too women and children. Nervous influence, infectious diseases (diphtheria, rötheln, syphilis), disturbances of the sexual and gastro-intestinal apparatus, and, finally, dreams, play an important rôle in the etiology of the affection, which is also observed in several members of the same family. Martius looks upon the paroxysmal tachycardia as a very acute cardiac dilatation, which disappears as suddenly as it began. Laache considers this dilatation as secondary, and seeks for the cause of the disease partly in a neurotic, partly in an anatomical change of the heart muscle and cardiac vessels. Therapy consists of absolute rest during the attack, and application of an ice-bag. Schott prefers local warm applications. Digitalis is too slow in action. Subcutaneous injections of morphine tend to alleviate symptoms, but do not shorten the attack. Suggestion therapy is often followed by good results. Of the nervous sedatives, the salts of bromine are recommended. In organic disease, digitalis is the sovereign remedy.

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LEPROSY AND ITS TREATMENT.

OPINION has fluctuated greatly with regard to the contagiousness of leprosy. The disease is perhaps the first mentioned in history, and its origin is lost in the mists of the past. That in those far-back days it was believed to be contagious is shown by the references made to it in writings still extant, many of which were composed some hundreds of years ago. Striking evidence is given of this fact in the Book of Leviticus, of which two chapters are devoted to a consideration of the different forms of leprosy and of the measures to be taken to control its ravages. In the case of what was then termed malignant leprosy, it was decreed by the Mosaic law that the house in which the sufferer had lived should be demolished. Since that time opinion has see-sawed between the contagious and non-contagious theories, until within the past few years men's minds have been slowly but surely veering to the latter belief. Hansen is chiefly responsible for the present attitude of scientific men with regard to this point. At the Berlin conference of last year, the views of the majority of leprosy experts may be summed up as follows:

(1) The leprosy bacillus (discovered by Hansen in 1871) is the true cause of the disease; (2) man is the only animal in which that bacillus exists; (3) leprosy is contagious, but not an hereditary disease; and (4) isolation of leprosy patients is strongly insisted upon.

But although the foregoing sentences express the opinions of the larger number of those who took part in the conference, there were some who were unwilling to accept these views in their entirety. Most of these dissentients were Britons, and Dr. Phineas Abraham gave voice to their sentiments when he expressed his general agreement with the conclusions arrived at, but took occasion to point out that where lepers are numerous, and their friends still more numerous and not desirous of being separated from them, harsh measures of isolation and segregation become impossible, their chief result being the concealment of cases. Mr. Jonathan Hutchinson, as is well known, does not even believe that segregation would effect anything in diminishing the prevalence of the disease. The mass of evidence, however, goes to show that although contagion cannot be demonstrated with scientific accuracy, yet it is the most important factor in spreading the disease. Norway is a case in point. In th try, up to 1856, leprosy was extremely prevale after that date and when complete isolation ments were brought into force, the number affected has been and is still steadily dec Again, if more proofs are needed, the upholde contagion theory can instance the disappear leprosy from Europe under strict isolation, spread in Madagascar and the Sandwich Thus, the contagion theory accepted, the nat quence is strict isolation. The disease will n effectually stamped out by half-way measure S. Ashmead puts the situation in a nutshell w says that there are two stands to be taken: (1) gion and incurability; (2) non-contagion and bility. And he classes the supporters of the theories as leprologists and dermatologists. Th rologists, the practical, experienced men, almost mously take the view that the disease is conta while the dermatologists hold the contrary belie

The original home of leprosy is Asia and it ishes there more than in any other part of the g China is a hotbed of leprosy; in Japan it pre extensively, while in India it is known that there at least some one hundred and thirty thousand le For quite a long time close observations have b made of leprosy in the country of Kashmir, and recently Dr. Ernest E. Neve, honorary medical su intendent of the state leper hospital there, has p lished the result of his investigations within late ye which, though perhaps not throwing much fresh li on the subject, are nevertheless highly interesting the purpose of comparison. He notes that the numb of female is much less than that of male lepers, a that youthful lepers are very rare. These observations bear out the conclusions arrived at by others. With regard to diet, the majority of dwellers in Kashmir feed on sour milk and rice; few are fish-eaters. Heredity is shown to be an apparently unimportant factor in reproducing the disease, while the evidence in support of contagion, although strong, does not seem to be altogether convincing. Dr. Neve sums up our knowledge on the subject as follows:

"(1) Heredity is one of the means of propagation of leprosy. This is, however, a less potent factor than might be supposed. (2) Direct inoculation has been almost if not quite proved to be a possible source. It appears improbable, however, that it is of frequent occurrence. (3) A considerable number of cases have been recorded, in which there are reasons to suppose that the disease has been communicated by a leper to a previously healthy person. . . . Again, propagation may be due to vaccination with contaminated lymph, or to contagion from clothes and eating-vessels, or even to aerial transmission. (4) There has been for many years a popular impression that the eating of fish, especially when salted, is a specific cause of leprosy. . . . That there is nothing intrinsically impossible in the transmission of bacilli by means of fish may be readily admitted. It has been recently pointed out by Edington that dried salt fish contains organisms of putrefaction to a considerable extent. It is quite probable that the lepra bacillus might find a suitable nidus

but the previous contact of leprosy virus with would, I imagine, be a *sine qua non*. And if fish is in no sense a cause of leprosy, but may ted to a minor place as a possible medium of ion. Thus, as we might expect, leprosy is in districts in which fish is never eaten; and, ely, it often exists where fish is eaten in large es. In Kashmir the fishermen and boatmen ost the only important classes of the commue from leprous taint."

Neve draws attention to the fact that milk is ly a source of danger; putrid buttermilk is cond a delicacy in Kashmir, and he remarks that easy to see that a leprous milkman might spread ion. After reviewing the question of predisposiand particularly with regard to the contention of that syphilis may confer such predisposition, the makes use of these words: "The water in lepdistricts is often heavily charged with organic er, derived from decaying leaves and wood. A important fact, and one on which I feel disposed y much stress, is the bad ventilation of the huts abited by the herdsmen and the extraordinary exto which in certain seasons of the year they are rcrowded." This expression of opinion is quite in e with the observations of those who have resided in rous districts, who one and all dwell with emphasis the necessity of cleanliness. Hansen, at Berlin, stanced America as a country where cleanliness was ore strictly observed than in European states, with e result that in spite of immigration leprosy has not een able to spread. This is also more or less clear roof in favor of the contagion theory. As regards reatment, Dr. Neve believes that when the disease has fairly set in, medicines have only a palliative effect, thus agreeing in the main with Hansen, who thinks that the efforts of Unna, Carasquilla, and Danielsen to cure leprosy by means of drugs or by serum treatment have been quite ineffectual. In the mission hospital in Kashmir the operation of nerve-stretching has been in vogue for the relief of anæsthesia and trophic ulcers, and it is stated that to a limited extent this practice is followed by beneficial results. In 1886 Dr. F. Downes read a paper, which was published in *The Lancet*, on nerve-stretching for leprosy, founded on a large experience in nerve-stretching for leprosy and sciatica in Kashmir, and contended that by these means sensation had been much improved. Dr. Neve has performed the operation in two hundred and eighty-four cases, with similar results in most instances, but of course is fully conscious of the fact that it is relief and not a cure. He also holds to the belief that leprosy is incurable—"once a leper always a leper"—and remarks that "however slight the risk of contagion may be, I am strongly in favor of segregation."

Here in this country we have fortunately had small experience of leprosy, but now that we have acquired Hawaii we are brought face to face with the problem of how best to deal with the disease. There is much divergence of opinion as to the prevalence of leprosy in the Sandwich Islands. Those on the spot, and who consequently can speak with authority, state that the number of lepers has been greatly exaggerated and that segregation has been thoroughly enforced during the past six years, with the result that there has been a decrease of over fifty per cent. of lepers sent to Molokai during that time. This is indeed good news, and it is to be hoped that the regulations for isolating lepers will be so stringently adhered to that soon it will be impossible to find one at large.

THE SANITARY IMPROVEMENT OF HAVANA.

THE unsanitary condition of Havana has been very strongly emphasized by the report of the late Colonel Waring, which has been recently published. Much that has been said and written on this subject is now reinforced by an exhaustive inspection by an acknowledged expert. Facts are presented which leave no doubt as to the necessity for a radical and thorough system of sewerage being instituted without delay. The city of Havana is practically without any effective drainage. Although the water-supply is excellent, there is no provision for the waste overflow. The bay, which is the main receptacle for the drainage, is practically unaffected by the tide, and is separated from the strong current outside by the two peninsular strips which guard the entrance. While the lay of the land makes an excellent harbor, the disadvantages of the conditions in other directions which invite sewage contamination are too obvious for comment. It is plainly to be seen that nature must be substituted by art if any effective sanitary work is to be done. To the latter end it is proposed to skirt the bay by a submerged sewer, which shall discharge itself safely in the rapid flow of the Gulf Stream outside. The sunken refuse vaults are, under the proposed new system, to be replaced by a complete network of sewers converging toward the main outlet. The streets, which are unpaved, are to be asphalted, and the gutters used for surface drainage instead of receptacles for every imaginable filth and garbage which find their easy way thither.

There is no question, if these suggested improvements are carried out, that Havana may become a reasonably healthy city, in which, possibly, foreigners can live without the present fear of inevitable seizure by the endemic malarial and yellow fevers. The report suggests that, in order that the work be done on time and before the coming summer, it shall be commenced without delay. In the mean time a suitable bill must be brought before Congress and the required appropriation of $10,000,000 be made. There is no doubt that the money can be wisely expended in the required direction, in the eventual saving of valuable lives there and here, and by markedly if not effectively arresting the yearly ravages of pestilence which threaten all our Southern ports. No amount of money is too great to insure us such protection, and no time should be lost in making the latter possible.

Etherion is the name given to a new element which Mr. Charles F. Brush claims to have discovered in the air.

COMPARATIVE REMUNERATION.

It has probably often occurred to the physician that his legal friends are able to secure much more easily than he tangible remuneration for intangible professional advice or services. What justice there is in this is not clear. To become a lawyer of sufficient knowledge and experience to express opinions upon legal questions, and to get large rewards for them, takes no longer and involves no more labor than to become a physician of corresponding position, and, with other considerations equalized, the services of the latter should be worth as much in money, the standard of value in this world, as those of the former. If any experienced surgeon were called to see a patient with a view to operation, and, deciding not to operate because he saw that the condition did not require such intervention, should attempt to charge an amount anywhere near what he would have received for an operation, there is not much doubt what the result would be. Nevertheless, in such an instance, the negative advice is just as valuable as any other, for it takes as much skill and experience to say no as to say yes under the circumstances. Furthermore, the surgeon or physician is often called upon to decide an important, perhaps vital, question at once, while the lawyer has time, or takes it, to look up cases and precedents. The question which the medical man must decide is, what is best for the ultimate good of the patient, not primarily how that good is to be accomplished. The method involves questions of detail and technique, and a man must have a proper knowledge of both in order ever to be called upon to decide such questions. The surgeon thus by his skill and knowledge accomplishes what is best for his patient, but unless he does so by an operation he is not allowed to charge in proper proportion to that skill and knowledge. Certainly if lawyers' charges are fair this is true. Even when there is a long course of medical or surgical treatment without any operation, the reward is not at all in proportion to what our legal friends would get for a similar expenditure of time and thought. Lawyers are expected to charge for advice and services no matter which side of a case they represent, and they are able to command large fees for advice pure and simple. Physicians ought to be able to do the same, or else a man's property is often of much greater value than his life.

Too Bad to Die.—A poor little street arab was brought into hospital by the police. He had been run over by a 'bus and was badly injured. The chaplain was sent for, as it was thought impossible that the boy could live many hours. With little tact the chaplain began the interview thus: "My boy, the doctors think you are very much hurt. Have you been a good little boy?" Boy (much bored): "You git aout." Chaplain (shocked): "But I am afraid that you are not a good little boy, and you know you may perhaps be going to die." Boy (anxious to end the interview): "Well, 'tain't none o' your business any'ow. Wot's me death got to do with you? 'Ave you got a pal in the coffin line?"—*British Medical Journal.*

News of the Week.

Examinations for the Marine-Hospital Service.—A board of officers will be convened at the United States Marine Hospital, Chicago, Ill., February 14, 1899, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States Marine-Hospital service. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: (1) Physical, (2) written, (3) oral, (4) clinical. In addition to the physical examination candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on the cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment the young officers are as a rule first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service assistant surgeons are entitled to examinations for promotions to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant surgeons receive $1,600, passed assistant surgeons $2,000, and surgeons $2,500 a year. When quarters are not provided, commutation at the rate of $30, $40, or $50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per cent. in addition to the regular salary for every five years' service up to forty per cent. after twenty years' service. The tenure of office is permanent. Officers travelling under orders are allowed actual expenses. For further information or for invitation to appear before the Board of Examiners, address Supervising Surgeon-General, United States Marine-Hospital service.

Influenza is again pandemic this winter. Much sickness is reported in Paris, St. Petersburg, and Berlin, the German Emperor being numbered among the sufferers. In St. Petersburg the unusual prevalence of the disease is attributed to the weather, which is frosty and soft in rapid alternation. In the eastern and southern part of this country the grip prevails almost universally and in many cities has been quite alarming, being more severe than at any period since the pandemic of 1889–90. According to reports made to Surgeon-General Wyman of the Marine-Hospital

service, the present visitation came from Asia Minor and Turkey, where the disease began to be noticeable in November. In spreading to the countries of Europe and America the influenza followed the usual lines of travel.

A Bequest to the Pennsylvania Hospital.—By the will of L. Taylor Dickson, of Philadelphia, who died recently in Georgetown, N. C., his estate of $100,000 is to revert in time to the Pennsylvania Hospital.

Care of the Soldiers' Feet.—A new branch of the British army service is about to be established, the adjutant-general having directed the chief of the surgical staff at Aldershot to form a class of non-commissioned officers for instruction as chiropodists.

Scarlet Fever in Bellevue Hospital.—Several cases of scarlet fever have been discovered in Bellevue Hospital, the first having been in the person of one of the members of the house staff. The patients are removed, as soon as their disease declares itself, to the Willard Parker and the Minturn hospitals at the foot of East Sixteenth Street.

Six-Day Bicycle Contests.—A bill has been introduced into the New York Legislature by Assemblyman Collins, of this city, providing that no rider in a six-day bicycle race shall remain on the track more than twelve out of each twenty-four hours after the first forty-eight hours of riding has elapsed. The proprietor of the place where a six-day contest takes place and the manager of the race who may allow any violation of the act will be guilty of a misdemeanor.

Surgeon-General Sternberg has gone to Cuba to inspect the Spanish military hospitals in Havana and elsewhere, to provide for a yellow-fever hospital, and to establish a permanent medical supply depot at Havana. The only depot at present existing is the hospital-ship *Missouri*. It is reported that a site for the yellow-fever hospital has been selected at the old Spanish camp known as Las Animas, on the Jesus Heights, about two miles from Havana.

Memorial to the Late Colonel Waring.—The committee of the New York Chamber of Commerce has reported that the fund of $100,000 for the Waring memorial has been raised. The committee, which was appointed to formulate and execute a plan for a suitable memorial to the late Col. George E. Waring, Jr., determined to raise a fund of $100,000, the interest on which is to be paid to the widow and daughter of Colonel Waring, one-half to each, so long as they live. At their death the money is to be used for the creation and endowment of a chair in Columbia University, to be known as the Waring municipal chair, for the giving of instruction in municipal affairs. Sixteen hundred and ninety-one subscribers made up the fund of $100,000 and $2,349 for expenses of postage and stationery.

Manslaughter by "Peculiar People."—An English upper court has sustained the conviction of a man who allowed his child to die without medical attendance. The accused was one of the "peculiar people" who do not believe in medicine, but who anoint and pray for the sick. The defendant sought to justify his neglect of his child by quotations from the Bible, but he was found guilty under the act of Parliament which makes it a criminal offence for any parent wilfully to neglect to provide adequate food, clothing, medical aid, or lodging for his child in his custody who is under the age of fourteen years, whereby the health of the child is or may be injured. The court held that it was no defence that the father believed that the Bible forbade him to provide medical assistance for his sick child.

Psittacosis, the infectious pneumonia spread by parrots, has broken out again in a number of Italian towns. Some years ago it prevailed quite extensively in Genoa and Florence, but a decree of the municipal authorities forbidding the keeping of parrots in private houses put an end to the epidemic.

The Bertillon System for Anarchists.—The Prussian police authorities have been ordered by the Minister of the Interior to subject all persons professing or known to be anarchists to the Bertillon system of measurements in order to insure their future identification in case of need.

Centenarians.—A woman died in this city last week who would have been one hundred and two years old had she lived six days longer. An old lady in New Hampshire celebrated the hundredth anniversary of her birth on January 3d by taking a sleigh ride, the thermometer registering at the time 20° below zero.

Smoke Nuisance in London.—Much stir has been made recently with regard to the smoke nuisance in London, and influential support has been accorded to the suggestion made by Sir W. B. Richmond, that a society should be formed for obtaining the enforcement of the law against this nuisance.—*London Times.*

Medical Inspections in the Army.—The Secretary of War has ordered a sanitary inspection each Saturday of all military camps and regimental, brigade, and division hospitals, and a special medical inspection on the last Saturday of each month. The senior medical officer will make these inspections for detached commands, military posts, and general hospitals, and brigade or division surgeons will make them for larger bodies of troops. A report of these inspections will be made to the commanding officer, who will return it after indorsing thereon his views. The medical officer is then to forward the report to the surgeon-general.

Cinnamon for Grip.—Dr. Joseph Carne Ross, physician to Ancoat's Hospital, Manchester, England, writes to *The Sun* in praise of a decoction of cinnamon as a cure for influenza. He says the treatment must be begun within twenty-four hours of the beginning of the attack; otherwise it will probably fail. He gives an ounce of the decoction of cinnamon every half-hour until six doses have been taken, then half an ounce every hour for eighteen hours, and after that half an ounce every two hours. After the temperature has fallen to the normal half an ounce of the decoction is given four times a day for two days. This suggests

the attempts perseveringly made, chiefly by Italian physicians, to cure pulmonary tuberculosis by means of cinnamic acid.

Dr. Max Rosenberg has been appointed "admitting physician" to Mt. Sinai Hospital.

The United States Hospital Ship "Missouri," with a large cargo of medical supplies, in charge of Major Arthur, has sailed from Savannah for Cuba. She carried one hundred and sixteen male and twenty female nurses, who will be added to hospital corps at Havana and Matanzas.

The Jenner Institute of Preventive Medicine.—As a result of the promised transfer of the subscriptions obtained by the Jenner memorial committee, the council of the British Institute of Preventive Medicine has sought for and received legal authority to change the name to the Jenner Institute of Preventive Medicine, whereby Jenner's work may be permanently commemorated.

The New York Odontological Society will hold its thirty-first anniversary meeting at the Academy of Medicine on Tuesday, January 17th, at 2:30 P.M. On this occasion Dr. J. Leon Williams, of London, England, will read a paper entitled "Certain Controversial Questions and Unsolved Problems in Dental Histology and Pathology."

The Soft-Coal Nuisance.—The first of the evil-doers to be convicted of the attempt to shut out the sunlight from New York by burning soft coal has been fined in the court of general sessions. The conviction under the new law for maintaining a public nuisance in using soft coal was obtained by the efforts of the board of health. As this was the first conviction under the new law, the judge let the man off with a fine of $25. After a few more of the greater offenders have been apprehended and punished, we trust the health-board inspectors will turn their attention to the proprietors of some of the hotels and large buildings on Fifth Avenue, who are most flagrant violators of the law in this respect.

Retirement from Hospital Duties of Mr. Treves and Mr. Goodhart.—*The Practitioner*, speaking of the retirement of these distinguished surgeons, makes the following remarks: "The fact that two of the foremost men in the medical world have recently found it necessary, in the very prime of professional life, to shake the yoke of a hospital appointment off their necks is full of significance—for those who have eyes to see. Guy's Hospital has lost Dr. Goodhart, and the London has lost Mr. Treves, just at the time when their services were most valuable—and why? To speak plainly, because they were overburdened with routine work in which their special skill was thrown away, to the detriment of all concerned. . . . A medical teacher of the first rank should not have to waste his scientific sweetness on cases of bronchitis, anæmia, or generally on the common run of human infirmities; nor should a surgical artist of the highest order be hampered by the care of broken limbs or ulcerated legs. The War Office is not an ensample of administrative perfection, yet it would not set the Sirdar to supervise the sewage farm at Aldershot, important and honorable as that duty is in its way; nor would it, I imagine, invite Lord Roberts to take charge of the riding-school. These illustrations point a moral which hospital authorities would do well to take to heart."

Hog Cholera in Indiana, according to a recently issued bulletin of the Purdee University experiment station, destroyed nearly one million hogs during the last epidemic. The ravages are diminishing somewhat at the present time. Many alleged specific cures have been experimented with, but none has given satisfactory results.

Obituary Notes.—Dr. Daniel Lucius Adams died in New Haven on January 3d, at the age of eighty-four years. He was a graduate of the Harvard Medical School in 1838, and formerly practised medicine in this city. In 1865 he retired from practice and removed to Ridgfield, Conn., and later went to New Haven.—Dr. Charles W. McManus, a young physician of this city, whose student life had offered promise of a successful professional career, died at the Willard Parker Hospital on January 6th.—Dr. William G. Brownson, of Noroton Heights, Conn., died at the soldiers' home in that place on January 3d of pneumonia. He was born in 1830 in Peterborough, N. Y. In early life he taught school, but later studied medicine, receiving his degree of M.D. from the medical department of the University of New York in 1865. He immediately entered the medical department of the army and was stationed as assistant surgeon in the hospital at David's Island. After the war he practised medicine in New Canaan, and in 1891 became surgeon to Fitch's Soldiers' Home at Noroton Heights. He was an ex-president of the Connecticut State Medical Society.—Dr. Evert P. Van Epps, of Schenectady, N. Y., died suddenly on January 7th. He was born fifty years ago, and was educated at Union College. His medical education was obtained at the Albany Medical College, whence he was graduated in 1881. The cause of his death was valvular disease of the heart.—Dr. Louis A. Livingood, of Womelsdorf, Pa., died at his home in that place on January 4th, at the age of sixty-eight years. He was a graduate of the Jefferson Medical College in the class of 1854.—Dr. John P. Sharer, of Little Falls, N. Y., died suddenly at his home in that place on January 8th, at the age of seventy-five years. He was a graduate of the Albany Medical College in 1846 and of the College of Physicians and Surgeons in this city in 1848. He had practised medicine at Little Falls continuously for over fifty years. Heart disease was the cause of his death.—Dr. John W. Warth, of Brooklyn, died at his home in that borough on January 7th. He was a native of New York, and was graduated in medicine from the medical department of Columbia University in 1868.—Dr. Edward G. Field, of this city, died suddenly at his apartments in the Hoffman House, on January 8th, at the age of seventy-six years. He was born in Waterbury, Conn., and was graduated from the Castleton Medical College, Vt., in 1847.

Reviews and Notices.

A SYNOPSIS OF SURGERY. By R. F. TOBIN, F.R.C.S.I., etc. London: J. and A. Churchill. Dublin: Fannin & Co., and W. McGee. 1898.

THIS book is one intended evidently only for the use of the student as a sort of pocket compend. It consists chiefly of what the author embodies in his lectures on surgery in Dublin, and the best adjective one can think of to apply to it is "old-fashioned." The student, however, may get much that is useful from the book, as the information is arranged in the epitomized way which is dear to the heart of the student class. The publishers' work is very well done.

CLEFT PALATE, ETC. By W. ARBUTHNOT LANE, M.S. London: Medical Publishing Company, Limited.

THIS is simply a collection of clinical lectures given by the author, some of which have been published before. The lectures are those of a man of large experience, and as such make instructive reading. One of the lectures, entitled "Some of the Consequences of Wearing Boots," contains information which would be very useful to the laity, if the lesson were only taken to heart. The first lecture, on "Cleft Palate," is one of the best.

A CLINICAL TREATISE ON DISEASES OF THE BREAST. By A. MARMADUKE SHIELD, M.B., F.R.C.S., etc. London and New York: Macmillan & Co. 1898.

THIS book covers in a very comprehensive way the pathological conditions which affect the breast, and for the most part is very satisfactory. The author has made free use of illustrations, and has introduced among them several good colored plates. He has taken freely from the writings of other authors, and has used them in drawing his own conclusions. Of course, in a book upon this subject, the chapters of most interest and value are those devoted to pathology and treatment, especially of malignant disease. This author emphasizes a sharp distinction between the so-called scirrhus of the breast as seen in old women, and the softer, more malignant forms of carcinoma, and further draws attention especially to that very malignant form which seems often to have its inception during the activities of the lactation period. He thinks that, in such cases, operation is of very little use. When he comes to discuss the views of various writers as to the efficacy of operation, this author seems to incline very strongly to the more conservative and less radical methods of operative treatment, especially in the case of scirrhous tumors; but we cannot agree with him, in spite of his statistics, that it is not always necessary to clear out the axilla. Clearing of the axilla is a very simple matter, and cannot fail to improve the prognosis. In the chapter on diagnosis, we think that the question of malignancy is more easily decided than the author would have us believe. Some of the patients whom he describes as doing well after several removals of recurrences illustrate rather unusual good fortune than the adequacy of the less radical methods of operation. In this country, certainly, our rule is in cases of malignant disease to operate early, and to go wide of the growth, and we hope for an improvement in our statistics in direct proportion to our success in making an early diagnosis. In this book, the chapter upon mammary abscess is especially full, and one plate illustrating an old thick-walled abscess cavity with marked retraction of the nipple is very interesting. In intelligent patients, however, the history of the illness ought to assist us in differentiating such a state of affairs from a new-growth.

THE REFRACTION OF THE EYE. A Manual for Students. By GUSTAVUS HARTRIDGE, F.R.C.S., Senior Surgeon to the Royal Westminster Ophthalmic Hospital, etc. With 104 Illustrations. Ninth Edition. Published by J. & A. Churchill, London. Philadelphia: P. Blakiston's Son & Co.

THE present edition is an elaboration of previous editions: it is a volume of two hundred and sixty-seven pages, of convenient size, printed on good paper, and is sufficiently illustrated to enable the student to arrive at a clear understanding of the text. As a manual for students the work is excellent. The subject is treated in a simple, clear, and concise manner. The methods advocated are of established value, and are perfectly safe to follow. On some minor points, as in the prolonged use of atropine in young subjects, and the advice not to wear glasses for distance in hypermetropes of two to three dioptres, the American ophthalmologist might differ from his English *confrère*. However, these things do not materially affect the value of a truly excellent work.

TRANSACTIONS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. VOL. XVII., containing the Report of the Proceedings from October, 1895, to June, 1897. Edited by WILLIAM S. CARTER, M.D. Philadelphia. 1898.

THIS volume of transactions differs from most volumes of a similar type in that its contents are classified in the body of the book rather than in the index. This brings together the diseases of the different tissue systems whereby they may be readily consulted. It may be said that this report contains more than a usual amount of good material.

ELEMENTS OF SANITARY ENGINEERING. By MANSFIELD MERRIMAN, Professor of Civil Engineering in Lehigh University. New York and London: John Wiley and Sons. 1898.

RECOGNIZING the necessity for light food for the young, many teachers with better intentions than ability have given the world indigestible treatises under the guise of "Elementary Text-Books," etc. This fortunately is not one of this class, however, for while elementary it is not childish. It is written from an engineer's standpoint, and in so far as technical considerations are concerned we are unable to judge of its merits, but where it touches upon sanitary science as seen from the doctor's vantage-ground, while there is but little, what little there is is for the most part good common sense.

AN AMERICAN TEXT-BOOK OF THE DISEASES OF CHILDREN. By American Teachers. Edited by LOUIS STARR, M.D., assisted by THOMPSON S. WESTCOTT. Second Edition, revised. Philadelphia: W. B. Saunders. 1898.

COMMENCING with the chapter on the clinical investigation and general management of children, Dr. Starr gives various formulæ, which are eminently practical. In the next chapter, which savors more of a laboratory announcement than anything else, the scientific milk problem is depicted. The average general practitioner, we are sorry to say, will not gain one iota by reading this article. A very instructive article is the chapter devoted to the injuries and diseases of the new-born. Following the chapter on lithæmia is the one devoted to hereditary syphilis; this chapter is certainly a masterpiece, and is well illustrated. The chapter on scarlet fever, measles, and chicken-pox, variola and varioloid, is fully up to date, and the various infectious diseases, as typhoid, cholera, cerebro-spinal meningitis, and erysipelas are comprehensiveiy discussed. Dr. Shakspeare has certainly added great weight to this volume. In the chapter on diphtheria so much is written and so many things are advised that it would be hard to select what is absolutely necessary for the successful treatment of a mild and a malignant case of diphtheria. Why do not up-to-date writers discontinue such old fads as "calomel fumigation"? To see on page 264 the statement that there are some preparations which are of great value, and the mention of pepsin as a solvent among other things, cannot be regarded as modern medicine. The chapter on "Convulsions," by Dr. Frederick Peterson, and the chapters on "Hysteria," by Dr. James H. Lloyd are very interesting and valuable. "Catarrhal Laryngitis," by Dr. H. Illoway, could very well have been omitted. When we see the statement, on page 344, that the principal etiological factor "is taking cold," then we can easily judge what the end of the same will be. That this author does not know that the cause of catarrhal laryngitis is certainly due to a specific invasion of micro-organisms, and, furthermore, that this is a distinct infectious disease, does not add to the value of the deductions.

The surgical and the orthopædic treatment of the diseases in children, and the various apparatuses are well described and beautifully illustrated. The diseases of the skin are enumerated and illustrated, and a great many prescriptions for the various dermal lesions are given. Altogether, this text-book of over twelve hundred pages gives a great deal of information, and many of the chapters are valuable contributions to pediatric literature.

Therapeutic Hints.

Earache.—(1) Cocaine, five to ten per cent. solution, in the canal. (2) Cold about the ear, hot applications in the ear. (3) Covering the ear with dry cotton. (4) Hot-water bottle. (5) Air douche, with Politzer bag; but this only when acute symptoms have subsided. If well borne it can be used, but if it causes pain it is contraindicated.—G. L. RICHARDS.

The Treatment of Uræmia by Subdermal Injections of Decinormal Saline Solution.—Dr. Poteenko reports two cases of acute parenchymatous nephritis (*Medicinskoe Obosvenie*, Bd. 50, Heft 8, 1898) treated by subcutaneous injections of physiological saline solution. In both cases severe uræmic symptoms were present, and the quantity of urine passed was small. Three hundred cubic centimetres of salt solution, at a temperature of 40° C., were injected each time. A beneficial action of the fluid was noticed after the first injection, and manifested itself in a regulation and toning up of the heart action, in a subjective improvement of the general condition of the patient, and almost always by an increased secretion of urine. Both cases were completely cured by this method of treatment.

On the Treatment of Tapeworm.—Dr. J. Sasse describes (*Medisch. Weekblad voor Noord- en Zuid-Nederland*, August 14, 1897) the methods employed by Man and Quanjer, of Holland. These two men are both of the opinion that oleum ricini should not be used in association with male fern as a laxative in the treatment of tapeworm, since filicic acid forms a readily absorbable compound with the oil, capable of producing symptoms of poisoning.

Quanjer's method is as follows: A preparatory course is not necessary, but the patient is kept in bed until the worm is driven off. At seven o'clock in the morning he receives thirty-five to forty grams of aq. laxat. Viennensis. Quanjer employs five grams of filicin, divided into eight or ten parts and administered in soft gelatin capsules (hard capsules are to be avoided). At eight o'clock the patient takes the first two capsules, and then every ten minutes two more, until all are taken, each time with a sip of port wine or madeira to prevent nausea. The bowels usually move about ten or eleven o'clock; if not, then another dose of laxative is administered. This method never fails in expelling the entire worm.

Man's method is to administer a laxative on the day previous, so as to soften the scybala and permit access to the parasite. On the evening before he orders wine and water to be drunk, but allows no milk. The next morning at eight o'clock the patient receives in repeated doses the ethereal extract of filix mas in capsule or pill form up to twenty or twenty-five grams, and as much wine and water as he cares to drink. Usually a laxative is not necessary. By eleven o'clock as a rule the worm is discharged, and the patient is allowed to get up. Sasse reports twenty-seven cases and as many cures; the absence of poisonous symptoms he believes is referable to the non-employment of castor oil. In those cases in which filicin is contraindicated on account of marked nausea or vomiting, he resorts to the copper treatment of Hager-Schmidt:

℞ Oxyd. nigr. cupri	6
Cretæ præp.	2
Argillæ alb.	12
Glycerini.	10

M. ft. pil. No. cxx.

For the first week, two pills four times daily, and during the second week, three pills four times a day; finally a dose of oleum ricini. No preparatory treatment is necessary; all sour substances are to be avoided.

Salol given in powder for a long time may result in favoring calculi. Since it is but slowly decomposed in the intestinal canal, symptoms of obstruction may be obviated by combining other powders with the salol.

Severe Gastro-Intestinal Infections of Infancy.—

℞ Bihydrochlorate of quinine	1 gm.
Asafetida	1 "
Tinct. of musk	1 "
Boiled water	120 "
Yolk of one egg.	

M. S. Use as an injection; this is sufficient for two or three injections.

—DR. FÉDE, *Semaine Méd.*, September 28, 1898.

Bronchitis.—A full dose of Dover's powder will frequently abort an attack.—CHARBONNEAU.

Opium should be freely used in the form of Dover's powder. No remedy can take its place.—OSLER.

The following therapeutic results are from the use of opium in full doses: Reduction of irritability, congestion, or inflammatory activity. Alteration in the character and limitation of the amount of the secretion. Increase in the general comfort by relief of pain and soreness, and removal of cough and incidental insomnia. Speedy and permanent cure of eighty per cent. of the cases.—W. T. ENGLISH.

Therapeutic Fasting in Typhoid Fever.—Dr. Adolph Koenig (*Philadelphia Medical Journal*) summarizes the following points in favor of fasting in typhoid fever: (1) To reduce to a minimum the gas and toxin formations of the putrefactive bacteria. (2) To increase the resisting power of the patient for the bacillus typhosus. (3) To favor the ease and comfort of the patient. (4) To counteract the tendency toward diarrhœa. (5) To prevent as far as possible the third stage or that of mixed infection of the disease.

Hereditary Syphilis.—Even if brought into the world alive, the product of syphilitic conception has a relatively weak hold on life. This is instanced in the well-known statistics of the Moscow Hospital, in which, of two thousand syphilitic children born in eleven years, over seventy per cent. died. Fournier makes the mortality twenty-eight per cent. from exclusive paternal heredity, sixty per cent. from maternal heredity, and 68.5 per cent. from a mixed heredity. Some figures are even more appalling.—L. DUNCAN BULKLEY.

Serum-Therapy.—Serums have been prepared and used with varying success in the following bacterial disturbances of the physical equilibrium, clinically known as diphtheria, smallpox, tetanus, tuberculosis, streptococcic infections, typhoid fever, bubonic plague, rabies, cholera, yellow fever, pneumonia, anthrax, syphilis, snake poisoning, ricin poisoning, typhus fever, and cancer.—A. L. MANN.

Goitre.—

℞ Iodini (crystals)	gr. i.
Potassii iodidi	gr. ij.
Alcoholis	ʒ ij.
Syr. simplicis	ʒ i.
Aquæ dest.	ʒ vi.

M. S. Take a teaspoonful in half a glass of water four times daily.

About one-third of my cases during the past five years were treated with the thyroid extract, the others with iodine. The iodine treatment has given the quickest results.— DR. F. C. SCHAEFER, *North American Practitioner*, October, 1898.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, December 22, 1898.

EDWIN B. CRAGIN, M.D., CHAIRMAN.

Suture Retained in the Bladder.—DR. PHILANDER A. HARRIS said that, after an operation for the removal of a tumor of the anterior portion of the urethra, it was thought best to make a vesico-vaginal fistula, and two sutures were inserted with the idea of holding the bladder in place. During the subsequent douching, one of the sutures disappeared and was thought to have ulcerated away, although in reality it had been carried into the bladder. After remaining there for six weeks and setting up a great deal of cystitis, a piece of silkworm gut was removed by him, about seven inches in length, encrusted with urinary salts. The specimen was exhibited.

Trachelotomy and Morcellement for Removal of a Fibro-Myoma.—DR. H. J. GARRIGUES presented a large uterine fibro-myoma which had been removed by trachelotomy and morcellement, leaving the uterus. The patient, who was forty-six years of age, had been married twenty-five years, and had had four children and three miscarriages. During the last two years her menstruation had been interrupted three or four months at a time, and for the past few months it had been impossible for her to urinate in the sitting posture. She complained of soreness all over the abdomen. Vaginal examination showed that the uterus formed a mass about the size of a uterus five months pregnant. It was freely movable. The os formed a pear-shaped opening, measuring two inches from side to side. The anterior lip was thin, and the posterior lip formed part of the tumor and was covered with dark mucous membrane. Examination under ether showed that the tumor was comparatively free to the right and behind, there being only adhesions which could be easily broken up; but to the left and in front it formed one mass with the wall of the uterus. The cervix was cut open on either side up to the utero-vaginal junction, and then an incision was made into the lower end of the tumor. By means of successive grasps with a strong traction forceps, the tumor was removed in pieces. After extirpation of the tumor it was found, by digital examination, that the uterine walls were thick. The hemorrhage was kept within reasonable bounds by constant traction on the tumor. There was only moderate hemorrhage from the uterine cavity, which was packed with gauze. The portions removed weighed twenty-eight ounces. Even the Péan four-prong traction forceps were entirely inadequate to deliver such a tumor, as the prongs were too thin and tore out frequently. Baer's forceps, however, answered admirably. Toward the close of the operation it was difficult to distinguish between the tumor tissue and the uterus, but it was possible to do so with care. Microscopical examination showed the tumor to be a fibro-myoma. This method of traction and morcellement was much safer than splitting the capsule and removing the tumor, thus leaving a cavity which easily became septic. Specimens were presented to show the difference between the tumor tissue and that of the uterus.

DR. H. N. VINEBERG said that the case was interesting as showing the value of such a procedure in younger persons. It seemed to him that, in a person forty-six years of age, it was a matter of little importance whether or not the uterus was removed. He had found it more advantageous to make an incision through the anterior lip of the cervix. Having first made the longitudinal incision through the vagina, it was possible to carry up the anterior incision as far as desired without danger of cutting the uterine arteries. It seemed to offer an advantage over the lateral incision in operations on such large tumors.

DR. GARRIGUES replied that while it was quite true that the patient was nearing the menopause, he felt that this operation was important to the patient, as it was well known that such women were better after the operation if the uterus was saved. Moreover, to control the hemorrhage it was necessary to use either clamps or ligatures, and these caused a great deal of pain for the first few days after operation. The question of the rapidity of convalescence was also a matter worth considering; the method he had used gave a very quick result. He certainly preferred to make the incision at the side, where there were no important vessels and organs, than to go in front and dissect away the parts there. When the latter procedure was adopted, one was impressed with the amount of dysuria that was present. The operation which he had employed in this instance might be called "Emmet's traction operation," as opposed to the method of Sims, used later by Thomas, of splitting up the capsule and enucleating the tumor. It was now used extensively by the French surgeons.

A Case of Salpingo-Oöphorectomy in Acute Puerperal Sepsis.—DR. H. N. VINEBERG reported this case. The patient, a woman twenty-two years of age, had been married eleven months, and had been delivered of a female child by a physician, on October 22, 1898. The labor was normal, except that the head was delayed at the perineum and the physician used the forceps to aid its expulsion. On the third day after confinement the mother's pulse was 103 and her temperature 106° F. On the fifth day the pulse was 86 and temperature 99.8° F. On the eighth day she had a severe chill, followed by a temperature of 104° F. and a pulse of 120. This was on October 30th, and he had first seen her that evening. At that time her pulse was full and strong, and her temperature 102.4° F. There was a tear in the perineum, which seemed to be healthy and granulating satisfactorily, but there were no discharge and no fetid lochia. An intra-uterine douche had been given a few hours before, but nothing had come away. At midnight, under full narcosis, the uterus was thoroughly curetted and a few small fragments were removed. Several ridge-like elevations were felt on the posterior uterine wall, and after some difficulty they were removed with the curette. Careful bimanual examination revealed no pelvic exudate or disease of the adnexa. Twelve hours afterward her pulse was 100 and temperature 103° F. Uterine irrigations were given at short intervals by means of two soft catheters, which were left in the uterus so that the nurse could carry out the treatment with the least possible disturbance of the patient. The woman did well after this for some days. On November 7th, or on the fifteenth day, her temperature was 98.3° F. and pulse 96 to 102. She was stimulated freely and nourished carefully, and ergot was administered. On November 8th, without any assignable reason, the temperature and pulse began to rise, and the patient began to complain of a severe pain in the iliac region. For the first time a mass could now be felt in this region. It was evident that the infection had passed beyond the uterine cavity. One hour later the abdomen was opened. The exterior of the uterus appeared normal. To the right was a mass made up of the ovary and tube adhering together. The tube was thick and dark. The infundibular pelvic ligament was very much infiltrated. The ovarian arteries were tied off as close as possible to the pelvic wall, and the tubes were cut off by exci-

sion into the horns of the uterus. Gauze drainage through the abdominal wound and vagina was employed. The temperature fell to 101° F. thirty hours after operation, but the pulse remained at 140, although of good quality. The movements of the bowel were natural at the end of thirty-two hours. Four days after the operation her pulse was 110 and temperature 99° F. There was considerable purulent discharge from the vaginal and abdominal openings. At the present time the patient had been out of bed for four days; she was free from pain and was improving steadily. The speaker said that this case emphasized the position he had previously taken, that puerperal sepsis was a surgical disease and should be treated on surgical principles. The source of the infection must first be ascertained, and then it should be treated just like an infected wound elsewhere. The treacherous nature of puerperal sepsis was also well illustrated by this case. Bacteriological examination of the uterine discharge on the fourteenth day showed no streptococci, but on the twenty-second day they were found to be present. This showed that a bacteriological examination of the uterine discharge was not always trustworthy, even in expert hands, and that when more reliance was placed on it than on our clinical observations the patient was likely to suffer. Puerperal sapræmia often passed into puerperal sepsis before the physician realized what had happened. A colleague had recently made the statement that puerperal sepsis killed before the tenth day, but the case just reported was a sufficient refutation of that assertion.

Symphyseotomy; Joint Apposition by Sling from Ceiling.—Dr. Robert L. Dickinson read a brief communication on this subject. He said that in his first case a method had been employed by which pressure was applied to the trochanters and the iliac crests by means of a hospital stretcher, on the cloth of which the patient lay. She was allowed to get up on the fortieth day. On examination, with the patient standing and transferring her weight alternately from one foot to the other, there was motion at the joint of barely half an inch, or double that found in the pubic joint under the same circumstances after normal delivery. By the fiftieth day this was very much less, and the patient was discharged.

The second case was that of a robust woman, aged twenty-six years, in confinement with her second child. When first seen by him on November 2, 1897, she had been in labor eleven hours; her pulse was strong and the uterine contractions long, powerful, and expulsive. She was anæsthetized with chloroform, and the pelvic measurements were taken. There was a true conjugate of three inches and a half. The fœtus presented in the L.O.A. position, and the head above the inlet was freely movable and well flexed. The cervix was dilatable and about three inches in diameter. The bladder was distended, necessitating catheterization. The Jewett axis-traction forceps were then applied, but neither the tips nor the handles would come together properly. An hour was spent in careful manipulation, knowing that a child had been previously delivered through this pelvis; but without avail. Symphyseotomy was then performed, and a baby weighing eleven and one-eighth pounds, and measuring twenty-three inches in length, was delivered. The divided bones were held together in a trough, so that the patient's weight would come on the iliac crests. She was then put on a stretcher, and later was slung from the ceiling. Although this case was attended in a tenement house, its progress thereafter was uneventful.

Application of Obstetric Forceps.—Dr. Dickinson said that there should be an intermediate step between the application of the forceps and traction, *i.e.*, examination to determine the mode of seizure. This should be done by both external and internal examination. The tips of the blades should be sought for through the abdominal wall, as their distance apart would confirm the conception formed from the distance apart of the handles. A finger on the head noticed the progress of the delivery, and whether or not the forceps were slipping.

Manual Extraction of the Placenta.—When it was necessary to pass the hand into the uterus to extract the placenta, the hand should pass inside of the membranes whenever this was practicable. In this way the amnion acted as a sort of glove or mitten, and diminished the chances of sepsis.

After-Treatment of Symphyseotomy.—The after-treatment of symphyseotomy in tenement-house practice was, as might be expected, very difficult. Two stiff pillows or bolsters placed along the edges of the bed, so that the pressure came on the iliac crests and trochanters, constituted an effective device if carefully watched. A binder enclosed both bolsters and patient, and held them fairly stable, but the pressure was not quite sufficient and it could not be easily regulated. A hospital stretcher was more convenient, but better than all these was the ceiling sling. The patient was slung up to the ceiling in her own binder. The binder was in the usual position, but was rather slack and was fastened over a stick placed parallel to the median line of the body. A rope fastened to a stout screw-hook in the ceiling and to this stick completed the arrangement, and allowed of caring for the patient without removing the lateral pressure. One nurse of average intelligence could easily carry out the necessary manipulations.

Dr. C. A. Jewett said that a very good imitation of Dr. Ayers' bed could be made out of a hospital bed. It seemed to him that it would be better to use lateral pads, even in connection with Dr. Dickinson's sling.

Dr. P. A. Harris thought that the ceiling sling should give sufficient pressure, but he was afraid it might produce so much numbness as to necessitate the substitution of some other device.

Dr. E. A. Ayers suggested that in many cases the ovaries might be injured by lateral compression of the uterus after labor. He was accustomed to instruct his students to make pressure on the uterus antero-posteriorly, for fear that such injury might result if the usual lateral compression associated with Credé's method of delivering the placenta was used.

Dr. Ayers then presented his bed for symphyseotomy patients in its most recent and improved form. He said that he had tried the hammock, and had found that it caused so much discomfort by compressing the chest that he had sought for some method by which compression could be made only on the pelvis. It seemed to him exceedingly important in these cases to make every effort to provide for the comfort of these patients. His latest apparatus had given both his patients and himself the greatest satisfaction. Dr. Dickinson's device was an excellent one because of its availability, but it was practically impossible to get sufficient pressure on the iliac crests and at the same time have the patient rest on the bed. If the patient was to be suspended, the canvas should be extended so as not to cause bowing of her body and a strain upon the joint.

Symphyseotomy Very Rarely Indicated.—Dr. S. Marx said that he had never met with a case in which he was willing to do a symphyseotomy. One reason for this was that he had never encountered a case in which the indications did not seem to point to some other operation which seemed to him better. Another reason was that he had seen some very horrible results following this operation in the hands of excellent operators. These results included terrible lacerations, with permanent crippling of the woman or death. One case in particular had impressed him. He had been

invited by a member of this section to see him do a second symphyseotomy on the same patient. He found what seemed to him a normal pelvis, with a chin presentation above the brim and an exceedingly small child. The physician in charge consented to let him try to deliver the woman without symphyseotomy, and the result was that he delivered an exceedingly small and premature baby in a short time. The child was kept in an incubator for some time, and was very tiny even after several weeks.

Pelvimetry a Delusion and Snare.—Regarding the application of forceps, he said that he had been deeply interested in the remarks made in the paper. As his experience in midwifery increased, he became more and more convinced of the uncertainty of pelvimetry. It seemed to him a delusion and a snare.

Axis-Traction Forceps.—The case reported in the paper was one in which there was a flat pelvis, and the child was enormously large. In his opinion, the side-to-side application was the best, as this gave compression of the fœtal head in the right direction. He used the axis-traction forceps almost exclusively, and it was a nearly ideal instrument. It had, however, one or two faults. One of these was the constant pressure which it produced, so that the child's head may be the seat of disagreeable sloughing, resulting in a bad scar. For this reason he now discarded the fixation screw. The manner in which the seizure was secured could be best determined by internal examination, the finger being kept on the head. The lower limit of measurement for Cæsarean section was usually three and one-fourth inches, with a child of normal size. In the case reported in the paper the child weighed over eleven pounds, and hence it was a matter for much congratulation that it had been delivered alive. In choosing between symphyseotomy, version, and embryotomy, he would certainly favor embryotomy or perforation of the skull. He wished it to be understood that he was perfectly willing to do a symphyseotomy in a suitable case, but so far he had not met with such a case. He objected to operations directed to the mother rather than to the child, for the mother's life was infinitely more valuable than that of the child, which is before birth an unknown and very indefinite quantity. The field for symphyseotomy was certainly very small, and there must be something wrong when one reads of a physician in a small town doing a number of symphyseotomies.

Dr. Jewett said that the last speaker objected to the axis-traction forceps because of the excessive pressure. This was probably because he used the screw wrongly; it should be used only to hold what pressure had been obtained. Personally he found but little use for the fixation screw. He delivered with the ordinary forceps by grasping the shaft of the instrument near the lock, so as to exert little or no pressure. It had been shown that the seizure of the head by the sinciput and occiput was a good one, the compensation taking place in the diameter corresponding to that of the passages. However, it promoted premature flexion, which was a disadvantage. When the head was far enough down to be seized in the biparietal diameters, this, of course, was the only scientific method of applying these instruments. He now had in his wards a patient whom he had delivered by symphyseotomy two years ago. The child weighed nine pounds and a half, and, although the pelvis was nearly large enough, he could not deliver the child with forceps with what seemed to him a proper amount of traction. Such a case seemed to him just the one for symphyseotomy. The patient had entered the hospital recently with the expectation of requiring another symphyseotomy, but the child being of average size, it was delivered without this operation.

Dr. Ayers said, regarding symphyseotomy, that it did not seem to him that the merits of the operation should be judged by one who had happened to witness some bad performances or bad results, or had seen the operation done in cases in which it was not at all indicated. Those who had had much experience with the operation were satisfied that it could be done with almost no risk to the mother, either as to her life or condition of usefulness afterward. The choice lay between symphyseotomy and Cæsarean section, and if the physician was the patient he felt sure that he would not hesitate long in electing symphyseotomy. The mortality was five times greater at the best from Cæsarean section than from symphyseotomy. He had saved all the babies in his last nine cases, and every one of the women was as well to-day as she had ever been.

The Passage and the Passenger.—Dr. P. A. Harris said there could be no doubt that children could be delivered in greatly contracted pelves—he had done this in the past, and had, like others, killed the children. It was the old story of the passage and the passenger. The first stage should be completed, and if there was any doubt about the mode of delivery, a trial should be given the forceps.

Dr. A. Ernest Gallant said that in watching these symphyseotomy patients in Dr. Ayers' beds at the hospital, he had been surprised at their apparent comfort. It seemed to him that the approximation gained by this apparatus must vary greatly with the distance apart of the handles of the stretcher.

Dr. Ayers remarked that the bars should be placed as far apart as the iliac crests; the object was not to get pressure, but simply approximation.

Suture of the Symphysis.—Dr. Vineberg asked if any one present had had any experience with the method of suturing the bones—a method now practised in Vienna.

Dr. Ayers said that in a case of traumatic separation of the pubis in which the operation was done a year afterward, it had been necessary to use a tremendous pressure in order to hold the bones together. Dr. Wylie sutured the bones with silver wire, and the patient recovered satisfactorily. It seemed to him absolutely useless to adopt such a method in the primary operation. One reason for this statement was that in his operation the joint was not laid open at all, which would be necessary if the suture method were followed, thus exposing the patient to infection of the bone. The operation of suture was somewhat tedious and, in his opinion, there was no indication for it.

Dr. Jewett said that he had been so impressed with the great mobility of the two portions of the pubic bones, that it had never seemed to him that a suture would have any special advantage. The simple suture used in closing the wound should, however, dip down into the fibrous structures covering the ends of the bones. An objection raised by the general surgeons to the use of the suture was the danger of necrosis of the bones. In his own seven or eight cases there had been no injury except in a single instance. In that one an inexperienced assistant had allowed undue and sudden separation of the bones as the child was delivered, so that the soft parts, including the bladder, were dreadfully torn. They were immediately sutured, and with good result. The patient is well and now has good control of the bladder.

Symphyseotomy a Difficult Operation, but Safe and Useful.—Dr. Garrigues said, regarding Pinard's bed, that his recollection was that the pressure was exerted on the trochanters by means of screws. He personally had had only two symphyseotomies, and, in his opinion, all the measures suggested for the after-treatment were superfluous. Dr. Ayers' bed was admirable for hospital practice, but was too large and unwieldy for transportation and use in many tenement houses.

In his successful cases he had simply used three strips of adhesive plaster, two inches wide, passed around the pelvis. They gave excellent fixation, and the slight irritation of the skin produced by them was a very trifling matter. He was sorry indeed to hear Dr. Marx's adverse criticism of symphyseotomy; it was rather late to do this. Personally he believed symphyseotomy to be as valuable as any other obstetrical operation. He was also entirely against relying upon fractions of an inch in the readings of the pelvimeter; it was entirely a matter of the relative size of the fœtal and maternal parts, and it was not feasible to formulate the indications for operation. In skilful hands the mortality of symphyseotomy was *nil*. It was a delicate operation—much more difficult than Cæsarean section—but the expert obstetrician or gynæcologist of the present day should be competent to do it successfully. With the Cæsarean section giving a mortality as low as eight per cent., and symphyseotomy with a still smaller mortality, he believed there was little occasion to sacrifice the life of the child by such operations as embryotomy. It was true that we did not know what the unborn child would become: it might be a thief or a murderer; nevertheless it was our duty to preserve its life if this was possible, even admitting that the life of the mother was more valuable. He did not feel like attempting to suture the pubic bones; it might do in hospital practice, but it was entirely out of place elsewhere.

Dr. Dickinson closed the discussion. He said that in the case reported in which the forceps had been used, the seizure had been a fairly good one, and consequently if the head could have been brought through that pelvis with the forceps, it should have been accomplished by that method of applying them. It was very easy so to adjust the pins of the obstetric binder that from above the iliac crests to well below the trochanters the pressure that could be exerted with his sling would be far more uniform than could be obtained by pillows or pads of any kind. He had not been able so to adjust the edges of the opening in the canvas sling, such as was used by Dr. Ayers, as to make the patient comfortable. In practice he had found that the pubic bones were more closely approximated by the ceiling sling than by any amount of pressure that he could apply with pillows, and which would be tolerated by the patient. The patient was not in an arched position, for she was supported by pillows beneath the head, shoulders, back, and knees. Regarding suture of the pubes, he would say that in a case which had been sent to him, in which rupture of the joint had occurred in connection with a difficult forceps operation a year before, it was found that the bones were so friable that they would not stand much traction. Moreover, in this case there was a tendency of the bones to remain apart. An effort was made to suture and approximate them, but the result was sepsis and death. Regarding operations involving the sacrifice of the child's life, it should be remembered that the physician was not allowed in Roman Catholic families to sacrifice deliberately the life of the child in the interest of the mother.

The Management of the Placenta in Advanced Extra-Uterine Abdominal Pregnancy, with Report of Two Cases of Abdominal Section.—Dr. Edward A. Ayers presented this paper. He said that he had been convinced, by an extended study of one hundred and fifty-two cases operated upon between the sixth and the sixteenth month since the year 1880, that a very important question in cases of abdominal pregnancy was concerning the management of the placenta. The first case was one of tubo-abdominal pregnancy at the seventh month, with delivery of a living fœtus and death of the mother. The fœtus was removed by cœliotomy and lived twenty-one days. The hemorrhage was severe, the placenta being attached to the uterus, colon, and broad ligament. It was controlled by ligature and gauze pressure, but the patient succumbed the following day from heart failure. The second case reported was one of abdominal pregnancy at ten months, with recovery after cœliotomy. The patient was thirty-five years of age, and had had inflammation following the birth of her first child, five years before. She became pregnant in February, and two or three months later was attacked with sudden and severe pains in the pelvis. In June she entered the Manhattan Hospital, and was told that she was pregnant and also that she had peritonitis. On November 25th a spurious labor occurred, and the decidua came away *en masse*. An abdominal examination at that time by Dr. Ayers showed the abdomen to be enlarged to the size of a normal pregnancy at the seventh month. No uterus could be felt, and no fœtal body was recognizable. The lower part of the abdomen felt soft and boggy. There were no fœtal heart sounds or placental murmurs, or any arterial murmurs except that of the aorta. The lower pelvic basin, on vaginal examination, was found to be encroached upon by the fœtal mass, which was behind the uterus. The uterus was jammed against the bladder and pubis, and bent sharply forward over the symphysis. It was clearly a case of abdominal pregnancy, with the fœtus lying underneath the placenta, but whether intra-peritoneal or extra-peritoneal it was impossible to say. She was removed to the Mothers and Babies' Hospital, and prepared for abdominal section. The operation was done by the abdominal route on December 15th, and the placenta was found under the line of incision. It was not attached to the abdominal wall, but was partly covered with omentum and loosely adherent to the bladder. It extended to the right side of the uterus and part of the sigmoid flexure, and was intimately adherent to the left broad ligament. There was no amniotic sac or fluid. After separating the posterior border of the placenta, it was drawn out and found to be badly macerated. The placenta was very large, partly due to static œdema, and it had lost most of its fœtal circulation, except near the maternal side. Most of the blood supply arose from the left broad ligament. The entire pedicle was ligated by a series of interrupted ligatures. Nearly one quart of blood was lost. The peritoneal cavity was cleansed with cloths, a drainage tube was inserted, and the abdomen closed. The drainage tube was soon removed, as very little fluid escaped from it. There was no peritonitis, and the temperature ranged between 99° and 101° F. During the first week nutrient enemata were administered. When the patient first began to walk, four weeks after operation, there was some general œdema from pressure on the left iliac vein, but she was now completely recovered. She became pregnant again in 1898, and this time the gestation sac was normally implanted, but she miscarried, owing to the inability of the uterus to rise.

Management of the Fœtus.—Generally speaking, Dr. Ayers said, the fœtus should be given an opportunity to live, in so far as efforts to preserve its life would not add to the mother's risk, but no further, for the study of the cases showed that at the best very few of the babies lived more than a year, and most of them died much sooner. Most of these infants were puny and deformed, and of low vitality, and to these unfavorable factors must be added the general high mortality among ordinary infants. Kelly had reported a mortality of ninety-one per cent. It was probable that only one or two of these infants were saved in two hundred operations.

Choice of Route.—Statistics showed that the mortality was greater the older the gestation—in other words, in proportion as the placenta was larger the percentage of deaths was larger. We should, there-

fore, operate as soon as the diagnosis was made and consent obtained, and the preferable method was by abdominal section. After the sixth month there was some question as to the advisability of waiting, because of the bearing of the operation on the life of the mother. He would not operate by the vaginal method simply because the fœtus could be delivered in that way, for by this route there was great liability of causing hemorrhage from the placenta, and we were utterly ignorant as to its position and as to the true condition within the abdomen. He would select the vaginal route only when the fœtus had already partially penetrated the vaginal wall, or the sac was suppurating and presented against the wall of the vagina. In cases existing months after the death of the fœtus, the removal of the latter would have no physiological or pathological effect on the placenta. In expert hands the fœtus should be removed as soon as possible.

The Management of the Placenta.—In considering the management of the placenta, it should be understood that for the time being the placenta was essentially a malignant structure, which was soft and friable, and fed from a hundred vessels, and by a surface instead of by a pedicle. After the death of the fœtus the placenta might grow larger by œdematous infiltration or by fibrous or connective-tissue hyperplasia, or it might remain the same size for an indefinite period, or it might gradually be absorbed or become encysted. Where the gestation lay without the peritoneum, it had been reached by abdominal incision low down near the pubes, not opening into the peritoneal cavity. It had been removed through the vaginal incision, with drainage. Various other methods had been employed, even involving the simultaneous extirpation of the uterus. It had been left undisturbed after the removal of the fœtus, and the placenta removed subsequently or allowed to come away piecemeal. All of the same methods had been used in cases of intra-peritoneal implantation of the placenta, and the treatment of the placenta had been responsible for a mortality of 30.1 per cent. in the cases collected since 1880. There were one hundred and fifty-three operators, the great majority of them being men of high reputation, and but few of the patients came under observation when *in extremis*. Statistics showed that the mortality increased the nearer the approach to full term; therefore, after the sixth month of gestation, unless it could be shown that the chances for the mother were better after the death of the fœtus, the operation should be done at once.

Time of Operation.—A study of the operations done before and after the death of the fœtus showed that the evidence was slightly in favor of early operation. The so-called primary operation, done during the life of the fœtus, was in harmony with the theory and practice of modern surgery—the surgery which trusted to direct interference while the tissues were healthy, in preference to waiting for nature's blind efforts to improve the condition. As a matter of fact, it was difficult, if not impossible, to determine when the death of the fœtus occurred; he did not believe this could be done by the aid of the stethoscope. Even when operation had been delayed until after the death of the fœtus, the hemorrhagic condition had not been found improved. If operation was delayed, the patient should be kept under the most careful observation, the temperature being taken systematically and every preparation made for operating just as soon as there was the first sign of sepsis.

Mode of Operating.—In many cases of the extra-peritoneal variety the gestation sac was pushed away from the abdominal wall, and hence the primary incision in all cases should start near the pubes and be enlarged when the variety of the pregnancy had been determined. If the placenta was attached to the line of incision, the hemorrhage was apt to be frightful, but it was no greater by rapid enucleation than from gauze packing. The fœtus should be removed, if this could be done without disturbing the placenta. Often the placenta bled violently with little or no disturbance. It was best to ligate the vessels supplying it before making any attempt to remove it. The blood-supply was chiefly unilateral, as most of these cases were primarily tubal. Hysterectomy had been performed in some cases because of the intimate attachment of the placenta to the uterus and because this sometimes had been demanded as the only means of checking the hemorrhage. When the placenta came from broad surfaces, which rendered ligation impossible, and when it lay on the iliac peritoneum, and was attached intimately to the intestine, it was necessary to make pressure on the aorta, and to use gauze pressure if an attempt was made to remove the placenta. If the fœtus lay under the placenta, the condition was still more trying. If the placenta must be left behind, that fact should be recognized before it had been disturbed and bleeding started. If it was intraperitoneal, the chance of sepsis was so great if the wound was left open that it was better to close it, but be prepared to reopen it if demanded.

Hæmostatic Injections into the Placenta.—Dr. Ayers said that he had been making some experiments with placentæ. It had occurred to him that immediately after delivery of the fœtus and severance of the cord the placenta might be injected with a solution which would check the blood-supply and at the same time prevent decomposition in the placenta for a sufficient length of time to allow of its safe removal subsequently. The placentæ had been taken for experiment shortly after delivery in normal cases. The first experiment was with a solution composed of tannin one ounce, salicylic acid three drachms, and boiled water two quarts. This was injected under a pressure obtained by elevating the reservoir five feet. The placenta was then kept in a room at a temperature of 70° F., and the first evidence of decomposition was noted at the end of five days. Other experiments were made with glycerin and tannin, with sodium-chloride solution, and with a 1.5-per-cent. solution of formaldehyde. With the last-named solution decomposition was delayed for nine days, and during this time the placenta maintained much of its normal appearance. It was found in these experiments that if the fluid was injected through the vein it transuded into all the tissues. The injection could be made in actual practice in the course of five minutes, and it would not pass into the maternal circulation other than by osmotic circulation.

The following were the author's conclusions regarding the class of cases treated of in the paper: (1) Operate by the vaginal method only when the fœtus has already perforated the vaginal wall or is suppurating and is closely pressed against it and the fœtal head presents; then remove and drain; (2) if the fœtus is living, do an abdominal section as soon as thorough preparation can be made, starting near the pubes lest the gestation sac should be intraperitoneal; (3) remove the fœtus first and without disturbing the placenta if possible; (4) if the placental circulation is active, ligate the ovarian and uterine arteries before separating the placenta; (5) compress the aorta and bleeding surfaces with gauze; (6) if extraperitoneal, enucleate the gestation sac; (7) if the placenta cannot be removed, stitch the sac to the abdominal wound, dust with salicylic acid, pack with sterilized gauze, and cut the cord close to the placenta, leaving the gauze in the wound; (8) if the placenta must be left, it might be injected with tannin, salicylic acid, or formaldehyde, after which the cord should be cut, the amniotic sac trimmed off, and the wound closed; (9) the secondary operation must depend upon the pla-

cental disturbance; (10) if the fœtus is dead, delayed operation is elective; (11) if it has been dead for one month or longer, operate at once without waiting for sepsis; and (12) if it is macerated, remove it immediately.

Dr. Jewett said that it was important to ligate the vessels before disturbing the placenta, and all other methods for controlling hemorrhage must be at hand, together with the necessary preparations for saline infusion and stimulation. Removal of the placenta was pacticable sometimes when the attachment was largely tubal. Another method of procedure was stitching the sac to the abdominal wall, and the treatment of the cavity in such a manner as to prevent sepsis as far as possible. A very important point in this method was to leave a very large opening; no ordinary drainage tube should be considered sufficient. Such an opening allowed ready access to the parts as soon as the placenta was free. The treatment of the placenta by removing as much of the sac as possible and closing the remainder had occasionally proved successful, but in most cases it had resulted in dangerous sepsis. Another method which he would be disposed to adopt in an extraperitoneal case, if discovered in time, was early operation. These children were usually well nourished, and yet they were apt to suffer in the later weeks because of pressure on the vessels; moreover, these children rarely lived long after delivery. In these cases he believed the mother's life should be given the greater consideration; the earlier the operation, the easier it was to control hemorrhage, and the greater were the chances of success. A method that had been practised with some success consisted in the removal of the entire gestation sac. This was more especially applicable in ligamentary pregnancies. Dr. Jewett said that he had injected the placenta without difficulty with cold water as a means of causing its expulsion from the uterus, and it was very easy to inject it in this way. The method suggested by the experiments of Dr. Ayers was very interesting, and the principal objection seemed to be the danger of poisoning the mother. He would expect that the fluids employed would readily enter the maternal circulation by osmosis, so that they could not be very concentrated. It would seem to be particularly desirable on this account to use glycerin in solution. He was of the opinion that it would be feasible to use a solution of perchloride of iron to check the bleeding from the placenta.

Evidence of Fœtal Death.—Dr. Malcolm McLean said that the late Dr. Greig Smith had called attention to the fact that in well-observed cases the evidence of death of the fœtus would be obtained by careful measurements of the gestation sac. It would be found that the contents very decidedly diminished as soon as the placenta began to degenerate. In the case reported by him nine years ago, and upon which he had operated, Dr. McLean said that this rule had held good, although it had been impossible to tell anything about the location of the placenta. After a time there had been a sudden diminution in the size of the sac, and he had then operated and found a bloodless placenta. The incision had passed directly through the placenta.

Dr. Dickinson said that the cautery would not check hemorrhage efficiently in many cases, but the application of heat at 180° F. would so desiccate the tissues as very efficiently to stop large hemorrhages, especially those of the capillary variety which would otherwise be controlled with difficulty. The method could be applied to the ovarian and uterine arteries as well as to bleeding surfaces capable of being included in the grasp of forceps. This desiccation was best accomplished by using Dr. Skene's electro-hæmostatic forceps. Even Skene's dome-shaped instrument would effectually control the bleeding from surfaces after hot water and pressure had failed. Dr. Dickinson suggested that the method proposed by Dr. Ayers might be modified after the manner of those practitioners who splint painful muscles by injecting into them a fat which is fluid when injected, but becomes solidified in the muscular tissue at the temperature of the body.

Dr. E. B. Cragin said that in his own experience the rule had obtained of treating each individual case by itself, namely, ligating the sac as far as possible, and then removing as much of it as was practicable. In two cases he had removed the uterus also, because of the very intimate adhesions between the placenta and this organ and the consequent damage sustained by the uterus in the effort at removing the placenta. The child was dead in both cases; one mother lived.

Dr. Ayers closed the discussion. He said that the suggestion made by Dr. McLean about detecting the time of the death of the fœtus was extremely interesting, and yet he felt very skeptical about it because of the bountiful blood supply from all directions and the congestion of the placenta which quickly followed the death of the fœtus. Of course this was purely a theoretical objection and might not hold in practice.

Dr. McLean explained that the fluid of the gestation sac did not change materially in quantity until the circulation in the placenta had ceased, and that then it very suddenly diminished.

Dr. Ayers, continuing, said that he thought a 1.5-per-cent. solution of formaldehyde would not prove poisonous to the mother if injected into the placenta, and yet it would be sufficiently strong to control the bleeding and keep the placenta aseptic for the desired length of time.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 26, 1898.

S. O. Vander Poel, M.D., President.

Some Observations on Stricture of the Urethra.—Dr. Ramon Guitéras read a paper with this title. After describing the nature of a true organic stricture of the urethra, he said that a spasmodic stricture was usually the result of cystitis, genito-urinary tuberculosis, spinal disease, neurasthenia, or chronic stricture occurring elsewhere along the course of the urethra. Organic strictures were usually found in the deep urethra, or in the first two and a half inches of the pendulous portion, as here the urethra was more vascular. Some strictures could not be examined by means of *bougies à boule* because they were too small to allow the smallest of these instruments to pass. When such was the case, a small olive-pointed flexible bougie should be passed down to the stricture, and an effort made to pass it through the stricture. It was rare that a filiform bougie could not be passed. Prostatorrhœa and spermatorrhœa, more especially the former, were often mistaken for chronic urethritis. Enlarged prostate also sometimes gave rise to an erroneous diagnosis of stricture. The *coudé* catheter could usually be slipped over the obstructing portion of the urethra.

Complications.—The chief complications of urethral stricture were: Chronic urethritis, false passages, rupture of the urethra with extravasations of urine, fistulæ, urethral or catheter fever, cystitis, retention and incontinence, pyelitis, pyelonephritis, stone in the bladder, and tuberculosis of the genito-urinary tract. False passages were generally situated in the floor of the urethra, and hence instruments should be made to hug the roof of the canal. Fistulæ were the result of abscesses forming behind the stricture and rupturing there. Urethral fever generally occurred in cases in

which there were deep strictures, and was relieved by external urethrotomy. Pyelitis and pyelo-nephritis followed the extension of the inflammation upward from the bladder.

Treatment.—The treatment of urethral stricture might be summed up in a few words. Every stricture which was permeable and dilatable up to the normal size of the urethra should be treated by these means. If the strictures did not yield to dilatation, they should be cut. For recent soft strictures sounds were excellent, but for others dilators were preferable. The stricture could be dilated one or two millimetres at each sitting. When it was necessary to use instruments smaller than No. 15 French, it was often better to substitute olive-pointed gum-elastic bougies for the steel sounds. Another and very useful method was by continuous elastic dilatation, a soft instrument being tied in for a number of hours. The operative treatment comprised two operations—internal and external urethrotomy. Internal urethrotomy was best performed with the aid of the Otis urethrotome. Small strictures should be cut by the Maissonneuve, and deep strictures may be, although personally he did not think it safe to do a deep internal urethrotomy unless accompanied by external urethrotomy. External urethrotomy should be performed, if possible, with a Gouley tunnel catheter. In cases of very narrow stricture this instrument should be forced over a filiform bougie as a guide. If the stricture was impermeable, and yet the patient was able to pass urine, he should be put to bed and given diluents, and, after a rest of twenty-four hours, an effort should be made to pass a filiform bougie into the bladder. This almost always succeeded. Sir Henry Thompson made the statement that he had never met with more than six cases in which an instrument could not be passed into the bladder, and four of these were cases of stricture. If the operation could not be postponed, it must be done without a guide, and it could be greatly facilitated by the use of Dr. Guitéras' grooved perineal cannula, which, after being inserted in the perineum, could be made to pass into the prostatic urethra. A grooved director could then be passed into the bladder. In the treatment of false passages the speaker recommended opening the urethra by a perineal incision, passing a guide down through the urethra into the pocket and then cutting down on the groove of the instrument from below. Fistulæ were occasionally cured by dilatation, but for their radical cure some cutting operation was generally needed, such as perineal section, followed by curetting or cauterization of the fistula. Fistulæ of the anterior urethra were best treated by dissection and suture. In suppurative disease of the kidney the genito-urinary surgeon was confronted with a dangerous complication, and one which often caused death after very trivial operations on the urethra. In tuberculous disease of the bladder there was danger of the formation of tuberculous tissue in the wound if a perineal urethrotomy was done.

Dr. F. R. Sturgis said that the membranous portion of the urethra, which was usually stated to be one of the points of contraction, was really the most dilatable part. The true urethra really ended just behind the fossa navicularis, and it was nearly always smaller than the rest. The old-time strictures situated about one inch from the meatus, which were treated so vigorously, are not heard of much at the present time, for the reason that they were really physiological and not pathological. Chancroids and the initial lesion of syphilis seldom invaded more than the first third of the canal. Spasmodic stricture was due to inflammation, often situated behind, and not at the stricture. The stricture itself might be passed by a bulbous bougie, the obstruction to its passage not being encountered until it passed behind the stricture. Drs. Sands and Weir, he thought, had long ago effectually disposed of the idea that there was a definite relation between the normal size of the urethra and the circumference of the penis.

Indiscriminate Meatus Cutting.—The reader of the paper had advised cutting the meatus if it would not admit a fair-sized instrument. From this he would vigorously dissent, because the meatus afforded the point of resistance necessary to give the stream of urine sufficient force. It was rarely necessary to cut the meatus. In many so-called impermeable strictures it would be found that the anterior portion of the stricture was funnel-shaped, and that after filling up this portion with filiform bougies the stricture could be passed. Occasionally the endoscope would be found of service here. The points to be remembered in passing sounds were: (1) Always keep the instrument exactly in the median line; and (2) a stricture, like a woman, can be coaxed, but not pushed.

Urethrotome versus Divulsor.—Dr. Sturgis said that the Otis urethrotome put everything on the stretch, and, as a consequence, its use was liable to be attended with severe hemorrhages. It was altogether a very dangerous instrument. A much better instrument, though not a popular one in this country, was Holt's divulsor. For strictures lower than four inches he would not employ either the divulsor or the urethrotome, but would do a perineal section. His experience with the divulsor had been much more satisfactory than with the urethrotome. In no case in which there was the slightest evidence of disease of the kidney (such as albuminuria or casts) should either form of urethrotomy be done except when imperatively demanded. If operation must be performed, it should be a perineal section. For tuberculous disease of the bladder he believed perineal section to be the safest of all the operations.

Dr. Eugene Fuller said that when the narrowing of the urethra was due to a round-cell infiltration, it was often better to improve the patient's general condition by tonics than to cut such an urethra. The tendency at the present time was for genito-urinary surgeons to be more conservative than formerly regarding the performance of internal urethrotomy. Much less was heard now of "impassable stricture." He deplored making prolonged attempts to cut through narrow strictures, as in many cases this only served to spread septic infection; it was far better to operate and relieve the patient by "retrograde catheterization."

Dilate Whenever Possible.—Dr. C. H. Chetwood said that by a true stricture of the urethra was meant a change in the urethra produced by inflammatory or cicatricial conditions. This would exclude from consideration what had been termed "spasmodic stricture," though a better term was "spasm." Personally he accepted the doctrine that had been propounded years ago by Dr. E. L. Keyes, that all strictures of the urethra that were capable of dilatation should be dilated. The smooth steel sound was the best for this purpose in most cases. As many patients complain of the pain produced at the meatus by the thick upper portion of the ordinary sound, it was better to make use of the sound having a double taper, *i.e.*, at the tip and toward the handle. In the treatment of strictures at the bulbo-membranous junction, external urethrotomy was the best operation because it was the only means by which efficient drainage could be established and the finger be used as an intelligent guide during the operation.

Dr. Ferd. C. Valentine said that in many cases of supposed impassable stricture, if a heavy steel sound was steadily pressed against the face of the stricture for some time, it would be found that a filiform bougie could then be passed through and left in position. After some hours of this treatment, it would

often be possible to pass a larger instrument. For most purposes he agreed with Dr. Guitéras that the Oberländer dilator was the best instrument.

Dr. Guitéras closed the discussion. Regarding the ruthless cutting of the meatus, he said that he had never made it a practice to cut the meatus above a point which would admit a No. 32 French. Where the instruments could not be passed at first, some hours should be spent in giving hot sitz-baths, applying hot poultices to the perineum, and perhaps even in puncturing the bladder, before resorting to perineal section without a guide. He had seen very few cases of severe hemorrhage in connection with the use of the Otis urethrotome. There was less likelihood of hemorrhage if the cutting of the urethra were followed by the introduction of peroxide-of-hydrogen solution. As to the Holt divulsor, he considered it a murderous instrument, as he had seen it used at the City Hospital with most disastrous results. He had recently had an opportunity of inspecting with the endoscope the urethra of a man who had been treated in Paris for stricture by Fort's electrolyzer. He saw two whitish horns under the urethra, showing that the knife of the instrument had passed upward through the stricture, leaving these two horn-like deposits with a trough in the middle through which the urine passed. If there was much congestion associated with anterior strictures, perineal section would undoubtedly afford some relief. In every case of extravasation of urine external urethrotomy should be performed, perineal drainage established, and all portions anteriorly opened, cleansed, and treated antiseptically. Retrograde catheterization would often prove very useful, yet in cases in which the bladder is full the operation of external urethrotomy could be comparatively easily performed by the use of his grooved perineal cannula.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CHRISTMAS IN HOSPITALS—PRINCE OF WALES ON TUBERCULOSIS; QUEEN'S EXAMPLE—ACTIVITY OF DRIED VIRUS OF SYPHILIS—PANCREATIC DISEASES—ENDOWMENT OF JENNER INSTITUTE, LORD IVEAGH'S MUNIFICENCE—DEATHS OF DRS. MUNK AND HARE.

London, December 23, 1898.

The Christmas recess comes as a welcome interlude to many a teacher and many a student. The residents in the hospitals, however, are perforce excluded from the holiday at home, but most of them are busy preparing for an entertainment for the patients. Curiously enough an objection has been raised in some quarters to these fêtes on the ground that they may distress those who are extremely ill. Surely the doctors and nurses might be trusted to protect the serious cases from the possibility of injury or annoyance. In some hospitals the entertainment takes place at a distance from the wards, and of course only those who are well enough can attend. In other institutions a ward is utilized, but never one in which those *in extremis* are lying or those to whom slight excitement might be injurious. Any patient who disliked the "jangling of a piano" could easily secure quietude from its disturbance. In children's wards the entertainments are usually a source of great delight, and a child too ill to bear the strain would be sure to be carried to another spot.

The Prince of Wales has placed himself at the head of the anti-tuberculosis crusade. The national association for preventing consumption, which, as I have already reported, was recently formed, has secured the influence of his Royal Highness, who held a meeting in its support at Marlborough House on Tuesday last. The Prince presided with his usual dignity and urbanity, and among those who spoke were Lord Salisbury and Lord Rosebery. The Prince opened the proceedings by calling upon Sir William Broadbent, who has taken so active a part in organizing the association, to make a statement of its objects and methods. After premising some statistics, Sir William told the audience that science had now shown that the ravages of consumption can be not merely mitigated, but prevented; "that it is a contagious disease communicated from person to person, from animal to man; and that it arises in no other way; it is not inherited." He then assured them that it is not spread through the breath of the patient, but the principal way in which it is propagated is through the sputa. The association seeks to promote a knowledge of the facts, that the public may protect themselves, to extinguish tuberculosis in cattle, and to encourage the establishment of sanatoria for the outdoor treatment of consumptives.

Lord Salisbury said he believed the association would be of great value in spreading real knowledge and correct ideas, but said they should avoid the snare of looking to legislation. An attempt to enforce the use of tuberculin would raise many "conscientious objectors," and his lordship seemed to have had enough of such fanatics and to be regretting his concession to their dangerous fads. He concluded by moving a resolution approving the effort of the new association, which was seconded by Sir S. Wilks and carried unanimously.

On the motion of Lord Rosebery, seconded by Mr. Long, M.P., a vote of thanks was passed to the Prince, who in the course of his reply expressed deep interest in the subject and urged that we should follow the example of Sweden, Switzerland, and America in attempting to eradicate tuberculosis in cattle. He admitted that legislation might be unpopular and urged that much might be done by example. Then he announced that the Queen had authorized the destruction of thirty-six of her dairy cows which on being tested with tuberculin were found to be infected.

The first sanatorium under the association is about to be established in London at an expense of twenty thousand pounds, which has been generously offered by the London partners of Messrs. Wernher & Beit for this purpose.

Sir T. Grainger Stewart, Dr. Moore, President R.C.P.E.; Sir J. Sawyer, Dr. Andrew, and Professor McFadyean also spoke at the meeting in support of the proposals.

On the same day the Prince presided over a meeting of the council of his hospital fund, when it was decided to distribute £32,500 during the present financial year. As a result fifty-seven unoccupied beds will come into use, making a total of two hundred and forty-two rendered available by the fund. The Prince thanked the several committees who had assisted in the work, and said that, so far as he was able to judge, the money at his disposal had been well distributed.

At the Clinical Society Mr. Campbell Williams related a case of lingual chancre to show that the virus was active after being in a dry state for two months. It had apparently been conveyed by the mouthpiece of bagpipes lent to a syphilitic man. Mr. Williams mentioned also a case of chancre on the trochanter, which he believed was contracted from a closet-seat, the patient having had a pimple at the time. Mr. Lucas saw no more difficulty in dried syphilitic virus than in that of vaccine, and mentioned a case of infection at the site of an abrasion of the tongue supposed to have been conveyed from a pipe or a tumbler.

The remainder of the evening was devoted to pan-

creatic cases. Mr. Gould led off with one in which he had performed abdominal section for severe pain, with enlarged liver, distended gall-bladder, and jaundice. The operation did not restore the flow of bile nor prevent agonizing paroxysms. Reopening the abdomen, Mr. Gould discovered a stone in the head of the pancreas within one-half inch of the union of the ducts and so pressing on both. Mr. Kellock mentioned a case of enlarged liver and paroxysms of pain with jaundice. There was some relief after the passage of a concretion, but the patient sank, and at the post-mortem a stone was found in the head of the pancreas. Mr. Langton remarked that jaundice was common in these cases.

Messrs. Fripps and J. H. Bryant next gave full details of a case of hemorrhagic pancreatitis in which an exploratory laparotomy had revealed no obstruction at the post-mortem. The pancreas was found about twice its size, infiltrated with blood and with patches of fat necrosis. The tissues around there showed also extensive hemorrhage with fat necrosis. A culture of coli bacillus was obtained from the centre of the pancreas, and two other cases were said to have afforded the same culture.

Five cases of acute pancreatitis were reported by Messrs. N. Pitt and Jacobson. In one abdominal section was done, when extensive fat necrosis was found with a tumor which could not be dealt with. At the post-mortem there was an abscess cavity in front of which were the stomach and lesser omentum, while behind lay the sloughy pancreas. In another case there was found fat necrosis with hemorrhagic inflammation of the pancreas. In another there was an abscess communicating through some distended ducts, though the mass of the organ was healthy. In another two and one-half inches of the organ was necrosed.

Mr. Langton mentioned a case of cyst on which he operated. The patient recovered, but died suddenly two years afterward from intestinal hemorrhage. At the post-mortem the pancreas was found almost entirely destroyed, and the cicatrix had caught the portal vein, causing the hemorrhage.

Mr. Bowlby mentioned a case in which he operated for obstruction, but found none, though the omentum was dotted with fat necrosis, and he had no doubt it was acute pancreatitis, but a post-mortem could not be obtained. He recognized as causes injury, infective inflammation, and embolism. These would explain the sudden onset and necrotic state resulting.

Scientific research at the Jenner Institute is to be placed on a firm footing. Lord Iveagh has offered the council the munificent sum of a quarter of a million pounds sterling to be applied in aid of the highest research in bacteriology and other forms of biology as bearing upon the causes, nature, prevention, and treatment of disease. Lord Lister, chairman, and Sir H. Roscoe, treasurer, have accepted this splendid donation on the conditions proposed by the donor, and declared that the gratitude of the nation is due for this provision for the cultivation of biology in the Jenner Institute, which will henceforth compare favorably with similar establishments in other countries.

Lord Iveagh proposes to devote another quarter of a million to the improvement of an insanitary area in the heart of the city of Dublin. This scheme requires legislation; but there will probably be no difficulty in obtaining it, as the whole is to be carried out at the cost of Lord Iveagh, and the new buildings are to be vested in trustees for the amelioration of the condition of the laboring classes in Dublin.

Dr. William Munk died on Tuesday in his eighty-third year. He took his Medical Degree in 1837, and continued to practise until his last illness, diabetes. For more than forty years he was Harveian librarian at the College of Physicians, and last year the fellows subscribed for his portrait in oils, which was completed last July and now hangs in the college. He wrote the lives of Paris and Halford and a number of biographical studies. To his pen we owe the "Roll of the College Physicians," which appeared in two volumes in 1878 and went to a second edition. Many interesting contributions to the medical journals might also be recalled. He was consulting physician to the Hospital for Incurables and the original Smallpox Hospital. At the latter he labored for many years, and his great experience gave him an authority on smallpox and vaccination which for many years no one could pretend to.

Dr. Charles James Hare died on the 15th inst. in his eighty-first year; thus following to the grave within a week his colleague, Sir W. Jenner. The two were elected on the staff of University College Hospital at the same time, and Dr. Hare worked on the medical side for about seventeen years. He was for some time professor of clinical medicine. When he resigned, he became a member of the committee, in which capacity he served until his death the institution in which he took the greatest interest. Dr. Hare was M. D. Cambridge, and a man of high culture. His personality was attractive, and the respect in which he was held by the profession was very deep. He passes from us as full of honor as "full of days," and, although retired from practice for several years, his death leaves a distinct blank in the medical world, in which his old-time courtesy, unfailing urbanity, wide culture, and happy disposition endeared him to all. He contributed various cases and papers to the journals and to the societies. Of some of these he had been president or vice-president. He had also been examiner and assessor to his own university and a delegate to congresses abroad. In 1883 he published a little work entitled "Good Remedies—Out of Fashion," in which he insisted on the value of venesection and other remedies, which, although once abused, he held to be too much neglected in certain cases.

THE RELATION OF THE MEDICAL PROFESSION TO CHRISTIAN SCIENCE.

To the Editor of the Medical Record.

Sir: Your editorial in the issue of the Medical Record of December 24th on the Christian Scientist delusion suggests several questions: What is the duty of the medical profession in the matter? What ought society to do to counteract the great evils of this new menace to the race? What self-sacrifice will the profession make in undertaking the needed warfare? That it is time for society to bestir itself in self-protection begins to be plainly evident. So-called Christian Science has done, is doing, widespread evil. It is bringing many well-meaning, and in some respects intelligent, people into discredit and contempt. It is doing harm to the rich by encouraging the neglect of a rational treatment. But, above all, its teachings tend to spread germinal diseases. The deluded followers of a belief that germ diseases are only a figment of the imagination do not hesitate to expose outsiders to infection by contact with afflicted members of their own families. The amount of damage that these ignorant fanatics may do is almost illimitable. And yet what is to be done? Of course this delusion is founded on superstition and ignorance, and only enlightenment will meet the evil effectively. Was there ever a better illustration of the fact of widespread credulity and ignorance in humanity? Yet how can these people be greatly blamed when about all of mankind hold religious views not greatly better in connection with things supernatural? We are edi-

fied (?) by eminent Christian divines declaring from their pulpits that the age of miracles is not past, and that the world does not know the nature of disease and how to cure it. We have the spectacle of millions of the race swallowing millions of doses of proprietary medicines, inert minute sugar pellets, and practically inert mixtures of grosser character, and still living in the belief of the efficacy of such dosage. We have the further spectacle of multimillions of the race pinning their faith on the efficacy of prayer—a belief not much more unreasonable than the beliefs of the miraculous doings of the "Scientist" healer.

It would seem that if society is going to attack Christian Science from a secure base, it has got to cut away a heap of rubbish from under its own feet. Among other things, the medical profession has got to instruct society as to the true nature of disease, and has got to show how little drug-giving has to do with the honest and rational treatment of disease. It has got to explain how all the influences of environment act to throw the bodily actions into disorder and likewise to tend to bring them into normal ways of working. Now when society knows all that it means that many a fee will be lost to the struggling doctor. Is the profession going to sacrifice itself for the general good of society? Where, where, Mr. Editor, would we be if that fool was not born every minute? Yet here is a plain duty. From no other source can society be so well enlightened as from the honest science of medicine. With the beginning of the New Year would it not be well for the profession to undertake its duty? To persecute a band of religious fanatics is only to make martyrs of them and to increase the evil. Of course there are fanaticisms and superstitions that are harmless, and even beneficial; and the peculiar medical dogma that has been tacked to Christian Science is positively pernicious; but to undermine it successfully both religionist and practitioner of medicine have got to abandon ground that has been held only because of credulity and superstition hardly less excusable than that of the deluded follower of the "peculiar people."

Very respectfully,

J. M. W. KITCHEN, M.D.

EAST ORANGE, N. J.

FALLACY OF THE ALCOHOL TEST FOR ALBUMIN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In to-day's issue I note that Dr. Ludlow has given the result of some recent experiments bearing on this matter. I examined into this more than twenty-five years ago, and then wrote ("A Guide to Urinary Analysis," New York, 1873) as follows:

"It is stated that if alcohol be added to urine in a test tube containing a trace of albumin not detectible by heat or nitric acid, its presence will be evidenced by the appearance of a milky line at the junction of the alcohol with the urine. Harley (1872), who has observed this reaction, states that the white precipitate is albumin, but that it is not indicative of Bright's disease, as it can be found in normal urine. In other words, that it is a different kind of albumin from the one produced by disease of the kidneys, and that it is a normal constituent of urine. He further states that it can be most readily obtained by the use of absolute alcohol. Desiring to test the accuracy of these statements, we made the following among other observations: A test tube was about half filled with filtered urine, supposed to be healthy, and to this was added a drachm or so of absolute alcohol. The precipitate immediately formed, but was redissolved by agitation. The tube was then filled to the top with more of the alcohol, and a copious precipitate appeared. It was set aside for twenty-four hours, at the end of which time the precipitate had subsided to the bottom. A portion of the precipitate was now removed with a pipette, and examined microscopically. The material under examination was found to consist of three different substances: First, abundant and large crystals of oxalate of lime; second, very large prismatic crystals, resembling and probably consisting of ammonio-magnesian phosphate; and third, a granular amorphous material having no peculiar or distinctive characters. (It may be stated that another tube filled with the same urine, but without the addition of the alcohol, presented, after twenty-four hours, no trace of crystalline deposit, and none was found on microscopical examination.) The supernatant fluid was now decanted, and the deposit washed several times with cold absolute alcohol, without much apparent diminution of its bulk. The alcohol was then removed, and a little distilled water added. This dissolved most of the precipitate. The solution was then thrown upon a filter. The addition of an excess of alcohol to the filtrate again caused a white precipitate, which upon microscopical examination was found to consist entirely of the amorphous material already alluded to, no crystalline forms being present. The effect of various reagents was then tried—among others, acetic acid, oxalic acid in alcohol, and nitric acid. All of these acids dissolved the granular matter; but there appeared, in its stead, a vast number of small crystals, whose forms were peculiar to the acid employed, and were different from any we had previously encountered in urine. An examination of the optical properties of these crystals by polarized light leads to the suspicion that the amorphous material is not a simple substance, but a mixture of two or more. What this substance or these substances are, we are as yet unable to say; but certainly some of the reactions noticed could not be produced by any form of albumin with which we are familiar."

I presume that again in a few years some one will rediscover this convenient domestic test for albumin, and that some one else will again show its fallacy.

H. G. PIFFARD, M.D.

256 WEST FIFTY-SEVENTH STREET, January 7, 1899.

Surgical Suggestions.

Intravenous Injections of Decinormal Salt Solutions.—Dr. H. T. Hanks (*Amer. Gynæcolog. and Obstetrical Journal*, May) reports eight cases that showed the remarkable effects of intravenous injection, and sums up the following conclusions: (1) Proper preparation before an exhausting operation, by systematic stimulation and by intravenous injection. (2) Intravenous injection of two quarts or more of normal saline solution after dangerous hemorrhage. (3) Intravenous injection for bad shock. Use three full pints or more of the solution. (4) Intravenous injection for remarkably weak pulse after or even before operation. Use from one to three pints. (5) Intravenous injection for septicæmia, especially when an operation is decided upon. Use from one to three pints, and repeat if bad symptoms return.

Dr. Eugene Boise (*Medical News*, September 10th) refers to the postoperative conditions which endanger the life of the patient, which are: (1) Hemorrhage; (2) shock; (3) sepsis; (4) uræmia; (5) intestinal obstruction. He believes in the intravenous route, and thinks it should have preference over all others for the following reasons: (1) By the use of proper technique there is practically no more danger than by any other route. (2) It supplies fluid to the system most quickly and most certainly. (3) It brings heat most directly to the cardiac and arterial ganglia. (4) The

stimulating effect of the saline solution on the heart muscle is more immediate and pronounced.

Dr. F. W. Parham (*New Orleans Medical and Surgical Journal*, October) speaks of the remarkable effects of repeated saline infusion as follows: I have just operated on a case of appendicitis in a boy of eleven, in whom suppuration had filled the pelvis, requiring two hours to find the location of the trouble, evacuate the pus, and complete the case by the removal of the appendix and the washing out of the peritoneal cavity, which had become contaminated. Shock was profound. He was revived by thirty-two ounces of intravenous infusion, but two hours afterward collapsed again, when two pints more were thrown in through the cannula, which was left in at the time of the first infusion. His pulse at this time was 150 to 170, but fell during the infusing to 140 and 130. At this writing, eight days after the operation, he has improved so much that his recovery seems likely. The temperature of the infusion was 115° F.

Gonorrhœa and Pelvic Suppurations.—As yet we have no very precise knowledge of the particular germ responsible for the destruction of the pelvic viscera of so many women. We do know that if we could get rid of gonorrhœa, pelvic suppurations would be rare. To say that neglected abortions or unscientific midwifery is responsible is putting it too strong, and is against the facts and conditions of our every-day observation.—Dr. Price, *Buffalo Medical Journal*, November, 1898.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 7, 1899:

	Cases.	Deaths.
Tuberculosis	180	177
Typhoid fever	15	12
Scarlet fever	152	4
Measles	127	8
Diphtheria	160	31
Laryngeal diphtheria (croup)	13	7
Cerebro-spinal meningitis	0	4
Chicken-pox	29	
Smallpox	1	

Malt Soup for Children.—The Breslau University Children's Clinic has long been investigating to discover a food adapted to cases with gastro-intestinal disease, and reports in the *Deutsche medicinische Wochenschrift* of September 28th, the extremely satisfactory results obtained with a food made of fifty grammes of wheat flour stirred into one-third of a litre of water at 50° C., and adding to this 10 cubic centimetres of an eleven-per-cent. solution of potassium carbonate. The malt-extract mixture is then stirred into the mixture of flour and milk, and the whole is cooked together. A table of the gain in weight in twenty-eight cases is appended (all children less than six months old), which averages very high under the circumstances, forty-three grammes a day in one case fed on the malt soup thirty-one days. None of the children had severe rachitis afterward.

Hydrophobia in the Philippine Islands.—According to a local scientific journal (*Cronica de Sciencias de Filipinas*), rabies, when it attacks the human subject in the Philippines, is popularly believed to occur under two distinct forms; to wit, hydrophobia properly so called, and aerophobia—the malady in the first form being characterized by an intense horror of all lustrous objects, including water; while in the second form the spasms are excited by air currents, however slight. A further subdivision into furious madness, when hyperexcitement of the nervous centres prevails, and dumb madness, when the chief symptoms are paralytic, is also generally recognized by observers. The following treatment is customarily adopted: (1) Cauterization of the wound with a live ember or by means of the actual cautery; (2) washing the part with a concentrated decoction of a plant known locally as "macabuhay" (Menispermum crispum); (3) the administration in copious draughts of a warm infusion of canella (Laura cinnamomum), until the effects show themselves in exaltation of the nervous system. The canella, which should be persevered with for two weeks, is said to cause profuse perspiration, lasting four or five hours, the patient meanwhile being kept closely enveloped in thick blankets, in order to encourage the action of the skin. In the opinion of the heaven-born physicians who chiefly represent the medical faculty, the foregoing treatment is nothing less than infallible, provided it be commenced early enough; but, unfortunately, trustworthy statistics are lacking.—*British Medical Journal.*

The Invention of Spectacles.—Who first invented spectacles? These aids to vision appear to have come into use about the fourteenth century. The earliest reference to them is in the work of Bernard Gordon, professor at Montpellier, who speaks of a collyrium devised by him which allowed a person to see without spectacles. In 1360 Guy de Chanliac, in his treatise on surgery, refers to the use of lenses. The invention of spectacles is sometimes attributed to Roger Bacon, who died in 1294. Further research, however, has shown that in 1285 Savrino degli Armati, a Florentine, worked glass into the form of a lens as a help to vision. For him, therefore, may justly be claimed the honor of having invented spectacles. He died in Florence in 1317, and was buried in the church of Santa Maria Maggiore. On his stone is the following inscription:

GIU GIACE
SAVRINO DEGLI ARMATI,
di Firenze,
Inventore degli occhiali. Dio gli pardoni le peccata.
Anno D. MCCCXVII.

(Here lies Savrino degli Armati, inventor of spectacles. May God forgive him his sins. A.D. 1317.)

—*British Medical Journal.*

Overuse of Pen, Ink, and Paper as a Cause of Death.—Let physicians rail at the horrible consequences of drink, of excessive smoking, of opium, of chloral, and of morphine. The most terrible of all stimulants is ink, the hardest of taskmasters, the most fascinating of enchanters, the breeder of the sweetest dreams and of the most appalling nightmares, the most insidious of poisons, the surest of destroyers. One may truly venture to say that of an equal number of opium eaters and professional writers, the opium eaters have the best of it in the matter of long life, health, and peace of mind. We all hear of the miserable end of the poor wretch who has subsisted for years upon stimulants or narcotics, and whose death, often at an advanced age, is held up as a warning to youth; but whoever knows or speaks of the countless deaths due solely to the overuse of pen, ink, and paper? Who catalogues the names of those many whose brains give way before their bodies are worn out? Who counts the suicides brought about by failure, the cases of men starving because they would rather write bad English than do good work of any other sort? In proportion to the whole literary profession of the mod-

ern world the deaths alone, without counting other accidents, are more numerous than those caused by alcohol among drinkers, by nicotine among smokers, and by morphine and the like drugs among those who use them.—F. MARION CRAWFORD, "The Three Fates," page 46.

Height and Genius.—Old long-held ideas are being dispelled daily. The opinion that weight of brain is synonymous with genius or even talent has received some crushing blows at the hands of scientific investigators, and now it seems that the ancient belief that short men generally possess more than their fair share of brain power must also be relegated to the realms of fancy. An ardent and careful observer, who has made a study of the heights of celebrated men, gives it out as an incontrovertible fact that tall men are the cleverest, and the old adage that "good stuff is put up in small bundles" will no longer pass muster as a truism, at least so far as the brain capacity of the human race is concerned. Here are a few statistics collected by the investigators in question. Tall men first: Burke, five feet ten inches; Burns, five feet ten inches; Sir R. Burton, over six feet; Sir Walter Raleigh, six feet; Peter the Great, six feet eight and one half inches; Thackeray, six feet four inches; Lincoln, six feet one inch; George Washington, six feet three inches. Medium stature: Lord Beaconsfield, five feet nine inches; Byron, five feet eight and one half inches; Voltaire, five feet seven inches; Wellington, five feet seven inches. Short men: Balzac, five feet four inches; Beethoven, five feet four inches; Keats, five feet; Napoleon, five feet one and three-fourth inches; Nelson, five feet four inches; De Quincey, five feet three inches.

Drug Addiction.—Dr. J. H. Kellogg, in a recent paper, makes the following clear distinction: "The majority of persons who acquire the disease of drug addiction are peculiarly constituted individuals, who may be divided into two classes, as: (1) Those who live upon the sense plain, regarding the body as a harp of pleasure, to be played upon so long as its strings can be made to vibrate by force of will or the aid of artificial excitements, and who, when the natural resources of the body are exhausted, seek artificial and unearned felicity through the aid of various nerve-tickling, pain-and-trouble-annihilating, felicity-producing drugs. (2) Those hypersensitive, neurotic, delicately organized individuals, a rapidly increasing class, who are the natural result of the artificial brain-and-nerve-destroying and race-deteriorating conditions of our modern life. These persons, lacking physical capacity for enduring the pains, hardships, and tribulations of life, from which they suffer untold and indescribable agonies, seek relief in some nepenthe, which promises them ease from the present stress of suffering, overlooking all considerations respecting what the future may have in store for them."

Cancer Houses a Delusion.—Perhaps it would be difficult to obtain a clearer illustration of the value of expert knowledge than was forthcoming at the meeting of the Incorporated Society of Medical Officers of Health in London on November 17th. That very interesting question, "Are there such things as cancer houses?" was under discussion, and as is the case with those who cannot specialize and are called upon to deal always in generalities, mistakes were frequent. But an invitation had been sent to Dr. Herbert Snow, the famous physician of the Fulham cancer hospital, who quickly dispelled some of the current fallacies. Indeed, he showed that to discuss the question of cancer as the society had been doing was in no way scientific, because there are some two dozen different kinds of cancer. Further than this, malignant disease, he said, was always traceable to known and well-recognized definite causes, so that to connect cancer with the dwelling is absurd; though he was more courteous than to say so in as many words. He concluded a neat speech with a sarcastic reference to the fallacy that in King Henry the Eighth's time there were seventy thousand executions, and said that the idea of cancer being specially prevalent in the male stomach ought by this time to be classed with that once popular but now universally discredited story.—*Sanitary Record.*

Health Reports.—The following cases of smallpox, yellow fever and cholera, have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending January 7, 1899:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
Michigan, Detroit	January 1	4	
Minnesota, Minneapolis	December 8th	1	
Oklahoma, Chandler	December 30th	1	
Daggett	December 30th	1	
Parkland	December 30th	1	
Sac & Fox Agen'y.	December 30th	1	
Stroud	December 30th	1	
Pennsylvania, Ball Hill	December 30th	1	
Charlesville	December 31st	Suspected.	
East Vincent Township	December 31st	1	
Everett	December 31st	3	
Homer City	December 31st	2	
Hopewell	December 31st	4	
Hustontown	December 31st	7	
New Granada	December 31st	1	
Pittsburg	December 31st	1	
Steelton	December 31st	11	
Waterfall	December 31st	1	
Virginia, Alexandria	January 4th	3	
Newport News	December 31st	4	
Norfolk	December 31st	10	
Wyoming, Rock Springs	December 24th	1	
SMALLPOX—FOREIGN.			
Africa, Loronzo Marques, Delagoa Bay	May 1st to 31st	..	5
Loronzo Marques, Delagoa Bay	June 1st to 30th	..	4
Loronzo Marques, Delogoa Bay	July 1st to 31st	..	14
Brazil, Rio de Janeiro	November 11th to 25th	38	14
England, Liverpool	December 3d to 10th	1	1
India, Madras	November 26th to December 2d	..	1
Japan, Awamori Ken	November 18th to December 8th.	53	13
Hiogo Ken	November 18th to December 8th.	1	
Kanagawa Ken	November 18th to December 8th.	1	
Nagasaki Ken	November 18th to December 8th.	1	
Russia, Moscow	December 3d to 10th	17	3
Odessa	December 2d to 17th	6	1
Warsaw	November 26th to December 17th.	..	15
Turkey, Constantinople	December 12th to 19th	..	14
Smyrna	December 4th to 11th	..	2
YELLOW FEVER.			
Brazil, Rio de Janeiro	November 19th to 25th	4	2
Columbia, Barranquilla	December 2d to 9th	1	1
Cuba, Havana	December 15th to 29th	..	4
Mexico, Vera Cruz	Lecember 15th to 22d	..	9
Vera Cruz	December 22d to 29th	..	3
CHOLERA.			
India, Madras	November 26th	..	2

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

PRACTICAL URINALYSIS AND URINARY DIAGNOSIS. By Dr. C. W. Purdy. Fourth Edition. 8vo, 365 pages. Illustrated. The F. A. Davis Company, Philadelphia.

A TREATISE ON UNRIPE CATARACT. By Dr. W. A. McKeown. 8vo, 202 pages. Illustrated. H. K. Lewis, London. Price 12s. 6d., net.

REPORT OF THE STATE BOARD OF HEALTH, PENNSYLVANIA, 1897. Vol. 1, 576 pages. Vol. 2, 1,110 pages. Illustrated.

RADIOSCOPIE ET RADIOGRAPHIE CLINIQUES. Par le Dr. L. R. Régnier. 8vo, 95 pages. Illustrated. Librairie J. B. Baillière et Fils, Paris. Price 1fr. 50c.

TREATMENT OF WOUNDS. By Dr. L. S. Pilcher. 8vo, 453 pages. Illustrated. William Wood & Company, New York.

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Original Articles.

A COMPLICATED CASE OF VESICO-UTERO-VAGINAL FISTULA; ACCIDENTAL VESICO-PERITONEAL FISSURE; CŒLIOTOMY, VESICO-UTERINE SUTURE; CURE.

BY PAUL F. MUNDÉ, M.D.,

GYNÆCOLOGIST TO MT. SINAI HOSPITAL.

Of recent years, thanks to the improved management of obstetric cases, vesico-vaginal fistula is a comparatively rare accident. I find but eleven cases of vesico-vaginal and two of vesico-uterine fistula recorded in my report of the gynæcological service of Mt. Sinai Hospital for the twelve years from 1883 to 1895 (ten cured, one improved, one unimproved—discharged unoperated—and one death, from rupture of an unsuspected ovarian abscess). I may have seen a few in private practice, but I doubt if I have met with more than twenty cases in the last twenty years all told. One of the worst cases was one in which the whole vesico-vaginal septum together with the anterior lip of the cervix was destroyed, only the urethra being left. Here I was obliged to stitch the posterior lip of the cervix to the urethra in order to secure sufficient material to close the rent. Perfect union and control were obtained by two operations. The external os, to be sure, was turned into the bladder, and the woman menstruated through that organ; but this caused her no particular inconvenience any more than the necessarily resulting sterility.

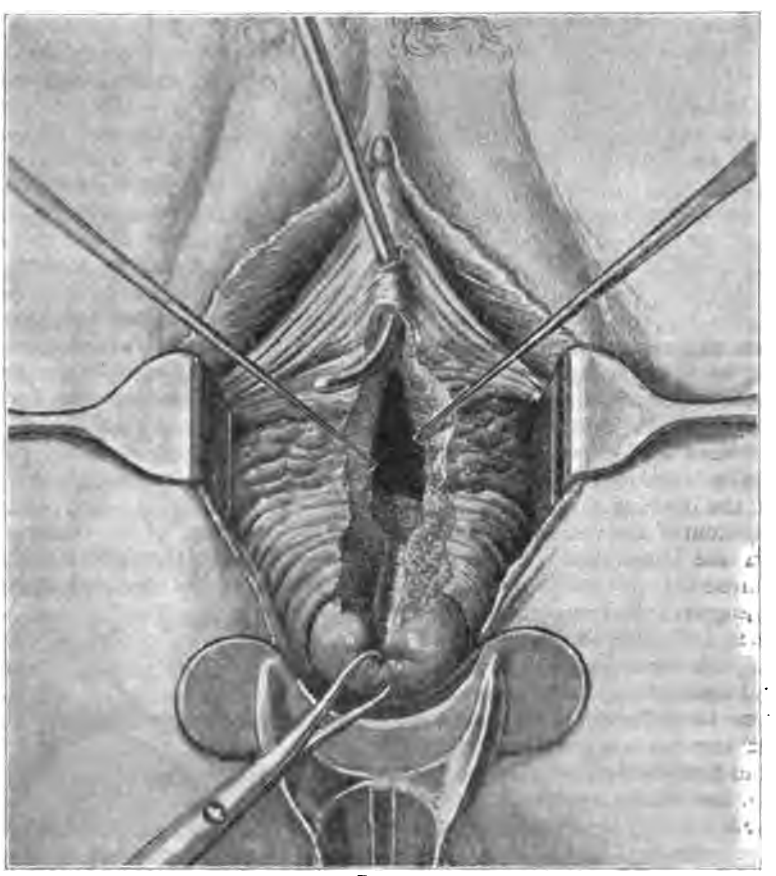


FIG. 1.

However, my desire to effect a cure in the present case without resorting to this always disagreeable alternative is to blame, in a measure, for one of the complications attending the case, as the report will show.

Mrs. L. H——, aged thirty-four years, mother of seven children—four born alive, three dead—consulted me at my office on September 27, 1898, with the history that she was confined four months previously, the delivery being instrumental, but of what character she could not say, as she was under anæsthesia. Since then there had been absolute incontinence of urine. I found the bladder torn from within less than an inch of the meatus to the internal os uteri, together with the anterior lip of the cervix, which had partly sloughed away. The bladder mucosa protruded into the vagina (see Fig. 1). The uterus was retroflexed, and a sound passed into it had to grope for the opening of the uterine canal through the bladder. The true conjugate diameter of the pelvis measured four inches, which accounted for the difficult deliveries and the three dead children. It was strange, however, that the woman had had six children before the injury to the bladder occurred.

I sent the woman to Mt. Sinai Hospital and operated on her a few days later. In order to be able to close the rent in the anterior wall of the cervix I attempted to peel the bladder from the uterus with my finger, after making a transverse incision across the cervix. To my surprise my left index finger suddenly burst through the thin adherent peritoneum, tearing also the attached wall of the bladder. I at once repaired these rents with catgut sutures and closed the tear in the cervix also with catgut, deferring the remainder of the operation to a future time. Ten days later I made a second attempt to close the fistula and readily brought its edges together with numerous silver-wire sutures. In order to make sure that the external os remained in the vagina I had an assistant keep a sound in it, which accidentally slipped out, and on my replacing it I chanced to miss the uterine canal, and the sound passed into the bladder and, to my amazement, through its posterior wall. As no force was used it was evident that a rent existed in the bladder-wall, probably the old tear which had not healed, although the absence of symptoms had led me to assume so. (The head of the bed had been kept raised all this time to facilitate the escape of urine through the fistula; hence

no urine remained in the bladder and none escaped into the peritoneal cavity, fortunately, for a septic peritonitis from decomposed urine might otherwise easily

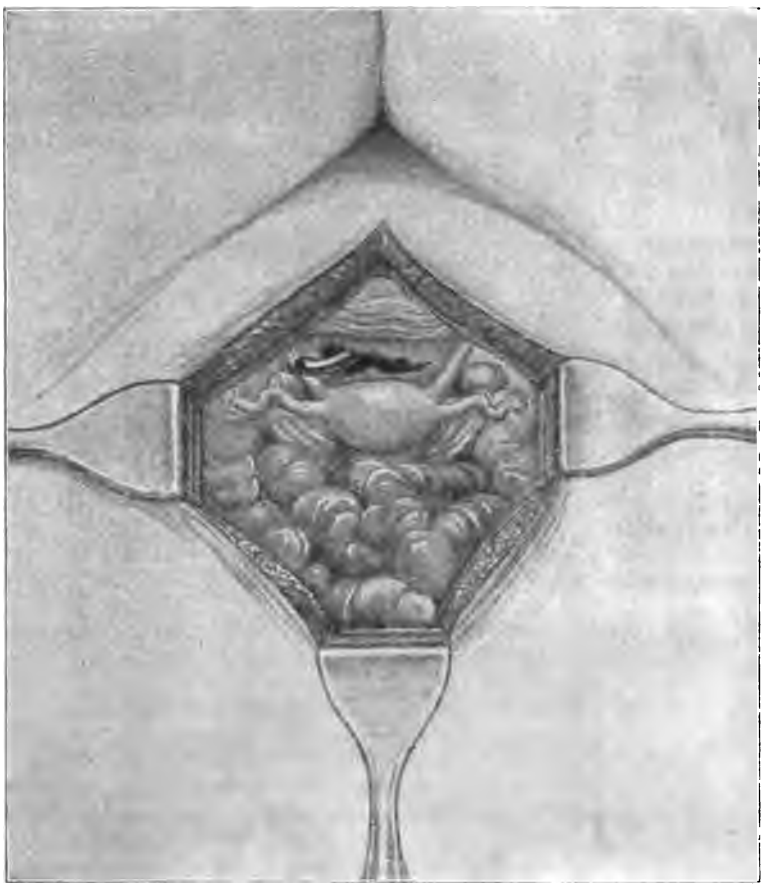


FIG. 2.

have resulted.) I could freely move the sound in the rent; hence it must be of some size. Obviously it could not be left open. I therefore rapidly closed the fistula, moved the patient into Trendelenburg's position, opened the abdomen, and exposed the rent. It extended for fully an inch and a half transversely from about the middle of the bladder toward the left, and was situated at the bottom of the vesico-uterine pouch. It is well shown in the illustration (Fig. 2). I at once proceeded to close the rent with fine interrupted silk sutures and thought I had successfully accomplished the task, when I discovered that some of the stitches had torn through the exceedingly thin bladder wall and that several leakages were visible. Nothing remained then for me to do but to endeavor to close the opening by stitching the body of the uterus and the broad ligament to the bladder, which was accomplished successfully, the whole vesico-uterine pouch being thus obliterated. The line of sutures extended from the bottom of the peritoneal fold joining the broad ligament and the bladder on the left side almost to a corresponding point on the right (Fig. 3). The bladder was then distended with a solution of methylene blue and found to be absolutely tight. The usual deep silkworm-gut sutures were used to close the abdominal incision, and the operation, which had lasted over two hours, was happily finished. A soft permanent catheter was placed in the bladder and the head of the patient's bed elevated to facilitate urinary drainage. Recovery was uninterrupted so far as the abdominal operation was concerned; but the vaginal-fistula part was a failure, as I had feared from its necessarily hurried performance. Urine had infiltrated the wound, and absolutely no union resulted, not even of the uterine rent.

One month later, when there seemed to be no danger of a reopening of the peritoneal fissure, a third attempt was made to close the fistula. Yielding to the necessity, I no longer attempted to restore the normal utero-vaginal communication, but closed the vagina transversely from the posterior vaginal vault to the meatus with a double tier of thin silver-wire sutures, making a wide denudation. As the neck of the bladder was destroyed, I cut out the remnant of the urethra and built up a longer canal by denuding and uniting the nymphæ nearly to the clitoris. A permanent soft catheter was kept in the bladder for fourteen days, and the patient directed to lie constantly on the side. There was no leakage; the sutures were removed on the twelfth day, and union was found to be perfect. After the removal of the catheter the patient was allowed to sit up and directed to urinate at least every two hours. I had feared that the newly formed urethra might not have regained its retentive power, but fortunately this fear proved groundless. The patient was not only able at once to hold her urine, but could pass it at will. A vagina of sufficient depth for copulation remains.

I regret that it did not occur to me, at the time the abdomen was opened, to shorten the round ligaments by doubling them on themselves, and to remove the ovaries. The former operation would have kept the retroflexed uterus more closely in apposition to the bladder, although this did not prove essential to a thorough union of the two organs; and the latter would have removed the persistence of menstruation (a useless function in this case, as was also ovulation) and spared the bladder the possible irritation of that discharge. I confess that I was so tired at the completion of the operation (which was preceded by several other operations on other patients), that I was glad to "let well enough alone" and be content with a tight bladder.

The closure of an intraperitoneal injury of the female bladder through an abdominal incision is, I believe, a rather unusual operation; at least, I have

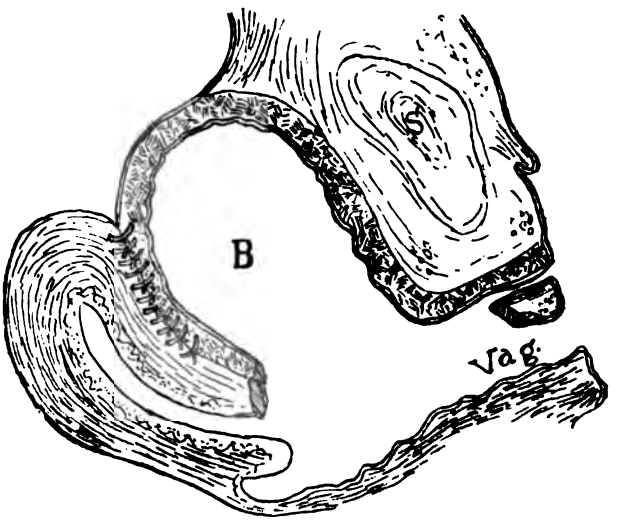


FIG. 3.

found only one reference to it in recent literature, namely, in a letter by Dr. A. Lapthorn Smith, of Montreal, describing a visit made by him to the clinics of a number of prominent European gynæcologists during

the past summer (*American Gynæcological and Obstetrical Journal*, October, 1898). Smith speaks of having seen Professor Zweifel in Leipsic accidentally cut into the peritoneal cavity while operating on a large vesico-vaginal fistula left after a vaginal hysterectomy by another operator. He at once opened the abdomen above the pubes, without changing the patient's position or rising from his own sitting posture between her thighs, and closed the rent with interrupted sutures. The result is not mentioned.

The excellent illustrations are by Dr. W. H. Luckett, of this city, former house-surgeon to Mt. Sinai Hospital.

30 WEST FORTY-FIFTH STREET, November 24, 1898.

THE USE OF MUSICAL VIBRATIONS BEFORE AND DURING SLEEP—SUPPLEMENTARY EMPLOYMENT OF CHROMATOSCOPIC FIGURES—A CONTRIBUTION TO THE THERAPEUTICS OF THE EMOTIONS.

BY J. LEONARD CORNING, A.M., M.D.,
NEW YORK.

To win to a just estimate of the propositions constituting the burden of the present writing entails some acquaintance with the psychology of the affective life. Eliminate that, and persuasion, however logically conceived, can bring but the empty shadow of conviction. It has seemed well, therefore, even at the risk of some prolixity, to bring forward the most apposite data in the very beginning.

The Feelings of the Waking State.—I know of no better definition of the feelings than that of Herbert Spencer. "Each feeling," he finds, "is any portion of consciousness which occupies a place sufficiently large to give it a perceivable individuality; which has its individuality marked off from adjacent portions of consciousness by qualitative contrasts; and which, when introspectively contemplated, appears to be homogeneous." If it cannot be distinguished from an adjacent part of consciousness it is one with that part; "it is not an individual feeling but part of one." Again, if under introspection it falls into unlike parts "that exist either simultaneously or successively, it is not one feeling but two or more."[1] A feeling exists only by virtue of its relations to other feelings. Deprived of these it could possess no semblance of autonomy, no conceivable limitation in time or space, or both.

To be sure, what is here termed relation proves ultimately to be itself a species of feeling, which, while scarcely occupying an appreciable part of consciousness, represents in its final sublimation the fugitive feeling accompanying the transition from one feeling to another.

For purposes of provisional classification it is customary to divide the feelings into two broad classes: those peripherally initiated—sensations, and those centrally initiated—emotions. These, again, as originally produced, are spoken of as primary, and as reproduced or ideally revived as secondary. The primary feelings are relatively vivid, the secondary ones relatively faint.

As the principle of the revivability of the feelings is indissolubly interwoven with the great question of the therapeutics of the emotions, which constitutes the chief object of this communication, I shall venture to bring forward what appear to be the data of most significance to the present argument.

Speaking broadly the feelings are revivable in proportion as they are relational; moreover, those peripherally initiated are more representable than those of central origin. Indeed, as Bain observes, emotions, "in their strict character of emotions proper, have the minimum of revivability; but being always incorporated with the impressions of the higher senses, they share in the superior revivability of sights and sounds."

This is a fact replete with suggestion; a fact to which the mind, compelled by the countless experiences of common life, yields a quick acceptance; yet a fact which has not heretofore, in my opinion, been turned to the fullest account in the management of the manifold derangements of the affective faculties. I shall have occasion to return to this point more than once. Without doubt, the most highly relational feelings are those of sight, and consequently they are also the most revivable. The blue of a woman's dress, the meteoric glare of a sky-rocket, are quickly and clearly revived without conscious effort. Scarcely less representable are the auditory feelings, especially those linked in melodic sequence. A simple cadence, theme, or harmony issuing from flute, viol, or piano, is recalled quickly—aye, almost spontaneously, without notable stress of either will or memory. So, too, with the higher feelings—emotions—with which the sensations of the imperial senses of sight and hearing are indissolubly amalgamated; one and all, despite the fragility of their texture, they (the emotions) are revived, buoyed, so to speak, into consciousness by the sturdier feelings of light and sound with which they are allied.

Sensations of touch are recalled with considerable readiness, but those of smell[1] and taste are less easily remembered. Little interest attaches, however, for present purposes to this plebeian class of feelings, whose relation to the higher emotions is remote and whose ability to aid in their revival is consequently limited.

Everything else being equal, it may be admitted that the greater the strength of a primary feeling, the greater is its revivability; and also, the more frequently it is recalled, the more revivable it becomes. Even the more faint and fleeting emotions become quite revivable after frequent repetition.

Another point of importance, yet one whose practical implications have been largely overlooked, is that present emotions, especially of a disagreeable character, inhibit the revival of other emotions, especially those of an agreeable character. Indeed, to indicate how the barring out of agreeable emotional memories by present disagreeable ones may be avoided, is one of the considerable objects of the present writing.

With regard to the revivability of the passions and emotions, two principal opinions are discernible among psychologists. According to one class of observers—and they are the more numerous—the affective memory is held to be merely that of the accompanying circumstances; the others, on the contrary, believe it to be nothing less than a true recollection of the emotion itself.

Ribot, however, who has reviewed the whole subject with much penetration, finds this discrepancy of opinion to be due to personal rather than generic causes. In short, there are great differences between individuals as regards their ability to recall emotional impressions. Some are able to recall them in intellectual terms only,

[1] "Principles of Psychology," vol. i., p. 164.

[1] While in their absence the peculiar qualities of different odors are not readily recalled, the odor itself is readily recognized on re-presentation. Not only this, particular odors ally themselves easily with certain of the higher emotions, and assist greatly in their revival. Examples of this will at once occur to every one. The peculiar effects of incense, as used in religious ceremonies, are due to this association. I have experimented at some length with combinations of musical sounds, moving colors and odors, but have not been convinced that the olfactory appeal did more at the time than lend a transitory sensuous agreeableness. The re-presentation of the odor, however, assisted considerably in the recollection of the harmonies and colors.

to know merely that they have experienced them; while by others they are felt again, and, when long dwelt upon, rise to the intensity of the original impression, become, in a word, veritable hallucinations. According to the classification of Ribot, the first are representations of the false or abstract memory; the second, of the true or concrete memory, whose salient feature is the actual reproduction of the original state of feeling.

Now, nothing is more certain than that just as auditory impressions arrange themselves in sequential or, as in harmony, in simultaneous aggregates; and just as visual impressions possess an inherent gregarious tendency, so the emotions, including those of pleasure and pain, are indissolubly linked with intellectual states, with perceptions, representations, or ideas. Moreover, it is a matter of common experience that the revival of the emotional representation is contingent upon the preliminary presence in consciousness of these very intellectual elements. In an apathetic person, however, the process may cease, or almost cease, with the first, or intellectual step, and there may be little or no emotional revival. On the other hand, the same intellectual associations, in one of an impressionable nature, may suffice to evoke the most vivid emotional representation. Is it possible, I have asked myself, to render the supervention of this secondary process, this revival of the emotional state, more constant and more vivid in those who, by disease or overstress of the affective faculties, no longer respond to natural stimuli? Or, in one word, is a rejuvenescence of the emotions along strictly physiological lines within the range of feasibility?

Were the evocation of a given emotional state alone contingent upon the reproduction of its intellectual relations, I should certainly feel impelled to answer this question by an emphatic negative. Indeed, if, in some persons otherwise sound, the presence in consciousness of these intellectual relations is unequal to the task of arousing the sluggish affective memory, of causing a real revival, a genuine reproduction of the cognate emotion, how immeasurably less capable are these relations of awaking emotional states in those grown irresponsive through the inroads of disease!

But—and the thought has already been anticipated—purely intellectual conditions and circumstances are not the only ones associated with the emotions. Permeating the shadowy precincts of the infinite maze of linked thought and feeling, the impressions of the imperial senses of sight and hearing, the inner pictures and the inner music, form an impalpable agglutination, a last ineffable cohesion. And just as the presence in consciousness of definite intellectual elements serves to revive their emotional connections, so likewise may the latter be evoked by the repetition (or recollection) of the sights and sounds with which they were originally allied. The rhythmic concatenation of sound which we know as music is capable beyond all else of achieving the revival of the affective memories.[1] But its relation to the feelings does not stop here; for, as Ribot justly observes, "while certain arts at once awaken ideas which give a determination to the feelings, this of music acts inversely. It creates dispositions depending on the organic state and on nervous activity, which we translate by the vague terms—joy, sadness, tenderness, serenity, tranquillity, uneasiness. On this canvas the intellect embroiders its designs at pleasure, varying according to individual proclivities."

It is not surprising, in view of all this, that music should have been invoked, even in the most ancient times, in the treatment of disturbances of the nervous system, particularly insanity. Even in our day the attempt has been made again and again; and I myself have been practically familiar with the expedient for years. There is, however, one serious objection to the method heretofore in vogue. I refer to the concourse of arbitrary images and ideas, especially of a melancholy character, which, in persons dominated by depressive concepts and moods, weave themselves about the melody, whether it be grave or gay. I was for long at a loss to parry this objection—an objection inherent in every attempt to employ music in the treatment of mental or nervous affections, heretofore proposed.

However, I continued to peer about, hoping, yet I confess sceptically, for some fact or happy trend of thinking to show the way to a practical solution. To ignore the intermediate steps, to come quickly to the result, I may state at once that one day it occurred to me that I would expose some of my patients while asleep to the influence of musical impressions, and note the result. I was led to this by the twofold consideration: 1, That during the abridged consciousness of the somnolent or presomnolent condition, the mind is peculiarly open to the full suggestive power of impressions, by reason of the absence of that inhibition which is the penalty, so to speak, of full consciousness; and, 2, that the effects of music are produced not by some trick of occultism, not by an intangible appeal to the non-material spirit of mystical philosophy, but to vibrations imparted to the brain itself through the intermediation of the acoustic apparatus. When later I glanced through the rather meagre literature touching this important question, I found that this, the essentially physiological view, was held by a considerable number of writers, notably by Buccola, Boudet de Paris, Vigouroux, Morcelli, and Mortimer Granville, whose researches, one and all, go to show that music acts ultimately as a species of vibrative medicine. If this, the scientific view, be accepted, it follows—and the conclusion is a momentous one—that in so far as the ultimate material effect of music upon the central nervous system is concerned, the participation of consciousness is not essential. In other words, to be unaware of their presence offers no hindrance to the propagation of the acoustic vibrations from the periphery to the central ganglia, which from mere mechanical necessity participate in the rhythmic perturbation.

But we have already seen that, in addition to this purely somatic effect, music is able to arouse a flood of intellectual memories and ideas, which in their turn give rise to other and more complicated memories. Is the music heard during sleep able to achieve this end? Or, in other words, is it possible, by exposing a sleeping person to the influence of music, to modify the images, ideas, and emotions of his dreams? And, furthermore, and most important, if this indeed be achievable, has such a modification of the mental state during sleep any appreciable effect upon the psychology of the waking state? Or, to be explicit, are the images, ideas, and emotions thus artificially evoked during sleep remembered during the waking state; and are they able, if thus remembered, to modify the emotional and intellectual character of full consciousness?

Finally, to return to the primary, immediate, or physical effects of music, are the sonorous vibrations imparted to the central ganglia during sleep capable of modifying the emotional character or tone of the waking state?

To give a complete and convincing answer to these questions presupposes some acquaintance with the psychology of sleep and its relation to the psychology of the waking state. Let us consider briefly the more important data.

The Psychology of Sleep.—In the full consciousness of the waking condition the subject is acutely

[1] This proposition is, of course, of more limited application in the case of those who are but slightly affected by it.

aware of his own existence and of his mental state and acts. To say this is but to affirm that during waking the "I," the feeling of personality, which is a summation, a kind of synopsis of awareness of all the psychical activities, memories, feelings, judgments, volition, etc., is at the maximum of development. When we scrutinize its formation a little more closely we find two principal elements entering into the structure of the "I." The first consists of the permanent conceptions derived from our motor and "general" sensations, and of the memories and their associations resulting from the repetition of external impressions. The second embodies the attribute of attention, or apperception—the condition in which the mind is aware of perceiving—knows the nature of its own processes as well as their object.

Now it is precisely this element of active attention so necessary to the "I," so necessary to consciousness, that is more or less completely arrested during sleep. Hence from the purely psychological viewpoint sleep may be truly said to be the "resting-time" of consciousness.

I have said that attention is more or less completely arrested during sleep, since only in the profoundest type of sleep is there reason to infer its entire absence. When, however, the erratic mentalization known as dreaming is present, there is great diminution of attention, and consequently the "I" assumes a passive form. Subjective sensory impressions and intellectual conceptions with their accompanying emotions arise in consciousness in arbitrary confusion, while at the same time there is wanting sufficient apperception to afford the orderly arrangement and grouping of the psychical material so necessary to objective thought. There is no self-criticism possible in dreams; all is accepted as real, however absurd.

Do the contents of dreams exercise an appreciable influence on the mental life of the waking state? Yes, most undoubtedly, for good, ay, and for evil also; for good, when the content is of a delightful character, and confers fragrant memories upon the waking state; for evil, when the content is of a depressive or dreadful character, as in nightmare. Indeed, it is no secret, for the fact has long been recognized, that dreams of this distressful character may give rise to insanity, the cause being the tendency of the subject to confound the events of the dream with reality, to merge them with the mental content of the waking state. Of late S. de Sanctis has published a number of cases illustrative of this hypnogogic origin of insanity;[1] and I myself have seen melancholic frenzy, sudden and nearly uncontrollable impulses to suicide, and hysterical crises develop, as what seemed to me the direct results of dreaming. But even when the outcome is not so drastic, a dream of sombre, terrifying character is fully capable of casting a shadow upon the mind, of blighting or perverting the affective life of waking.

The mental states of sleep—and this is a pivotal point of the argument—have, therefore, an influence upon waking thought and feeling that cannot be gainsaid; to ignore it is to miss a most significant element in psychiatric etiology, and, what is more important, to let slip an enticing opportunity of scoring in a practically untrodden field of neurotherapy. The ideation of the night, desultory and unguided though it be, exerts then an undoubted sway over the spontaneous though more systematic thought of the day. Does the reverse hold good—do the thoughts and feelings of the day find an echo in the night? I think most of us, or certainly those of us who have given the matter the slightest attention, will feel impelled by personal experience to give an affirmative reply to this question. Nothing, indeed, is more common than for a person to retire to rest with a thought-laden mind, and to find on waking that the dreams of the night have represented substantially a continuation—albeit a chaotic one—of the ideas and emotions that were uppermost in the mind just previous to falling asleep.

With regard to the emotions De Sanctis finds—and his testimony is corroborated by several other observers—that the waking emotions of medium intensity are those most liable to reappear in sleep.

Other Significant Data of Dreaming.—There are some other facts connected with dreaming, which, bearing as they do more or less directly upon the theory or objects of the present paper, I shall briefly indicate. It should be known—to cite a fundamental fact of this kind—that dreams may be both centrally or peripherally initiated, may arise as the result of cerebral erethism, or as the sequence of irritation of the sensory nerves. When centrally initiated they have been called "representation" dreams; when peripherally induced, they are known as "presentation" dreams. This seems rather an artificial nomenclature, since a representative element, *i.e.*, a transformation of the sense excitation into an image implies activity of the association process; and surely association is common to all dreams, however initiated. With this reservation the classification is not so bad; but in my opinion it will be found to serve better for clinical purposes if we extend it so as to include a third class of dreams—that in which the dream is due to both central and peripheral excitation. I shall later have occasion to return to this point. Dreams may be induced by excitation of any one or several of the nerves of general or special sensation. The most highly relational senses, *i.e.*, sight and hearing, are those whose instrumentality is conspicuous in the creation of many elaborate dreams. Vold, by causing the subject to contemplate various objects immediately before falling asleep, has been able to modify the visual representations of the subsequent dream. In my experience, however, the best results are obtained by the use of auditory stimuli during the drowsy interval immediately preceding sleep and during the subsequent period of complete unconsciousness.

The induction of dreaming by way of taste, smell, or dermal sensations (hot bottles to the feet, etc.) offers decidedly subordinate advantages, the content of the dream being much less controllable, while the method itself presents formidable difficulties. Finally, there are some persons—and they are doubtless more numerous than the meagre literature available would lead one to suppose—there are some persons who dream readily at the instigation of whispered suggestions. In experimenting with this class of individuals, however, it is necessary to go forward with caution, since so small a mischance as the undue elevation of the voice or an irregular, strident utterance is of itself sufficient to arouse the sleeper. Further than this, the mere act of approaching, or of bending over, or letting the breath play upon the features of a sleeping person is often enough to cause a quick awakening. Just as inimical to the success of the experiment are the loud noises of the street—the rumble of passing vehicles, the cries of newspaper venders, the cracking of whips—and the same may be said of sudden flashes of light and indeed of any sensory impressions of a disjunctive sort. When to this is added the further necessity of operating when consciousness is not wholly lost, or, in other words, when sleep is light—for experience teaches that under such conditions dreaming takes place most readily and is most easily controlled—it becomes at once evident that the task undertaken is beset with added complication. How these obstacles may be largely overcome I shall now proceed to indicate.

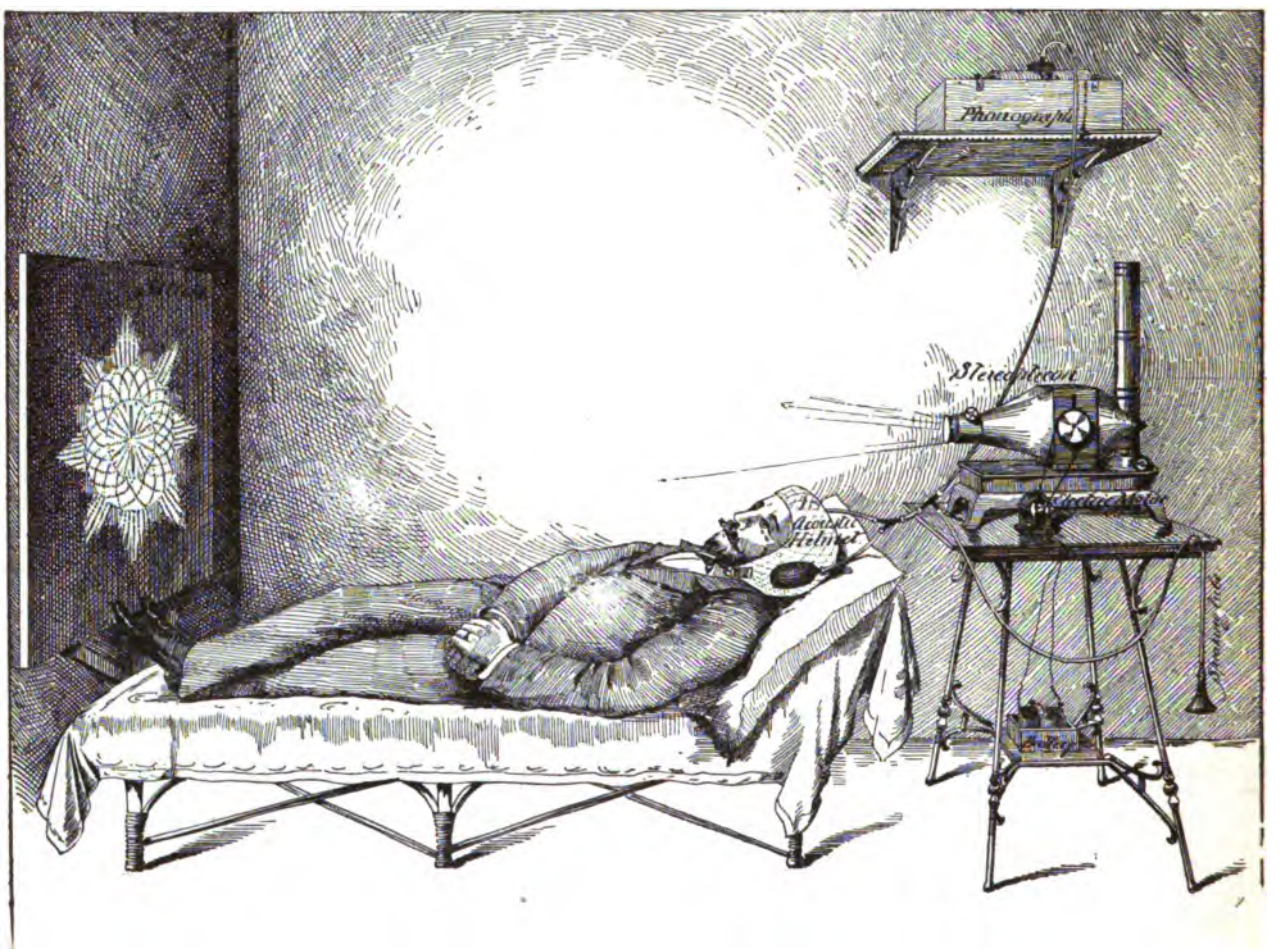
The Author's Method of Employing Musical Vibrations during Sleep.—To give practical effect to

[1] Ann. de la Société de Méd. de Gand. 1897.

the ideas previously set forth, I have had recourse to the following expedients.

In the first place, I have had made a kind of hood of canvas or soft leather which, enveloping the whole head, extends forward and over the ears, so that the face alone remains uncovered.[1] Just at the point where the cap rests upon the ears I have caused the material to be cut away, so as to allow of their free protrusion. A kind of metallic saucer, just deep enough to afford the necessary room, was then placed over each ear, and its margin, broadly flanged and perforated for the passage of the needle, was sewed to the edges of the opening.

Each saucer was provided, moreover, with a hollow metallic nipple, situated just above the ear and communicating with the enclosed air space. A piece of India-rubber tubing of small calibre, twenty-five feet



in length, was attached to these two nipples by a short bifurcation. The other end of the tubing was then connected with the reproducing mechanism of an Edison phonograph. This acoustic hood with its attachments has been made according to my directions by W. F. Ford & Co. Despite certain obvious imperfections the phonograph presents incontestable advantages as a producer of powerful musical vibrations. The preservation of the tone color, though a desirable quality, is not its chief recommendation, but rather the high degree of penetration—if I may be permitted the expression—which it is able to impart to the vibrations themselves. The consequence is that, quite irrespective of the extraordinary influence which its music exercises upon the feelings, the phonograph is capable of inducing important changes in the metabolism of the cerebral ganglia. But how do we know this? First of all, because persons suffering from neurasthenia frequently experience marked abatement of symptoms after exposure to the vibrations of the phonograph during sleep. Clearly, therefore, in view of the unconsciousness of the subject, a "spiritual" participation cannot be invoked to explain an effect of this kind. Again, persons who suffer habitually from mental and physical atony in the morning, who are capable of little or no exertion before midday, and whose constant complaint is that they derive little or no good from sleep, no matter how prolonged, often experience a decided revival of vigor if subjected to the vibrations of the phonograph during sleep. Matutinal depression, when not dependent upon some obvious physical disorder, is frequently relieved in the same way. The like may also be said of certain head pains of the milder sort, taking their origin in all likelihood in transitory derangement of the intracranial circulation.

All this goes to show, beyond a doubt, that we are here confronted with the material effects of musical vibrations.

In my experience harmony is more effective than melody in this vibratory plan of treatment, and for this reason selections from the Wagnerian compositions render excellent service. Arpeggios and minor chords are likewise exceedingly effective.

The simple appliance just described possesses various advantages. Not the least of these is its ability largely to exclude all disagreeable or disjunctive noises. This is rendered possible by the careful padding of the edges of the metallic saucers, where they press upon the cranial bones. The subject, as a result of this arrangement, is effectively screened from intrusive elements of environment, whose presence could not but materially diminish, if not wholly inhibit, the benefits otherwise to be derived from treatment.

[1] The object in employing this form of apparatus is to guard against its displacement by the movements of the subject while in bed. It may be worn in the dorsal or side position without risk of derangement.

Measures to be Adopted to Facilitate the Occurrence of Sleep.—While soft musical vibrations, far from interfering with sleep, tend rather to induce it, there is no denying that the presence of the cap is sufficiently unusual to retard at first the supervention of unconsciousness. This difficulty may be readily overcome in one or two ways:

1. The subject may be given a small dose of some appropriate hypnotic fifteen or twenty minutes before retiring.

2. His power of attention may be exhausted by causing him to look fixedly at a bright object, rapidly revolved and illuminated by a light so screened as to leave all else in complete obscurity. A disk of tinfoil, rotated by clockwork behind a dark sheet of cardboard, perforated by an orifice sufficiently large to disclose about a square inch of the tinfoil, answers every purpose. The furtive iridescence proceeding from this opening when illuminated by the rays of a small reflector, binds the attention in the beginning, only to exhaust it in the end.

The Use of Musical Vibrations during Incomplete Sleep (Somnolency).—With this fatigue comes drowsiness; and it is precisely now in this state which is half sleep, half waking, that the musical waves, surging into the labyrinth and onward to the sensorium, produce effects alike transcendent and indescribable.

Most of the criteria of objective reasoning are gone; and the mind, secure against the intrusion of depressive thinking, is given wholly to its visions. This is no mere expansive use of words. The fact itself becomes sufficiently intelligible when it is remembered that coincidently with the waning of purposive thought, we evoke (suggest), by the use of sonorous stimuli, concepts and moods which in the twilight of subjective consciousness bear the imprint of complete genuineness.

It is precisely this store of arbitrary ideas and feelings assembled during drowsiness, that constitutes later on the frail gossamer of dreaming. And, as previously hinted, the gradually acquired art of vividly recalling these dreams, or many of them, on waking, makes it possible to achieve good through a kind of blending of the mentalization of day with that of the night.

Should a lengthening of the period of drowsiness seem desirable—and in my own experience this has sometimes been the case—the administration of small doses of tea or coffee will be found to render good service, where the tendency to fall quickly asleep is pronounced.

The Combination of Chromatoscopic[1] Images with Musical Vibrations during Waking.—This method, to which I give the preference, while possessing all the advantages of the foregoing so far as fatiguing the attention is concerned, has the added virtue of making a much more powerful appeal to the affective life of the subject. To give proper effect to its exactions requires, however, somewhat elaborate paraphernalia, involving, moreover, in the aggregate a considerable expenditure.

The arrangement employed by me for some time past is briefly this:

Upon a low divan the subject, who has previously donned the acoustic hood, extends himself at full length, preferably upon the back. A tent-like arrangement, shutting in the divan both above and at the sides, excludes the light completely. At the foot of the dark chamber thus simply constructed is a white screen stretched upon a vertical quadrangular frame, which is securely fastened to the foot of the divan. Supported upon a tripod at the head of the divan, but outside of the curtained enclosure, is a small stereopticon of relatively short focus. Only the tube of the instrument protrudes through a small aperture in the drapery. Various chromatoscopic slides may be successively introduced into the slot of the lantern; and it is evident that accurate focalization makes it possible to project many-hued images upon the little screen at the foot of the couch, images whose ever-changing forms and capricious beauty hold the attention with an ineffable enchantment.

To dispense with the necessity of operating these slides by hand I have invoked the good offices of a little electric motor, which performs its part to the full satisfaction of all concerned.

While this powerful appeal is made to the highly associated feelings of sight, a like influence is exerted upon the acoustic associations by harmonic vibrations derived from an Edison phonograph, placed in communication with the ear-pieces of the acoustic hood by the aid of the small India-rubber tubing, as already described. Most of the music to be had in the shops is quite worthless for the purpose; but I am happy to say that of late, what with the improvement of the reproducer and the more dexterous preparation of the cylinders, more perfect though less plentiful harmony is now available. Should the volume of sound prove too great, it may be diminished either by plugging the ears or by blocking the conducting tube with a pledget of cotton. As to the phonograph, it should always be operated behind closed doors, in an apartment adjoining that occupied by the subject. Communication between the hood and the phonograph may be had by passing the conducting tube through the keyhole.

By the use of two phonographs connected by a bifurcation with the conducting tube, it is possible, by employing first one and then the other, to avoid any considerable break in the continuity of the harmonic vibrations.

In weak, debilitated persons the previous administration of some form of mild stimulation will be found greatly to enhance the energy of this dual appeal to that vast affective life, to which the impressions of the imperial senses of sight and hearing are the open sesame.

Moreover, as the capacity to recall the visual and acoustic content increases with practice, there develops a tendency on the part of the mood to couple itself with the remembered sense impressions. Depressive ideas lose their ability, to a certain extent, to engender moods of corresponding sombreness; or rather—to state the fact with full significance—the visual and acoustic recollections arise spontaneously after a time, till at length they attain the quality of veritable hallucinations, carrying joyous or tranquil moods in their train and largely displacing the kind of ideation which carries a melancholic consequent. In this process of recollection the visual memories suggest the acoustic ones, and *vice versa*. The association implied thereby is not, however, to be thought of as taking place between the original sense impressions, as crudely imagined by some writers, but rather between the feelings engendered by such impressions. Nothing more disparate than sound and color can well be imagined; and, yet, a kind of analogy between their emotional characters is discernible. It is undoubtedly an instance of emotional association pure and simple.

It only remains to add that, since the subject is so isolated from his environment, some means of communicating with him, without the previous removal of the acoustic hood and consequent interruption of the whole procedure, is desirable. This end I have been

[1] The chromatoscope here referred to is that employed with the ordinary stereopticon. It consists essentially of two variicolored glass discs rotated in opposite directions by simple cogwheel gearing. The chromatoscope is vastly more efficient than the kaleidoscope, with which I first experimented.

able to attain quite simply by connecting a small speaking tube with that employed for conveying the musical vibrations from the phonograph. This arrangement is sufficiently well shown in the illustration. Suggestion made by way of this tube, while the mind is engrossed by the sounds and colors, has a semi-hypnotic effectiveness.

Employment of Musical Vibration during Profound Unconsciousness.—But visions and fragrant memories are but a few of the desirable things to be got from the use of music immediately before and during sleep. Aside from these psychological advantages there are others of a distinctly physiological origin whose importance is at least as considerable. These have already been brought forward in the introduction, where it was distinctly stated that beneath the purely spiritual effects of music are others quite substantial in character, consisting evidently in their ultimate essence of nothing more nor less than vibrations —I can think of no better word—of the collocations of material particles composing the active (ganglionic) elements of the cerebrum. From the far-reaching nature of the psychical effects of music it is evident, moreover, that the cerebral areas both directly and indirectly influenced by such vibrations must be extensive. No wonder, then, that in accordance with the laws of cell economics the effect exerted upon cerebral nutrition by such a prodigious number of vibrations as occur in even relatively simple musical compositions is enormous.

So great, indeed, it is and potent that when continued for prolonged periods during the unconsciousness of profound sleep—for, as previously insisted, the awareness of this subject is not essential—when allowed, I repeat, to produce its full effect in this way, this vibrative treatment is capable of mitigating a number of troublesome symptoms by which melancholics, neurasthenics, and other neurotics are burdened, notably in the early morning hours, shortly after the first awakening. These are the facts and these the considerations which have led me to subject a number of my patients to the effects of musical vibrations for several hours, during many consecutive nights, at the time when I had every reason to believe unconsciousness was most complete. And now, after prolonged and numerous trials, I have become convinced that here in this untrodden field we have spread before us a host of new opportunities—not of theoretical acquisition merely, but of substantial achievement in the realm of the tangible and the useful.

Nay, there is no room for cynical skepticism in the presence of a procedure which, from its very nature, is secure in the countenance of all that is most recent and convincing in physiology and psychology alike.

Illustrative Cases.—The following brief synopsis of a few of the cases treated by the author according to the principles here advocated will form a fitting supplement to the argument.

Matutinal Depression and Inertia.—Miss L—— has for long been a sufferer from neurasthenic symptoms. She is beset by a dread of work and responsibility. Neither reading nor writing is possible to her without marked discomfort; her attention soon flags, the words cease to convey their meaning promptly, and she reads a sentence again and again in an automatic, dreary way, coming but slowly to a realization of its import. So, too, in writing she is obliged to search long for an appropriate symbolism of her ideas, and the thoughts themselves come forward sluggishly. This, on the intellectual side, is the chief note in her case; it is quite typical and important, of course, but it is not the one which has led me to bring her history into the present discussion. A single, much less obtrusive, but hardly less troublesome symptom—matutinal depression—is for us her chief *raison d'être*. Indeed, from her first awakening till midday—and sometimes till two or three o'clock —she is oppressed by melancholy to such a degree as to lose all initiative either to think or to act. Accordingly she remains in bed, listless and apathetic, till a late hour, to rise finally with the aid of strong coffee or other stimulant. There are other but irrelevant features connected with the case, which is on the whole a typical instance of the congeries of symptoms commonly classified as neurasthenic.

As many things had been tried in her case by competent practitioners without manifest result, and as I myself had been unable to do any better, I resolved to test the efficacy of the treatment with the chromatoscopic images and musical vibrations during the evening, allowing the musical vibrations to go on after the supervention of unconsciousness and until far into the night.

A portable screen of linen, about four feet square, was set up at the foot of the bed; the lantern placed upon its tripod above the head-board, its lamp alight, the lenses brought to a correct focus. The chromatoscopic slide was then adjusted, and the small battery for the supply of its motor ensconced in a convenient corner.

About half after ten, the patient, though wakeful, was put to bed, the acoustic hood adjusted, the chromatoscopic images were thrown upon the screen, and the phonograph, in the neighboring apartment, was set to play some familiar harmonies. She seemed both pleased and astonished, as could be easily made out from the expression of her face, which had quite parted with its accustomed melancholy and now wore an interested, happy expression. I gave her now fifteen grains of trional, to hasten the coming of unconsciousness. Twenty minutes later she was quite drowsy, had shut her eyes, and turned upon her side. The lamp in the lantern was quietly extinguished, and the musical vibrations, shorn of their loudness by the insertion into the conducting tube of the pledgets of cotton, were continued with but slight interruption for four hours. When a change was made in the musical composition, great care was exercised in discontinuing the vibrations and in recommencing them, abrupt transitions being avoided by gradually compressing the tube over the cotton, when shutting off the music, and slowly releasing it at the same point when beginning anew. This apparently insignificant point is of importance, since to ignore it is to run the risk of awakening the patient.

When, on the following morning, the patient awoke, a decided change for the better had disclosed itself. She affirmed with great emphasis and unmistakable sincerity that she was feeling better than for many months past; that she felt ability and even desire to be up and doing; and, to her most wonderful of all, she was quite free from the depression and general malaise which had so relentlessly haunted her morning hours.

For the three following nights the same procedure was followed, with a like happy effect. On the fifth night the trional was discontinued altogether, as by this she had quite accustomed herself to the presence of the hood; and as for the vibrations, they served rather to aid sleep than to retard it.

Nor was the benefit derived merely transitory; for aside from the mental improvement there was a striking gain in appetite, especially evident at the morning meal, and culminating at the end of three weeks in a small though decided accession of weight.

Insomnia.—Mr. S——, a speculator, has been accustomed to take his worries and his cares "to bed" as he puts it, for many years. Ignorant in the beginning of the evil inevitably following such abuse, he became in due course fully aware of its hurtfulness,

but was unable to shake off the habit which mastered him completely. Harried at length by the long vigils consequent upon erethism so persistent and untimely, he sought the aid of various hypnotics. These served for a time, but lost their effect after long usage. In default of something better, he began to stimulate rather freely—during the day, to overcome his inertia; at night, and more copiously, to produce stupefaction. This, too, was of short avail; and when he consulted me, the difficulty was if anything more aggravated than ever. Only quite exceptionally at this time did he succeed in falling asleep before two in the morning; his weight had decreased materially; and he was become morose, irritable, and taciturn, shunning all society, of which he appeared to stand in a kind of feverish dread.

With him, too, I proceeded as in the previous case, sending him to bed at eleven in the evening, and letting the shifting colors and harmonic vibrations do their work.

Though without manifest liking for music, he was open to color impressions, and I experienced no difficulty in holding his attention and effectually excluding both thinking and worry. And with the ultimate fatigue of the attention and the monotonous repetition of the music came sleep—the first nights it is true, after long waiting only, but thereafter with ever-increasing quickness. It required no urging to induce this patient to continue treatment; for, though unmusical in the usually accepted sense, he certainly derived a kind of satisfaction—physical, I think, rather than spiritual—from the continuous inflow of harmony, which was still maintained for two or three hours after the occurrence of unconsciousness. I encouraged him to endeavor to recall the more simple melodies and colors; and this in due time he succeeded in doing fairly well, so that after the discontinuance of treatment he was able, on the slightest reappearance of the old tendency, to rid himself of persistent thinking and worry by summoning from memory the changeful pictures with their correlated melodies.

This, one of the first cases of insomnia in which I tried this mode of treatment, proved also one of the most successful.

Morbid Dreams.—Mr. L——, now past middle life, has been haunted by morbid dreams since his twentieth year. He is not now nor has he ever been given either to gluttony or intemperance. His digestive powers are unimpaired; his appetite is good; his work regular and without emotional stress. And yet, and quite without visible incitement, he dreams through every night—not in a vein of pleasurable extravagance, but harried by nightmare, whose nocturnal horrors leave to waking a legacy of grewsome memories. Naturally of a sombre and superstitious cast of mind, with faculties alive to the dissonances of life, he has brooded much upon these visions of the night, which in his biassed fancy have come at length to assume the rôle of a kind of sinister foretelling. No amount of argument can shake his belief in the spiritual origin of such phenomena, and consequently occult explanations are more agreeable to his prejudices than physiological ones.

Only as a *dernier ressort* was he induced to consult me, and he invoked my services hampered by the most complete scepticism.

Having installed the necessary appliances, I ordered him to bed an hour earlier than usual, employing the interval of wakefulness in the usual manner, *i.e.*, fixing and fatiguing the attention with the chromatoscopic images, and reversing the emotional tendency as far as possible with the musical vibrations from the phonograph, which was operated in an adjoining apartment. Owing doubtless to the presence of the hood, and perhaps to the novelty of the experience, sleep itself was considerably delayed. At length, however, respiration became deeper and slower, his eyelids began to droop, and, with a sigh, he turned upon his side—his usual attitude in sleeping. The lamp was then extinguished; but the phonograph, brought now to a more gentle modulation, continued to transmit its harmonic vibrations for an hour or two longer.

When interrogated on the following morning, the account given by this gentleman was interesting and surprising as well. He had certainly not dreamed less than usual—rather more, indeed, if that were possible; but—and here lay the marvel—the character of his dreams had changed completely. Formerly a kind of carnival of the horrible, they were now become agreeable visions, of whose fascinations he spoke with considerable enthusiasm. The misty memories of these experiences brought comfort, which proclaimed its presence by heightened ardor and a more hopeful countenance. This sense of wellbeing maintained itself during the day, so that by night he acknowledged his impatience to resume treatment.

It would be a waste of writing to relate circumstantially the trivial shiftings of this interesting case. Enough that the experiences of the first night were repeated again and again; that he was gradually enabled to acquire a more definite memory of the content of his dreams; and that these memories replaced in some manner the immediate effects of treatment, which, being diminished by degrees, was finally discontinued at the end of the fifth week.

It is yet too early to speak of a permanent result; but I have encouraged him to take an abundance of exercise toward the end of the day, so as to insure marked physical weariness; and, with a single exception, his nights have passed without a recurrence of his old trouble, such dreams as he has had being of an optimistic coloring.

Imperative Conceptions.—Mr. S—— is a young man of considerable versatility. From his earliest youth he has been given to studious pursuits, and with advancing years the tendency has continued to assert itself with increased vigor. The arts, including music, have commanded his earnest and searching attention; but his chief satisfaction hitherto has been found in the study of philosophy, natural and speculative, of which he has acquired a wide knowledge. About two years ago he was compelled to endure a considerable emotional strain; and this, coupled with the necessity of exerting himself unduly in a mental way, has resulted in debility of the central nervous system, which in turn has opened the way to the development of a variety of disagreeable symptoms. Chief among them, and most germane to the present discussion, are various arbitrary and depressive ideas which obtrude themselves at irregular intervals and with implacable obstinacy during the whole time of waking. "What is the meaning of life?" "What is the use of it all?" "Is there a future life; and if not, what is the use of living?" "All the world seems subjective"; "All the ideas I held by seem in a state of flux"; "I seem to be drifting," are some of the more striking phrases which spring into consciousness quite without logical or other apparent incitement. Indeed, he declares that he is able to discuss the most pessimistic speculations of philosophy without depression; but that these arbitrary ideas, forcing themselves as isolated concepts into consciousness, invariably engender the deepest melancholy.

To add to his distress, he is afflicted with an eye trouble which has greatly interfered with his reading—upon which he is exceedingly dependent—besides still further adding to his apprehension.

He has been referred to Dr. David Webster, who, by correcting his visual defects, has restored his ability to maintain a studious discipline. This has pro-

duced a marked improvement in his temper, which speedily revealed some slight gleams of hopefulness. Nevertheless, it was thought best to attempt to dislodge the arbitrary ideas by some plan of explicit treatment. Accordingly I caused him to look fixedly at the images produced by an ordinary kaleidoscope, while listening to the phonograph. After twenty minutes or half an hour, treatment was discontinued, and he was requested to endeavor to recall the images associated with definite harmonic combinations. Possessed of an excellent musical memory, he found no difficulty in performing what to a person less endowed would have been by no means easy. Indeed, after frequent exercise with the phonograph and kaleidoscope for a week or two, he declared that his memory was haunted, for hours at a time, by the images and their correlated harmonies; and that during the persistence of the phenomena he was "unable to think," and remained quite free from the imperative ideas which could find no lodgment in the field of consciousness, already filled out by the intricate blend of sights and sounds.

Nor, in moments when consciousness was less preoccupied, did these imperative concepts gain more than a precarious foothold; for, on their sudden coming into consciousness, he would immediately call up the color images and their harmonic associates, whose vivid recollection was sufficient to put a quick termination to the unwelcome intrusion.

This is an excellent illustration of the good to be had from the use of the method during full consciousness.

Nervous Irritability.—Rapid growth and the coming in of puberty have been accompanied in the case of H—— by general hyperæsthesia. He is lacrimose, morbidly sensitive to criticism and subject to passionate outbreaks on the most flimsy provocation. He finds it impossible to remain in one position for any length of time, is morbidly sensitive to heat and cold, and alternately loquacious and taciturn without apparent incentive.

Five years ago he suffered from an attack of acute rheumatism; developed a slight valvular lesion, and ultimately chorea, of which latter there has been an occasional recrudescence.

His emotionality, always above the average, has recently become a significant feature. Sometimes by exaggeration of gesture and language he betrays the presence of a morbid exaltation, which colors everything he says or does; at others, his whole point of view—or rather feeling—is reversed, and the expression of his face bears witness to his depression, irrespective of his words, which are usually scanty. It is during his irritable, extravagant moods that I have taken occasion to invoke the aid of the chromatoscopic figures and the harmonies of the phonograph. Sometimes I have employed the treatment during the morning, with much satisfaction, the disappearance of the irritability following promptly. The most perfect results, however, were obtained in the evening, just before the coming in of sleep. Prompt drowsiness and the quick supervention of unconsciousness were the usual result. During the early part of the night the vibrations were allowed to do their work; and on awakening in the morning he always manifested less excitement and much greater balance of temper than usual. The change was apparent to every one, and he himself repeatedly remarked upon it.

Hysteria.—I have seen, in simple hysteria, decided benefit result from the plan of treatment here advocated. The exacerbations of emotional hyperæsthesia, so characteristic of that affection, are often quickly checked by it.

Some other phases of its protean manifestations are likewise amenable to its influence. Thus in a case of hyperkinesis cordis, of undoubted hysterical origin, occurring in a young woman of twenty, the palpitations could be invariably aborted by a few minutes' treatment with the chromatoscopic figures and harmonic vibrations.

These, then, are a few of the cases in the management of which I have successfully employed musical vibrations and the figures of the chromatoscope. While the results obtained are, I believe, quite convincing, they do not justify the advocacy of this plan of treatment as an exclusive measure. Nay, it would be a grievous misinterpretation of the author's position were any such inference to be derived from what has gone before. His task, in short, will have been accomplished if he has succeeded in making plain the value of his proposals as adjuncts—albeit important ones—to the purely medical resources already at our disposal.

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THE PHYSICAL SIGNS, SYMPTOMS, AND THE IMPORTANCE OF DIAGNOSIS OF CHRONIC INTERSTITIAL PNEUMONIA.

By ABBOTT SMITH PAYN, M.D.,

NEW YORK.

The condition is a progressive pulmonary inflammation characterized by the production of new connective tissue in the interlobular spaces, around the bronchi, walls of the alveoli, and the capillary vessels surrounding the air cells. There may be a production of connective tissue in the cavities of the air spaces, growing either from the walls of the air spaces or formed out of plugs of coagulated matter and of cells formed within their cavities, the whole resulting in thickening with consequent contraction (cirrhosis), obliterating the alveolar structure.

Cases of interstitial pneumonia are variously stated as following one or more attacks of lobar pneumonia, broncho-pneumonia, pleurisy, chronic bronchitis, inhalation of dust or grit as is seen among stone-cutters, knife-grinders, colliers, and button-makers.

For years the only symptoms may be a slight dyspnœa, occasional cough, and mucous expectoration. Gradually the dyspnœa increases, respirations rising to forty and fifty per minute; the cough becomes more or less constant, and at times violent and paroxysmal; the temperature is rarely above 100° F., and sometimes subnormal. When above 100° F. it signifies that something beyond fibrosis is going on. The sputum is muco-purulent, and, in consequence of the enlargement and rigidity of the bronchi (causing retention), fetid. Expectoration is difficult owing to this inelasticity of the bronchi. Loss of weight is progressive; in a case in mind, a patient weighing two hundred and twelve pounds six years ago at present weighs but one hundred and thirty-eight pounds. Lassitude is a distressing symptom. Hæmoptysis is not uncommon. Cardiac murmurs are frequent late in the disease. The blood current is slowed and at times irregular, followed by signs of obstruction, œdema of the extremities, albumin in the urine, and death by dyspnœa or blood poisoning, in contrast with the ordinary termination of phthisis pulmonalis. The patient may, however, die of apnœa without albuminuria or dropsy, or of some acute intercurrent pulmonary disease.

The physical signs early are not marked, consisting of exaggerated breathing and a few moist râles. When the disease is well established there is depression on the affected side with immobilization.

The percussion note may be dull over the entire area of the disease; over the bronchi hyper-resonant, tympanitic, or amphoric, according to the extent of bronchial dilatation and the amount of secretion. If of

pleuritic origin—on the left side—the area of cardiac dulness is increased as the heart is displaced outward. Over the unaffected lung (right), which is doing compensating duty, the note is hyper-resonant; this extends to the line of cardiac dulness. Gastric tympany may be noted as high as the fourth rib. Auscultation: The breathing may be deficient or absent. It is bronchial over the enlarged or sacculated bronchi, and may be heard over portions of thickened pleura. The râles are mucous and gurgling; the breathing is prolonged, and low pitched over the unaffected lung.

The diagnosis, while not difficult, is important. The tendency toward invasion by tubercle bacilli being great, the attendant should exert every energy to differentiate so that his charge may not be placed in a tuberculous atmosphere, as in hospital wards especially assigned to phthisical patients, or that he may be removed from the seat of infection if already in one. The synonym fibroid phthisis is absolutely inapplicable. The term should be limited to those cases in which the signs and symptoms are those of pulmonary phthisis, and the tubercle bacilli are found, including those secondary to a local or diffuse interstitial pneumonia. While the production of new connective tissue is the constant accompaniment of phthisis, the tubercle bacillus is not the constant accompaniment of pulmonary fibrosis. The especial features are: the length of the disease, the persistency of the bronchial symptoms, and the absence of the tubercle bacilli (repeated microscopic examinations).

There is no cure for the condition itself. Care should be taken to prevent intercurrent affections; out-of-door occupation should be advised, and the symptoms as they arise should be treated on general principles.

A NEW METHOD OF DRESSING COLLES' FRACTURE.

By E. BARNES, M.D.,

PLEASANT PLAINS, N. Y.

If there is any subject in surgery concerning which the last word would seem to have been spoken, that subject is "Colles' fracture"; yet what fracture is there which in many cases gives more trouble and anxiety to the surgeon? The enlargement on the back of the hand, the malposition of the styloid extremity of the ulna, the cramped and stiffened fingers so slow to resume their usefulness—who that has treated many cases of this fracture is not familiar with all these vexations? After using the classical, pistol-shaped splints for some years, the writer employed the method of Dr. E. M. Moore, of Rochester, N. Y., which is certainly a long step in the right direction, its very simplicity and ease of application powerfully recommending it to any one who carefully studies the argument of its distinguished author. Still it at times would seem to fall short of accomplishing all that was claimed for it, and the writer was finally led to adopt the dressing about to be described, which is, as far as he has been able to ascertain, original. The dressing consists of a piece of rubber adhesive plaster, of the proper width and long enough to go a little more than one and one-half times round the wrist, and a piece of roller bandage, three inches in width and about one-third of an inch in thickness when tightly rolled.

The method of application is as follows: The fracture having been properly reduced by extension from the hand and elbow, the surgeon cuts his plaster of the length already described, and of a width corresponding to that of the lower fragment. Should it somewhat exceed this width and extend upon the back of the wrist for a little distance, no harm would be done. The piece of roller bandage is laid upon the palmar surface of the wrist at its ulnar side, extending from a point above and to the inner side of the styloid process of the ulna toward, and slightly pressing upon, the thumb at its inner aspect. The plaster is now firmly applied upon the dorsal surface of the lower fragment, carried firmly and tightly across the palmar surface of the wrist and the roller bandage, brought round the ulna to the dorsal surface of the wrist, and while the surgeon with his disengaged hand strongly supinates the upper fragment, the plaster is carried across this and again across the palmar surface of the

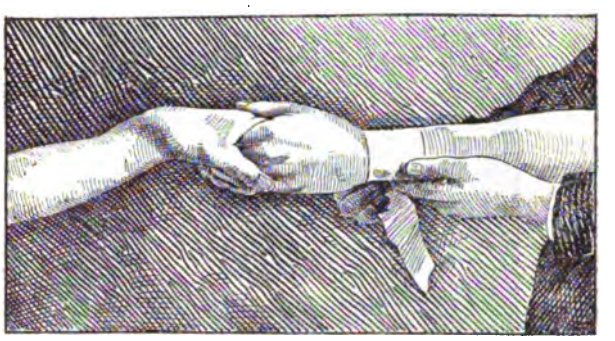

FIG. 1.

wrist to the border of the ulna, when the excess of plaster is to be cut away and the end firmly applied to the surface. A roller bandage, smoothly applied, completes the dressing, and the arm is to be placed in a sling. The patient can at any time move the thumb and fingers, and is encouraged to do so to a moderate extent and as far as it can be done without causing pain or ache. The accompanying illustrations show the method of application very well: Fig. 1 shows the application of the plaster to the lower fragment, carrying it to a position of pronation; Fig. 2 shows the strip of plaster brought round again to the palmar aspect of the wrist and fastened down while the upper portion of the radius is supinated by the other hand of the surgeon. The object of the piece of roller bandage is to keep the ulna in position and also to preserve the arched formation of the bones of the carpus. In a series of twelve cases this method has given a perfect result in every case. One of the greatest advantages is that the patient so soon recovers the use of the hand and arm when the dressings are removed. If the plaster should prove too tight, the pressure may be relieved by cutting with a sharp scalpel a series of buttonholes in the plaster at the points of constriction. If the patient is inclined to embonpoint, the edges of the plaster may be lightly nicked by a pair of probe-pointed scissors. It is well to remove and reapply the plaster some time during the second or third week.

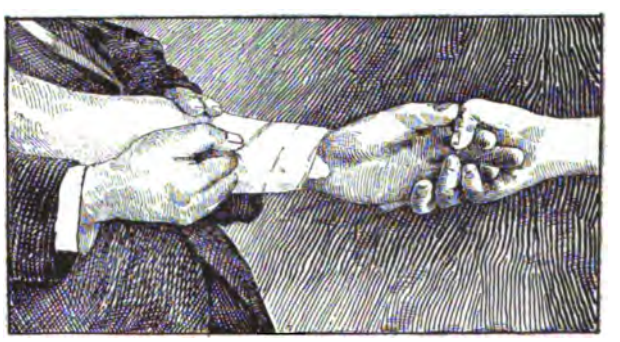

FIG. 2.

Harelip and Cleft Palate.—The operation for harelip should be performed about the fourth week, and that for cleft palate about the twelfth month.—R. W. MURRAY.

FLIES AND TYPHOID FEVER.

By ERNEST B. SANGREE, A.M., M.D.,

PROFESSOR OF PATHOLOGY AND BACTERIOLOGY, IN THE VANDERBILT UNIVERSITY, NASHVILLE, TENN.

THERE has been so much said since the late war with regard to the transmission of disease germs, especially

FIG. 1.

those of typhoid fever, by means of flies, that I thought a few graphic representations of flies' tracks might be of interest. Photographs 1 and 2 were secured by means of the following experiment: After pouring a tube of agar-agar into a sterile Petri dish and allowing it to cool, I spread over the surface a culture of the bacillus of anthrax. This culture was allowed to develop in the incubator over night. The next morning, having poured into a Petri dish another tube of agar-agar and allowed it to cool, I caught a fly, pulled off its wings, and placed it on the dish of anthrax culture for one-half a minute; immediately afterward putting it on the other Petri dish of sterile culture medium for also half a minute. Fig. 1 shows the tracks the fly made in the half-minute. It did not travel much for two reasons: one was that the fly had been slightly injured in the handling; and the other, that the agar-agar had not hardened sufficiently and the fly had heavy walking. Each little dot in the line of the tracks represents a step. The several colonies near the edge are those of extraneous organisms that accidentally dropped on the plate. As for the tracks, they consist apparently of nothing but anthrax colonies. Fig. 2 was secured by allowing another fly to walk for one minute over the same anthrax culture, confining it for half an hour in a large unsterilized potato dish, and then making it walk about for one minute on another dish of sterile agar. This was in order to see how much anthrax would be retained on the fly's feet after the lapse of this length of time. Here are many extraneous organisms, but the small dots in the line of the fly's manifest tracks consist mainly of anthrax, showing that it is quite possible for a fly to carry on its feet and deposit a certain micro-organism after the lapse of at least half an hour. Figs. 3 and 4 are the result of a second experiment. Fecal matter in a large sterile potato dish was placed in the steam sterilizer in order to get rid of at least some of the contained germs. Over this was dropped five cubic centimetres of a one-day-old bouillon culture of anthrax, which was well mixed with the fæces, and the dish with the fæces was placed in the incubator over night. The next morning a fly was allowed to walk for one minute over the fæces and immediately placed for another minute on a dish of sterile agar. The dish was then put into the incubator over night, as were all the others. Fig. 3 shows the result. Each step of the fly is marked by a little colony of anthrax; the blotch in the centre of the dish is a colony of some other organism, but, aside from this, nearly every colony to be seen is anthrax. Fig. 4 was secured after the manner of Fig. 2. A fly was made to walk about for one minute over anthrax fæces, allowed to remain for half an hour in a non-sterile potato dish, and then caused to walk for one minute over a Petri dish of sterile agar-agar. Here, although there are many colonies of other organisms, yet quite a number of anthrax colonies can easily be recognized, especially the small, clearly defined colonies, marking the evident line of the insect's tracks. The reasons I chose the bacillus of anthrax for these experiments are: That anthrax develops in colonies that are easily recognized as such by a low magnification; that they make a good photographic impression, and, finally, that anthrax is a rapid and lusty grower. The question at the camps, however, was mainly with typhoid, and I accordingly made the same series of experiments with the bacillus typhosus, and with practically the same results; but, as every bacteriologist knows, both the typhoid bacillus and its colonies so resemble other colonies and other bacilli, that to reach an approximation of the number of typhoid colonies on a plate would require a very great deal of time and trouble. Furthermore, the colonies are not represented photographically so easily. At Chickamauga, where there was so much typhoid, the sinks were shallow, very foul, and in some cases, it is said, as near as twenty feet to the tents. Observers say that flies settled in clouds on the contents of these sinks and then swarmed on to the food which the soldiers were eating. On account of the short distance they had to traverse, the time element may be

FIG. 2.

FIG. 3.

eliminated. The conditions were analogous to those in which I transferred the fly directly from the infected

culture to the sterile dish. Of course the number of typhoid bacilli on their feet would be nothing like that in my experiments, yet the contents of the sinks, warm, fluid, and abundant, would furnish conditions

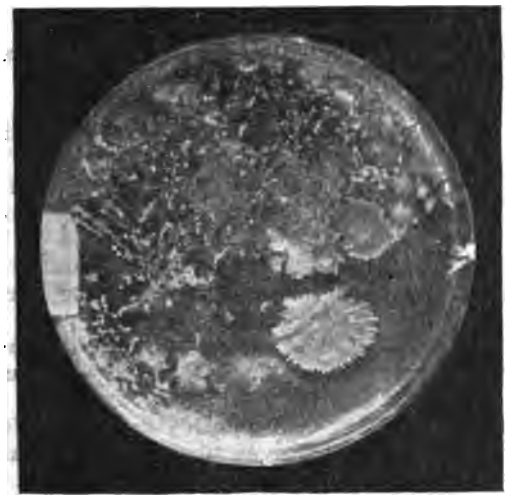

FIG. 4.

for the development of the frequently inoculated typhoid bacilli, almost equal to those which surrounded my bacillus of anthrax; and one can hardly doubt that of all the myriads of flies some at least would carry to the soldier's food the deadly bacillus typhosus.

RADICAL CURE OF HERNIA.[1]

BY GEORGE G. HOPKINS, A.M., M.D.,
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SURGEON TO ST. JOHN'S HOSPITAL, ETC.

FOR the last one hundred and fifty years the subject of operations for the radical cure of hernia has been constantly before the medical profession. One of the first modern efforts in this direction is the announcement of H. Gautier, in 1774, of his improvement on the methods of Maget, by which he secured a permanent cure, enabling the patient to dispense with supports of every kind during the remainder of his life. His method was invagination of the entire sac in the internal ring, securing retention in this position by the use of caustics, thus making a permanent plug. From his assertions his results were as good as those of more modern times. The prolonged suppuration produced by the caustic was a drawback to its use. Gerdy, in 1837, suggested a similar method of invagination. The invaginated sac was held in the internal ring by a quilled suture until adhesive inflammation was secured and the ring practically obliterated. Various methods have been suggested from time to time, all with the same object, the plugging of the enlarged ring, and fifty years have added practically little that was not known before that time, though much of it has been forgotten. The ebb and flow in favor of caustics and the knife have left the subject practically where it was before, and some of those who have given the most time and have had the largest experience in this line of surgery are still of the opinion that a radical cure is of very rare occurrence.

In our medical schools we were expected to know the various structures involved in the descent of a hernia and the component parts of the sac in a fully developed hernia. In the descriptions the tissues met with from without inward, and the layers met with are defined with great minuteness; but how seldom is the surgeon able to identify these parts when the patient comes under his hands for operative treatment! The adhesions caused by pressure and inflammatory action have amalgamated and so changed the parts, that if we waited to dissect out the various layers we would not be able to do many operations in a day. But there are anatomical parts that concern us very deeply, and need to be defined with great accuracy and care. These parts, traced from within outward, are the peritoneum, the epigastric artery, the transversalis fascia, the spermatic canal and cord, transversalis and internal oblique muscles, and the aponeurosis of the external oblique.

It strikes me that too much stress has been laid upon the displacement of the sac in operations for radical cure of hernia. Being composed of peritoneum, it is a very yielding tissue, when interposed in its ordinary thickness, to prevent the descent of the bowel; but when it is corrugated at the point of pressure, as is the case in a ligated stump of the sac, there is enough tissue in thickness to offer an appreciable amount of resistance at the point of greatest pressure, if it is interposed at this place.

Various methods have been devised for displacing the divided end of the sac from its normal position over the mouth of the internal ring. This is certainly a mistake. In the very young and in adolescence, when the tissues have great formative powers, the puckered stump of the ligated sac can be made of great service in strengthening the barriers placed at the internal ring, with the object of preventing a redescent of the intestine. My object, in the very young, is to make use of the stump to make a radical cure the more certain, while in the displacement method no use is made of this important aid in confining the bowel within the abdominal walls. The retention of the stump between the pillars of the ring is often a source of weakness and a cause of failure. In the very young the stump should be secured firmly by a suture, over the line of union of the pillars of the internal ring. How it can be considered a source of weakness, as is asserted by some, is an enigma to me. The puckering of the sac caused by its ligation gives a mass of solid tissue, which in the young will certainly be organized into a solid pad that will surely offer more resistance than a single layer of peritoneum. This is the more surely the case when this fresh stump has been transfixed by a suture, the ends of which are then carried through the tissues, outside of the sutures intended for the approximation of the sides of the ring. The sutures for closing the ring are first tied; then the suture which transfixes the sac stump is drawn down and tied, thus fixing the divided end of the sac firmly over the line of union of the sides of the ring, thereby placing a mass of solid tissue in such position that it will offer a great obstacle to the future breaking through of the abdominal contents.

The cause of most failures to secure a radical cure of hernia is not so much the faulty operation as the character of the tissue which we desire to unite. The fascia in which the ring lies is not a highly organized tissue, and therefore its cicatrix will the more readily break down; if, therefore, we can support it above and below, we vastly increase the chances of success of any operative procedure. By the method suggested of putting a patch over the inner cicatrix in the shape of the stump of the sac, which is composed of a more highly vitalized tissue, you not only add to its strength by increased thickness of tissue, but must secure firmer union of the walls of the ring, owing to the greater amount of nourishment brought to it, by its close contact and intimate union with this more highly organized peritoneal membrane.

In the closing of the ring, I doubt very much whether anything is gained by the displacement of the cord, as suggested by Bassini and now almost universally practised. Nature invariably places an organ

[1] Read before the Brooklyn Surgical Society, February 3, 1897.

in the best and most protected place in the economy, and when we try to improve on nature we usually go astray. The cord is always normally placed in the lower portion of the ring; it is only found otherwise when the ordinary course of nature has been departed from.

The changing of the position of the cord from the lower to the upper portion of the ring also does violence to mechanical laws. The cord, being a distinct cylindrical body of considerable density, offers a very decided purchase for downward pressure to bear upon. This cord, like a rope hanging over the line of union in a torn sail, fastened at one end immovably, and dragged upon by the other with all kinds of forces, would soon reproduce the rent. So in like manner we displace this cord from a position where the traction of the contents of the abdomen upon it exerts no effect upon the ring opening, to a position where it will exert the greatest amount of traction upon the line of newly united aponeurotic tissue. The pressure of the abdominal contents is normally downward more than forward; therefore, by displacing the cord upward the new tissue is subjected to more than the normal downward pressure, in addition to the usual lateral pressure exerted upon the abdominal walls by their contents.

It is not my purpose in this brief paper to discuss the other points of this most important surgical procedure, but merely to touch upon two points: First, the best methods of dealing with the cord; and second, with the internal abdominal ring.

I have now to present to the society two cases, on which I have operated recently. The first is peculiarly interesting, on account of the age of the patient; the second, merely from its being a very pretty result in a young man.

In the first case the boy was an eighth-month baby; when the operation was done he was only ten weeks old. Being of premature birth, the tissues were practically only those of six weeks of extra-uterine life. Dr. Wheeler, who attended his mother at his birth, is sure that the hernia did not exist at birth and only developed at eight weeks of age, and increased so rapidly for the next two weeks that he consulted me as to the propriety of an operation. The operation was done at once, as it was evident that the baby would soon empty all his intestines into the hernial sac, unless radical measures were taken to prevent further descent of the abdominal contents.

Case I. (St. John's Hospital).—Record of baby C——, No. 4,851, service of Dr. Hopkins. Admitted, December 31, 1896. Discharged, January 18, 1897, cured. An eighth-month male child, aged ten weeks. History and present condition: A large acquired inguinal hernia of two weeks' standing was present on the right side; it was reducible. Family history and previous personal history good. Circulation and respiration good. Digestion and general nutrition good. Diagnosis: Acquired inguinal hernia of two weeks' standing.

Treatment: The operation was performed on January 2d. An incision was made in right groin, about two and a half inches long, from the internal ring downward. The sac was dissected out from the surrounding structures. The testicle was lodged at the bottom of the sac, complicated by a small hydrocele. The cord was differentiated with some difficulty. The sac was ligated and cut off rather long. The ring was closed, with the sac drawn over it; the divided end of the sac was drawn over the line of apposition of the sides of the internal ring, these sides having been first united by sutures. The external wound was sutured and sealed with collodion.

The patient took chloroform well. Only a few drops of blood were lost during the operation. He reacted quickly after the operation and did not vomit. He nursed as soon as reaction had taken place, and nursing was continued every two hours, or oftener if found necessary to keep him from crying. He cried very little and slept well.

January 5th, the dressings were changed and the wound was found healing by first intention.

January 11th, the dressings were changed a second time and the stitches removed.

The temperature was taken every four hours, per rectum. At 4 o'clock, four hours after operation, 102°; 8 P.M., 101°. January 3d, 12 A.M., 101.4°; 4 A.M., 101.6°; 8 A.M., 101.6°; 12 M., 100.8°; 4 P.M., 102.2°; 4 P.M., 102.2°. January 4th, 12 A.M., 102°; 4 A.M., 101.2°; 8 A.M., 100.8°; 4 P.M., 99.8°. The temperature continued below 100° until the 6th, when it fell to normal and remained so until the date of discharge.

The bowels and kidneys acted normally the entire time the patient was in the hospital. On January 18th the patient was discharged cured.

Case II. (St. John's Hospital).—Record of John A. V. T——, No. 4,822, service of Dr. Hopkins. Admitted, December 1, 1896; discharged, wound entirely healed and hernia perfectly retained, January 15, 1897; age, twenty-eight years; occupation, marketman. History: One week before admission he was attacked with a pain in back and right groin, after heavy lifting, and noticed a small soft tumor in the groin. Physical examination reveals a small tumor in the right inguinal region, which gives an impulse on coughing. Family history good, and previous personal history good. Circulation good; respiration good; digestion and general nutrition, etc., good; innervation, neurotic; urine, normal.

Treatment: The operation was done on December 7th. A very small sac was found, so small that some difficulty was experienced in differentiating and separating it from the cord and surrounding structures. The sac was opened, ligated, and secured as in Case I. The wound was sealed with iodoform collodion. On the third day the temperature reached 100.8° F. It had been normal for the first two days, and was again at normal on the seventh day, and remained so until the patient was discharged. The wound healed by primary union.

February 4th, the patient has been at work a week, wearing a close-fitting abdominal bandage. The gut is perfectly retained.

350 Washington Avenue.

The Bacterium Coli Commune as the Cause of Croupous Pneumonia in Strangulated Hernia.—One of the most dangerous complications that frequently develop, especially in old people, after an operation for strangulated hernia, is croupous pneumonia. For a long time this has been considered as only coincidental, but recently Dr. Sobolotnow has demonstrated by direct experimentation that pneumonia is not an accidental complication, but is the result of the bacillus coli communis. This is always present in the intestine, and in the cases referred to enters the circulation and is carried to the lungs (Tagesbuch der Gesellschaft der Aerzte zu Kasan, *Medicinskoe Obosrenie*, Bd. 50, H. 6, 1898). The author's case occurred in a woman, seventy-three years old, who was operated on for a strangulated femoral hernia of the left side. She died on the following day with symptoms of pulmonary œdema; there were, however, no signs of peritonitis. The autopsy showed that a right-side lobar pneumonia was the cause of death. Microscopical examination proved the bacillus coli communis to be the cause of the inflammation; no other bacteria could be demonstrated.

Clinical Department.

WHOOPING-COUGH IN A DOG.

By A. HADDEN, M.D.,
NEW YORK.

In your number of December 17th last, you note that Dr. Vincenzi, an Italian physician, claims to have discovered the specific microbe of whooping-cough, but was unable to reproduce the disease by inoculating animals with it, for the reason stated that animals are not subject to the ailment. As additional information on this point, I will state that I have seen a well-pronounced case of whooping-cough in a young, smooth-haired, English greyhound. He contracted it from the children of the household where he was kept, and for quite two months he coughed, whooped, and otherwise suffered with the ailment as did the children. Many a time I saw him lying on the grass-plot, exhausted after a severe paroxysm of coughing. The animal was a pet of one of my neighbors, a well-known physician, who called my attention to the highly interesting fact. The disease ran about the same course as it does in the human subject, and the animal made a good recovery. This observation may be useful to those who are having the malady under investigation at present.

155 East Fifty-First Street.

CARBOLIC-ACID GANGRENE.

By EDWARD J. BROUGHAM, M.D.,
CHICAGO, ILL.

The occurrence of this accident, although infrequent, shows that we should take it into consideration every time a carbolated dressing is used. Altogether there are forty-five cases reported in the literature up to 1897. The following letter from Dr. Billroth, of Vienna, has been published:[1] "I have lately seen four cases in which fingers which had suffered most insignificant injuries become gangrenous through the uncalled-for application of carbolic acid. The acid may not only cause inflammation and gangrene but also blood poisoning, and so may even prove fatal."

Piraire (Société Anatomique de Paris), quoted in the *Münchener medicinische Wochenschrift*, 1897, p. 155, reports a child, aged ten years, having received a dog bite at the point of the right index, very superficial and insignificant, followed by swelling next day. Compresses of carbolic-acid solution (one per cent.) were applied for twenty-four hours. Insensibility, anæmia, later gangrene of third and second phalanx followed, necessitating amputation.

Czerny[2] reports three cases:

Case I.—Nurse (female), aged twenty years; unimportant injury of right little finger. A compress of carbolic-acid solution of unknown percentage was applied. After twelve hours anæmia, insensibility, and beginning gangrene set in. Amputation was necessary in the middle of first phalanx.

Case II.—Butcher, twenty-six years of age; knife wound at the right thumb. Moist carbolic-acid (three per cent.) cotton dressing was applied for several days. Anæmia and insensibility followed, and amputation was necessary.

Case III.—Laborer, aged fifty-four years; contusion of left middle finger. Carbolic-acid (three per cent.) compresses were applied every hour for several days, with the same result as in the cases above.

Frankenburger[3] reports: Farmer girl, aged twenty years; received a contusion of the right thigh. Compresses of carbolic acid (three per cent.) for six days were applied. This was followed by a gangrene the size of the palm of a hand, deep into the muscles, healing by boric-acid compresses.

Frankenburger wrote a dissertation (1890) on this subject, and states as a conclusion of his experiments that weak solutions of carbolic acid (one to three per cent.) are far more dangerous than strong ones. He observed disintegration of red and white blood corpuscles, stasis of the circulation, thrombosis first in the capillaries, then in the veins and arteries, resulting in gangrene.

Dr. Max Kortüm[1] in an excellent article reports two cases of gangrene following the use of eight-per-cent. and two-per-cent. solutions. He believes the gangrene is due to the toxic action on the trophic nerve fibres, the local action on the peripheral nerves being similar to its action when taken internally. He also points out that the *restitutio ad integrum* is very slow, more so than after many other chemical and thermal agents. In the English and American literatures many cases have been reported.

J. S. Hughson, in an article entitled "Injurious Effect of Carbolic Acid,"[2] reports one case.

Kellock[3] describes two cases.

Warfield[4] reports one case.

M. Poncet[5] reports two cases of dry gangrene.

The following two cases have come under my observation at the clinic, one of which I presented at the Chicago Medical Society. In both, examination of the urine showed nothing abnormal.

Miss A. S——, aged seventeen years, received a trifling wound at the base of the right little finger. Nothing was done until three days later, when upon its feeling painful it was washed in cold water and a piece of linen covered with a three-per-cent. carbolated salve was wrapped about the finger and allowed to remain on over night. The application was followed by intense burning, keeping her awake most of the night. By early morning numbness ensued. When the dressing was removed the finger was found black and insensible. Examination three days later showed a sharp line of demarcation at the base of the little finger, whose tissues were black, dry, and bloodless to deep incisions. Amputation at the metacarpophalangeal joint was necessary in this case.

The girl's history elicits the fact that a few years before she had gangrene of a wound follow the constant use of iodoform dressings.

Robert A——, aged fifty-six years, received a slight contusion of the last phalanx of the left third finger. His wife prepared a solution of carbolic acid, strength unknown, and dipped a compress in it, wrapping the same about the injured finger. The compress was allowed to remain on over night. This was followed by numbness, and next morning the skin over the second and third phalanx was gangrenous. Later a large slough came away, leaving the tendon on the dorsal surface exposed. The resultant ulcer was very slowly healing.

The conclusion is inevitable that carbolic acid applied to a skin surface may bring about rapid death of the part.

That this death is not due to the manner in which the dressing is applied—for instance, in the terminal parts of the extremities, by wrapping too tightly and thus impairing the circulation—is shown by Frankenburger's case of contusion of the thigh.

The gangrene produced is always sharply circum-

[1] Lancet, August, 1889.
[2] Münchener medicinische Wochenschrift, 1897, p. 407.
[3] Münchener medicinische Wochenschrift, 1897, p. 1,138.

[1] Internationale klinische Rundschau, December, 1888, No. 52.
[2] Medical and Surgical Reporter, Philadelphia, 1872, 492.
[3] Canada Lancet, 1877, 195.
[4] Medical News, 1890, 385.
[5] Medical and Surgical Reporter, Philadelphia, 1872, 298.

scribed, and corresponds to the skin area in relation with the drug; it also is apt to be produced only when the entire circumference of the part is in contact with the destructive agent.

The length of exposure seems also to be of importance.

206 East Chicago Avenue.

Progress of Medical Science.

Umbilical Fungosities. — Dr. Froelich (*La Presse Méd.*, No. 97, 1898) says that, besides granulomata and adenomata, we must recognize two divisions of the latter, according as they originate in the omphalomesenteric canal or in a persistent urachus. Thus we will have intestinal adenoma or urinary adenoma. An instance is related of a pea-sized nodule in a three-months-old child, which was shown by the microscope to originate from the urachus.

Pericarditis in Childhood.—Dr. A. Baginsky made the following remarks on this subject at the Berliner medizinische Gesellschaft: There are various forms of disease to which children seem less predisposed than adults; among these croupous pneumonia, typhoid fever, polyarthritis, renal diseases, and pericarditis are to be mentioned. A closer observation of the diseases of childhood, however, has shown that these views and statements are deceptive. Among the various affections, the investigations of the heart diseases in children, and especially the question of the occurrence and course of pericarditis, have thus far been somewhat lacking. In reference to the frequency of pericarditis in childhood, the literature on the subject shows very varying views. Henoch maintains that it is more frequent than in adult life, and Baginsky is of the opinion that it is very frequent—far more so than generally supposed—in children. Sixty-five cases were observed in the hospital. In these cases the primary affections given in the order of their frequency were as follows: Polyarthritis, tuberculosis, pleuro-pneumonia, erysipelas, phlegmon, purulent pleurisy, diarrhœa, morbilli, pneumonia, meningitis, otitis media purulenta, scarlatina, diphtheria, and in three instances the pericarditis was primary. Serous pericarditis was observed in sixteen instances—in nine boys and seven girls, ranging from two and three-quarters to thirteen years of age. In speaking of the clinical picture, Baginsky mentions the difficulty of diagnosis—a difficulty which is rendered all the greater by the fact that the physical examination of the thorax in childhood is more complicated, inasmuch as the conditions of percussion in childhood are not so uniform as in adult life. In children the course of the ribs is more horizontal, the diaphragm rises higher, the heart rests more horizontally, so that the apex beat, especially in young children, lies outside of the mammillary line even under normal conditions. In diagnosing serous pericarditis, particular weight should be given to the well-known triangular dulness. A rather free movement of the heart within the exudation upon changing the position of the patient was assumed. An injection experiment into the pericardium, however, showed that the fluid collected for the most part below and to the right, and that the movement of the heart upon change of position was very limited. The most important points for the diagnosis, even in the serous form, still remain the absence of heart sounds and the presence of pericardial murmurs. These murmurs are best heard at the upper part, in the region of the large vessels and the point of reflection of the pericardium. Rosenbach has called particular attention to a peculiar whizzing murmur at the apex, which has an endocardial character, but which in reality is of pericardial origin. This murmur, however, is not very frequent. Still more difficult is the diagnosis of purulent pericarditis which Baginsky observed in phlegmonous erysipelas, angina, caries of the ribs, broncho-pneumonia, severe enteritis, furunculosis, diffuse peritonitis, and emphysema. In these cases the general symptoms disguise the clinical picture. The pericarditis is very difficult to demonstrate by physical examination. Baginsky observed a true tuberculous pericarditis in but eleven instances. In conclusion, Baginsky speaks of pericarditis and endocarditis in acute articular rheumatism, and states that pericarditis is to be looked upon as a very serious affection, in which even salicylic acid fails entirely. In instances of cardiac insufficiency during the course of the affection, digitalis and diuretin—the latter in doses of sixty to seventy-five grains a day—have proved very efficacious.—*Wiener medizinische Blätter*, December 1898.

Clinical Study of Nervous Dyspepsia.—Dr. Ludwig Herzog (*Zeitschrift für diätetische und physikalische Therapie*, November, 1898) draws the following conclusions: (1) The pathologico-anatomical examination in these cases should, in so far as is possible, be directed to the mesentery and splanchnic nerves as well as to the stomach. (2) In nervous dyspepsia there exist an increased irritability in the course of the vagus (and the sympathetic) and an action upon the entire nervous system. (3) The term nervous dyspepsia is up to the present day the most correct and best that can be applied. Neurasthenia is but one of the many etiological factors. (4) Nervous dyspepsia is not a symptom, but a uniform and indeed characteristic clinical picture. (5) Nervous dyspepsia is a chronic affection. (6) Nervous dyspepsia is not only a pure sensory, but mostly a mixed, neurosis, and indeed ofttimes in connection with a sensory neurosis there exists a neurosis of motility and secretion. (7) Body weight and the amount of acidity often increase or decrease in inverse proportion. (8) Nervous dyspepsia with motor insufficiency of the stomach and simultaneous hyperacidity is an especially important form; this leads in part to motor insufficiency with subnormal or normal acidity. (9) Nervous dyspepsia with good motor power may be associated with hyperacidity and subacidity. (10) Nervous dyspepsia as a pure sensory neurosis is not so common. A thorough examination of the chemical and motor functions of the stomach will tend to narrow this group very materially. (11) Nervous dyspepsia may be the result of a gastroptosis (enteroptosis), but not the cause of it. The maladie de Glénard does not at all belong to the category of nervous dyspepsia, nor is it a variety of this affection. (12) An aggravation of the dyspepsia shows itself in a strong reaction of the nervous system. The subjective symptoms often remain in severe form for a considerable length of time. A simultaneous oscillation of the subjective symptoms and the functions of the stomach is not frequent. On the other hand, according to my observations, a change—that is, an increase of the dyspeptic symptoms—often takes place at certain fixed periods of the day, namely, when the maximum daily physical and mental resistance has been reached or exceeded. (13) In nervous dyspepsia even the empty stomach may be the seat of disturbances, which are for the most part irritations in the sensory sphere. (14) In a very large number of cases we are in a position to definitely diagnose nervous dyspepsia. (15) In the differential diagnisis chronic gastritis and ulcer of the stomach are mainly to be considered.

MEDICAL RECORD:

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VACCINATION FROM A LAYMAN'S POINT OF VIEW.

VACCINATION, though overshadowed for a time in Great Britain by the affairs in the Soudan and by the acute political situation in the far East, has once more come to the front as the burning domestic question of the hour. Conscientious objectors, literate and illiterate—chiefly the latter class, we imagine—have multiplied exceedingly, and many an amusing passage of arms has occurred between these well-meaning ignoramuses and a too energetic country magistrate. In truth, the accounts of some of these wordy tilts have been excruciatingly funny, and if the situation were not really so grave one could almost forgive the originators of the antivaccination movement for the amusement that the carrying through of their measure has been the occasion of causing. However, the matter cannot be looked upon as a laughable one, and it is interesting to notice in what widely different lights the subject of "to be or not to be" vaccinated is regarded. For example, a writer in the *London Referee*—that brilliant Sunday paper, brought out under the guidance of George R. Sims himself, in his way the most gifted journalist in the great city—expresses himself in the following caustic manner: "The law as regards the new vaccination act clearly needs amending. The 'conscientious objection,' in the interpretation of which so many of the metropolitan magistrates have made fools of themselves, is a farce. It is a mere sop to prejudice, like certain provisions that disfigure the divorce act. . . . If a father does not vaccinate his child, it might, I think, be safely inferred that he had the conscientious objection to it which the law respects. During the past week I notice the conscientious objector has been presenting himself in his thousands in some provincial town, and exemption certificates have been granted in shoals. Observe that he is not even required to state his objection on oath. If I were he, I would take my chance of a prosecution which the law sanctions but once. In the face of tne manifest intention of the act, which is to place vaccination on the same optional footing as any other medical nostrum, I doubt whether the magistrates would dare impose more than a nominal fine. But, in truth, all this absurd machinery of certificates of exemption and single prosecutions is bound to go. It is what a vivacious friend of mine would call mere 'monkeying with the act.' But it would be better that the act should be properly amended than that the public should learn to flout it in its present shape. It is curious to see crusted Tory papers like the *St. James' Gazette* defending vaccination with beak and claw, as if it were a prop of the British constitution. This is simply because it has for fifty years or more been the law. It matters not that, after such a trial as no other medical nostrum ever had, it has failed to secure the unanimous support of a strong royal commission of medical experts. Do you imagine the enforcement or non-enforcement of that infinitely sounder cure, the antitoxin of diphtheria, would affect the *St. James' Gazette?* Not at all; it is not venerable enough."

From the tenor of the above-quoted remarks there can be no doubt that their author has arrayed himself on the side of the antivaccinationists, and is besides a prejudiced partisan. Now let us read, mark, learn, and inwardly digest the views of a hard-and-fast stickler for the rite of vaccination; and we can accomplish this in no more satisfactory way than by reading a book called "Dr. Theme," written by Rider Haggard. This work has created quite a sensation, both in lay and medical circles. Mr. Haggard, as is well known, made for himself a deserved reputation as the writer of tales vividly imaginative. No author of the day can bring before the eyes of his readers the scenes and characters which he wishes to depict in such brilliantly colored and at the same time such apparently natural terms as Mr. Haggard, and he has placed his great powers with most striking effect at the service of the followers of Jenner. The work throughout—interesting as it is in plot, language, and situation—is in reality an eloquent and impassioned defence of vaccination, and will undoubtedly tend to strengthen the waverers and to turn the perverts from the wrong path. In a few words, it is an effective counterblast. Here in America—now that the most silver-tongued of the antivaccination demagogues is perambulating the country like the proverbial lion, "seeking whom he may devour," or, to put it more clearly, endeavoring to trade on ignorance—a work like "Dr. Theme" comes in the nick of time. Vaccination should need no defence. Its record is, when properly performed, unassailable; but seeing that the attack against the well-proven operation is virulent and strong, it is well that a doughty champion has arisen. As we have pointed out before, medical men must fight the enemies of vaccination with their own weapons; they, too, must take to the lecture platform and controvert its assailants.

THE TREATMENT OF WOUNDS OF THE HEART.

UP to very recently it has seemed beyond the bounds of possibility that penetrating wounds of the heart should have any outcome other than prompt death, except under very unusual circumstances. The safety with which surgeons have been able to work upon almost every organ and to open any cavity, however, finally led to a discussion of the feasibility of opening

the pericardium and repairing an injury to the heart, in cases in which life was prolonged sufficiently to allow the operative intervention. Finally, it was tried and a stab-wound was sutured, and since then several attempts have been made to save patients with this sort of injury, by operation. It is at once clear that the number of cases of cardiac injury in which there is any chance for operation will always remain small. It is now established that any wound, beyond a mere needle puncture, in an auricle will be almost immediately fatal, and that a bullet-wound of any part of the organ is equally bad. The causes of death after cardiac injury are shock and mechanical interference with the heart action from the blood in the pericardium. The reason for the greater fatality of wounds in the auricles is obvious. The only cases in which there can be any opportunity for the surgeon are those in which there is a stab-wound of one of the ventricles, preferably with a narrow-bladed knife or with simply a sharp point, like scissors or a round file. Patients injured with such weapons sometimes live a number of hours, thus giving time to repair the injury. The clinical picture of such cases is one of shock and hemorrhage, with very bad, irregular heart action and progressively rapid and shallow respiration; and the physical signs are those of accumulating fluid in the pericardium, and consequently increasing displacement of the heart. Rehn (Verhand. der deut. Gesell. f. Chir., xxvi. Cong., 1897) reports a case in which he operated upon a man with a stab-wound in the left side of the chest, an account of symptoms which indicated a wound of the heart, and was able to find and suture a wound of the right ventricle, 1.5 cm. in length, from which blood was escaping freely. The man recovered, though he developed a pyothorax during his convalescence. The operator noticed that the heart could be handled to some extent without stopping it, and that the pressure of the finger upon the wound in the ventricle did not interfere with the movements of the organ, but that the introduction of the sutures caused temporary cessation of motion. No difficulty seems to have been experienced in clearing the pericardium of clots. The resection of one or more ribs and cartilages is, of course, necessary for the performance of the operation, as a free approach to the site of the injury is very important. It is quite possible that a small punctured wound of one of the ventricles should not bleed, because the walls are made up of several layers of irregularly distributed muscular fibres, and such a puncture would really actually divide very few fibres; but any kind of an incised wound is certain to bleed more or less, for in such a case the weapon has at least one cutting edge which divides fibres in every layer of the muscle.

A few more cases like the one described will place the operative treatment of wounds of the heart upon a firm basis, and at the same time will very sharply define the limits within which any surgical intervention is to be thought of. Cases of this kind of injury, of course, are rarely seen by surgeons even in large hospitals, but when one does occur it is well to know what has been done or at least attempted. The exact effect, under varying conditions, of the small-calibre, high-velocity projectile of modern war upon the heart cannot yet be put down, but a man seems to have a little better chance for life with it than with its larger and slower predecessor.

News of the Week.

Dr. Alvah H. Doty, whose term of office as health officer of the port of New York expired on January 1st, has been very deservedly reappointed by Governor Roosevelt.

The Charities of New York State.—According to the report of the New York State board of charities, recently issued, the inmates and other beneficiaries of the institutions, societies, and associations included within the jurisdiction of the board aggregate over 2,500,000, and the expense of their maintenance amounts to nearly $22,000,000 annually. In its report the board reiterates its belief that legislation is required to prevent the abuse of medical charities, now so prevalent in New York City, and also the overgrowth of such charities, and hopes that a statute which will be satisfactory to all who are desirous of rectifying such abuses may be enacted.

The New York City Board of Health.—During the year 1898 the sanitary officers of the health department in this city made 1,801,853 inspections and reinspections, in response to 83,439 complaints. The inspections of milk numbered 106,776; 114,199 samples of milk were examined, and action taken resulting in the imposition of fines aggregating $5,098. The bureau condemned 858,200 pounds of meat, 1,232,894 pounds of fish, and 7,714,766 pounds of fruit, food, and milk. There were 39,333 cases of contagious diseases reported, requiring 80,351 visits; 59,197 persons were vaccinated; 139,966 public-school children were examined on suspicion of having contagious diseases, and 7,606 were excluded from school on the strength of the inspectors' reports. There were 66,161 deaths during 1898, 78,936 births, and 28,877 marriages.

Preparing Military Hospitals in Cuba.—Surgeon General Sternberg has returned from an official tour of inspection of the military hospitals and supply stations in Cuba, having arranged for the establishment in Havana of a general hospital, a hospital for officers, and a yellow-fever hospital. He reports that the sanitary condition of troops stationed in and near Havana, Matanzas, and Pinar del Rio is very good. There is little serious sickness at present, but it is feared that there will be a very considerable increase in the amount of sickness as the rainy season approaches, and efforts are being made to prepare for a large number of sick in case it is found necessary to retain a considerable body of troops in Cuba during the summer. At Havana orders have been given for the preparation of the Spanish military hospital, which has a capacity of two thousand beds; also for an officers' hospital at the Vedado, and for another hospital for infectious diseases. At Matanzas the military

hospital and barracks, which are substantial stone buildings, well adapted to the climate, are being thoroughly disinfected and prepared for the use of the troops. In the mean time a suburban villa is being prepared for use as a hospital. The troops in the vicinity of Matanzas are encamped on high ground overlooking the bay. The camps at Marianao are well located, and every effort is being made to preserve the health of the troops.

Students in New York State.—According to statistics recently published by the regents of the State University, 29,301 students were registered during 1898 in the colleges, universities, and professional schools of this State, as follows: Colleges for men, 3,489; colleges for women, 2,705; coeducational colleges, 2,307; law, 2,218; medicine, 3,582; pharmacy, 635; dentistry, 430; eye and ear, 11; veterinary, 96; theology, 820; education, 1,257; music, 766; other, 10,977. There were 66,342 students in secondary schools and academies.

Pediatrics in the Volunteer Army.—In Havana, on January 13th, forty-five men of the ninth Illinois volunteers were reported sick with measles, in the second South Carolina regiment seven men were down with the mumps, in the fourth Virginia regiment four had the measles, and in the third Nebraska regiment two were suffering with scarlet fever.

Immune Nurses Wanted in Cuba.—It is announced that the army medical department is in need of additional immune nurses for the yellow-fever hospitals in Cuba, and circulars will be sent throughout the South requesting applications. The surgeon-general's office, to which all applications should be addressed, requires that each applicant should furnish written indorsements from her physician, the wife of her pastor, or from her priest, as the case may be, and a physician's certificate stating that the applicant is strong and in good health. The department is preparing another party of seventeen female trained nurses for Matanzas.

Dr. A. P. Shellman, of Rosendale, N. Y., has been appointed as junior physician at the Willard State Hospital.

The Italian Pharmaceutical Association of the State of New York was incorporated recently by the secretary of State in Albany. It is organized to advance the interests of Italian pharmacists and to protect all licensed members of that profession.

A Change of Name.—The name of the New York Cancer Hospital will be changed to the General Memorial Hospital, and permission to do this will be asked of the legislature during the present session.

A New Dispensary Bill will be introduced in the New York legislature this winter, and, as it is one favored by the dispensary managers themselves, it will probably meet a better fate than the Sullivan dispensary bill of last winter. The bill was drawn up by representatives of the Medical Society of the State of New York, the Homœopathic Medical Society of the State of New York, and the Eclectic Medical Society of the State of New York, at the request of the representatives of all the dispensaries in Greater New York, and has received the approval of the latter. It provides for the creation of a board in which physicians and dispensary managers will be equally represented. This board shall have power to make and enforce rules and regulations, and the bill provides for the punishment of all who refuse to be governed thereby. The board of dispensary control will be subject to the State board of charities, in that the latter can refuse to give any authority to the board of control unless the actions of that board are in keeping with the desires of the State board of charities. In order to accomplish anything, therefore, it will be necessary for both boards to work in harmony. If they do not work in harmony, the dispensaries will be just as free as ever to bestow their favors on the rich, but we do not suppose any such possibility ever occurred to the managers of the dispensaries when the preliminary discussions concerning the bill were going on.

The Red Cross Society Thanked.—A joint resolution was adopted in the senate on January 12th, tendering the thanks of Congress to Clara Barton and the officers and agents of the Red Cross Society for their humane services toward the Armenians and toward both sides in the Hispano-American war.

A Reaction against the New English Vaccination Law.—In a dispatch from London, published in *The Sun* of Sunday last, it is stated that the health authorities are thoroughly alarmed at the extent of the advantage taken of the new act recognizing "a conscientious objection to vaccination." It is believed that five hundred thousand certificates of exemption have been already issued by different magistrates, they having no option in the matter, but must issue certificates of exemption if parents swear they are actuated by conscience. In many cases these parents are ignorant and are frightened by the lurid pictures painted by the "anti" cranks or criminals, or they are themselves faddists. But the intelligent and sane portion of the community is already moving to abate the mischief of the act of Parliament, which, its framers contended, would be utilized by only an infinitesimal percentage of parents. School boards are enforcing an article in the education code, requiring that all candidates for pupils or teachers shall have been vaccinated; a vast majority of householders are insisting that domestic servants shall be vaccinated. Since the majority of the children of these objecting parents will have to earn their living later in domestic service, this determination of employers will probably make those afflicted with the statutory conscience pause. A more immediate practical effect is the action of the Peabody trustees, who own a great number of workingmen's model tenement dwellings in London. They house over five thousand families, and insist that the children of tenants shall all be vaccinated. Many owners of artisans' cottage estates enforce the same rule. Several insurance societies, benefit societies, and similar bodies are now following suit. There never has been, *The Sun's* correspondent writes, such a mass of evi-

dence within so short a time after the passage of an act of Parliament which has gone to show that the legislature was mistaken.

M. Quesnay de Beaurepaire, the latest sensational actor in the Dreyfus scandal in Paris, comes of good medical stock, being the great-grandson of Dr. Quesnay, for a quarter of a century physician to Louis XIV., and celebrated in his day as an able financier, a skilful surgeon, and an earnest advocate and promoter of hospital reform.

A State Sanatorium for Consumptives.—A bill has been introduced in the New York State legislature, authorizing the establishment of a sanatorium in the Adirondack forest preserve for the treatment of cases of tuberculosis, the site to be selected by the trustees provided for in the bill. The bill provides that the sum of $200,000 be appropriated for the purpose of erecting and equipping the buildings. It is provided that within thirty days after the passage of the act the governor shall appoint five citizens of the State to constitute the trustees of the State hospital for consumptives, who shall be appointed for three years, who are empowered to select a site within the forest preserve wherein to construct the hospital at a cost not to exceed $150,000, which shall be completed and provided with ample facilities for the accommodation of two hundred patients, within two years from the passage of the act. The trustees are to receive a salary of $1,000 per year during the construction of the building, upon the completion of which their salaries are to cease. In order to supply to the public needed information concerning the disease, the State board of health is directed to issue a circular containing information upon the subject of tuberculosis and its prevention. The bill provides for the appointment of examining physicians, two in number, in each of the cities of New York, Buffalo, and Syracuse, to examine patients and commit them by certificate. Patients able to pay, or having relatives able, must do so. The committee appointed by the senate to investigate the advisability of the measure strongly urged it, and drew up the bill. Much of the report of the committee, which was written by Dr. Brush, of Brooklyn, is taken up with the testimony taken by the committee, extracts from well-known writers on pulmonary diseases, and statistics relative to the spread of and the number of deaths resulting from tuberculosis in the State and nation each year. The report states that one of the results of the investigations of the committee has been to show a lamentable lack of hospital provisions for tuberculous persons in our large cities and towns. Recognizing the infectiousness of these cases, the public hospitals reject them if it is possible to find an excuse to do so, and no special public hospital exists for the treatment of tuberculosis, so far as the committee has been able to learn. The report therefore suggests that the representatives of the large cities and towns urge upon their local authorities the pressing necessity for establishing special hospitals for the treatment of tuberculosis, to be located somewhere in the suburbs.

The New York Red Cross Hospital, formerly in West One Hundredth Street, which was closed during the summer and fall owing to the absence of Dr. and Mrs. Lesser and the Red Cross Sisters at the front, was reopened with appropriate ceremonies on Saturday, January 14th, at 259 West Ninety-third Street.

German Army Surgeons. — The medical staff of the German army numbers 2,155. The total strength of the army on a peace footing is about half a million officers and men.

The Russian Famine in the trans-Volga provinces is still causing many deaths, although the misery has diminished somewhat in response to energetic measures on the part of the government and private relief associations.

Section on Laryngology and Otology of the American Medical Association.—Dr. C. R. Holmes, secretary of this section, announces that the programme for the section of laryngology and otology has been filled, and that no more papers can be accepted for the Columbus meeting in June, 1899.

A Modest Physician.—During a performance of "Cyrano de Bergerac" in Brooklyn last week, *Christian,* in his impetuous haste to climb up to the balcony, pulled the whole thing down, and he and *Roxanne* fell to the stage. They were evidently hurt somewhat, and a physician who was in the audience ran to the box office and offered his services. The manager gratefully accepted his offer, and led him to the stage. He fixed up the two injured actors as well as was possible, and then hastened away without leaving his name or even accidentally dropping his card where some one might pick it up.

Obituary Notes.—Dr. H. de Valson Pratt, Jr., of Elmira, N. Y., died at his home in that city on January 12th, of pneumonia. He was forty-two years old, and was a graduate of the College of Physicians and Surgeons in this city in 1881. He was at one time surgeon of the thirtieth separate company of the National Guard.—Dr. Horace Burr, of Wilmington, Del., died on January 10th, at the age of eighty-one years. He was a graduate of the medical department of Yale College in the class of 1842. He was a linguist and the author of numerous papers on the history of the Episcopal church in Delaware.—Dr. C. C. P. Clark, of Oswego, N. Y., died in that city on January 11th, at the age of seventy-five years. He was a graduate of Middlebury College in 1843, and of the College of Physicians and Surgeons, New York, in 1847.—Dr. Julius A. Roth, of this city, died at his home in East Seventy-ninth Street, on January 15th, at the age of forty years. He was a native of New York, and was graduated from the Bellevue Hospital Medical College in the class of 1882.—Dr. Edwin M. Hale, one of the leading homœopathic physicians of Chicago, died in that city on January 15th, at the age of nearly seventy years. He was professor emeritus of materia medica and therapeutics in the Chicago Homœopathic College. He was at one time editor of the *North American Homœopathic Journal.*

Reviews and Notices.

GUIDE TO THE CLINICAL EXAMINATION AND TREATMENT OF SICK CHILDREN. By JOHN THOMPSON, M.D., F.R.C.P. Edin.

THIS book is the outcome of a series of clinical lectures delivered in the Children's Hospital of the Royal College at Edinburgh. The object of the book is to give practitioners of medicine additional practical points in the management of the diseases in children which they do not find in the average text-book. The chapter on syphilis, and what the author terms physiognomical diagnosis, with its magnificent illustrations, greatly enhance the value of this work. The chapter on food atrophy is very instructive. The illustrations depicting achondrophasia, and the other illustrations of rachitic children, are certainly not only very true pictures, but very valuable illustrations. The author can well be proud of the product of his pen, for every chapter is certainly worth reading. The appendix, with its various formulæ and recipes for various dietetic preparations, completes this interesting volume.

A TREATISE ON DISEASES OF THE EAR. Together with a Brief Sketch of the Anatomy and Physiology of the Organ. By ALBERT H. BUCK, M.D., Clinical Professor of Diseases of the Ear, College of Physicians and Surgeons, New York; Consulting Aural Surgeon, New York Eye and Ear Infirmary. Third Revised Edition. Pages 592; 8vo. New York: William Wood and Company.

THIS, the third revised edition, marks the transition of the work from the domain of the manual into that of the treatise. The printer and the binder have combined to make a very presentable book. The arrangement of the subject-matter in the chapters, while still open to objection as in the earlier editions, is so in a much less degree.

In Chapter I., on general diagnosis, the writer condemns the speech test as being very unsatisfactory. By attention to the sound values of spoken or whispered words, and by the use of residual air (that left in the lungs after a forced inspiration followed by an ordinary expiration), the speech test can be and is made by many aurists the most reliable and accurate test for variations in hearing that we have at our command, and is far and away more to be depended upon than the average patient's impression.

The reviewer cannot agree with the writer in that "it is only in exceptional cases that we derive valuable information from the tuning-fork test." The writer himself seems a little uncertain as to his convictions on this subject, for on page 1 he states, "Although in the vast majority of instances he will derive no material aid from the procedure, he should nevertheless apply the vibrating tuning-fork to the patient's forehead or vertex"; and on page 9, "In an enormous majority of cases of impaired hearing that come under our observation, these [affections of the sound-conducting apparatus] are precisely the regions which are mainly involved, and we therefore expect, with considerable confidence, to hear the patient say [when the tuning-fork is applied to the vertex] that the sound of this fork is heard more loudly in the defective ear." The writer fails to mention certain well-known tests, systematically employed by many aurists, *e.g.*, Schwabach's.

The forehead mirror depicted on page 14 does not compare in freedom of action with Hartmann's. The writer gives the impression that he only exceptionally looks through the central aperture of the mirror; this seems to be the only correct method of use, to the reviewer.

Most aurists would object to the recommendation, "that in the majority of cases the bowl may be used both as a reservoir from which to fill the syringe, and as a receptacle for catching the water that runs out from the ear" (page 29).

On page 35 the writer states that there are generally good grounds (in the exanthemata) for believing that the primary source of the disease (of the middle ear) must be placed in the pharynx. Rudolph and Bezold, as the result of post-mortem examinations on eighteen temporals of patients dead of measles, deny this and present evidence to show that the middle ear is affected primarily, in the same manner as the pharynx and the skin.

Chapter III. constitutes a very valuable epitome of the more common symptoms of ear diseases, and, if the reviewer is not in error, is an addition to previous editions; as apparently also is Chapter X.

The writer will hardly bring many aurists over to his preference for the removal of impacted cerumen by instruments rather than by syringing, except in certain cases (page 110).

Dr. Robert Lewis, Jr., has furnished, in very little space, a very readable, instructive, and conservative account of naso-pharyngeal conditions (Chapter XIII.).

The reviewer has not had so fortunate an experience as the writer, who says that "the incus usually comes away as soon as its chief support, the malleus, has been removed" (page 360) in doing an ossiculectomy for the relief of chronic suppuration of the middle ear. In fact, the removal of the incus has usually been the most difficult step of the operation.

We read, page 369, "When the foot-plate [of the stapes] goes, the hearing also vanishes. This, at least, must be the rule." It will seem to many of those who have artificially removed the stapedial foot-plate that some other element than the bare removal of the foot-plate must be taken into consideration to account for the deafness in any particular case.

The writer well says, page 427, "Acute suppurative mastoid inflammation, if left to itself, or if treated in the impotent fashion which prevailed even as recently as thirty years ago, is a disease remarkably full of disagreeable and dangerous possibilities."

On page 440 occurs the statement that "in the light of this experience, therefore, I have been forced to draw the conclusion that there is only one thoroughly safe course to pursue in these cases of acute suppurative inflammation of the mastoid cells, viz., to expose to view a small area not only of the sigmoid sinus, but also of that part of the dura mater which lies in the vicinity of the posterior end of the antrum."

The chapter on periphlebitis and infective thrombosis of the sigmoid sinus, new, is especially timely, and one of the best in the book. A mistake has been made on page 463 in attributing to Whiting the discovery of the significance of puffiness of the eyelids as a sign of interference of the flow of blood through the cavernous sinus; S. Phillips and J. W. Stirling wrote of this long before.

Chapter XXIII., on the diseases of the auditory nerve, seems to the reviewer the weakest in the book, and the only one that seems to have been inadequately handled from the standpoint of the results of modern research.

Taken all in all, Dr. Buck has given us a work that is pretty truly representative of American otology as it is practised to-day by those aurists conversant with the publications of domestic and foreign authorities in this field of surgery, ready to accept that which is true and to reject that which is false. He is to be congratulated on having produced a book worthy of his reputation as a teacher and practiser of aural surgery.

TESTS AND STUDIES OF THE OCULAR MUSCLES. By ERNEST E. MADDOX, M.D., F.R.C.S. Edin., Ophthalmic Surgeon to Royal Victoria Hospital, Bournemouth; Author of Ophthalmological Prisms and the Decentring of Lenses. Published by John Wright & Co., Bristol. Simpkin, Marshall, Hamilton, Kent & Co., Limited. London: Hirschfeld Bros.

THIS small volume of four hundred and twenty-seven pages contains the evidence of a comprehensive knowledge of the subject on the part of the author, who expresses his ideas clearly, accurately, and logically. The object of the work is modestly stated in the preface as follows: The endeavor of this little work has been to cull, from the many tests for the ocular muscles scattered throughout ophthalmic literature, a selection of the best, to be interspersed with a few original ones, and with several studies of the ocular movements." The first chapter is devoted to the consideration of "the globe and its socket," in which the relation of the ocular muscles and globe to that important fascia, Tenon's capsule, is clearly described and given its proper value. A full discussion and careful analysis of "ocular motions," "motor faculties," "strabismus," "ocular paralyses," and "mnemonics for ocular paralyses," follow in subsequent chapters. Suppressed or "superable" squint (heterophoria) is described in chapter xii. Chapters on "latent torsion" and "the eye in darkness" are added.

The interest in the study of the ocular muscles is so widespread at the present day that the appearance of a work of such value is very opportune. Between the covers of this

book Dr. Maddox has recorded much that is of practical worth to the ophthalmologist and neurologist, and that merits careful study and consideration.

PRACTICAL DIAGNOSIS. The Use of Symptoms in the Diagnosis of Disease. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital, etc. Third Edition, revised and enlarged. Illustrated with 204 Engravings and 13 Colored Plates. Philadelphia: Lea Brothers & Co. 1898.

THE first edition of this work was published just two years ago, a fact that speaks for the professional approval of the author's treatment of his important subject. The arrangement of the work is most logical and therefore convenient, proceeding from the known to the unknown, from the symptom to the underlying pathological cause. After a brief introduction, the book is divided into two parts dealing respectively with the manifestation of disease in organs, and the manifestation of disease by symptoms, such as headache, cough, pain, convulsions, etc. The illustrations are well selected and add clearness to the already lucid text. We know of no better aid to the young practitioner in his early attempts to interpret the often apparently conflicting symptoms which present themselves in individual cases.

JAHRESBERICHT ÜBER DIE VERWALTUNG DES MEDICINALWESENS, DIE KRANKEN-ANSTALTEN UND DIE ÖFFENTLICHEN GESUNDHEITSVERHÄLTNISSE DER STADT FRANKFURT. Herausgegeben von dem ärztlichen Verein. Jahrgang 1897. Frankfort. 1898.

THIS report on the condition of the hospitals of Frankfort and the general sanitary condition of the city, while made up for the most part of uninteresting statistics, yet nevertheless contains much general information. In it, among other things, we learn that there are in Frankfort 298 registered physicians from the fatherland and 1 from Switzerland; this, with a population of 245,400, results in 1 physician to every 821 of the inhabitants. Of these 298 physicians, 291 are so-called regulars; there are but 4 homœopaths. Of the total number of physicians, 80 are interested in hospital work.

THE PRINCIPLES AND PRACTICE OF HYDROTHERAPY. A Guide to the Application of Water in Disease. For Students and Practitioners. By SIMON BARUCH, M.D., Visiting Physician to the J. Hood Wright Memorial Hospital; Consulting Physician to the Montefiore Home for Chronic Invalids, etc. With Numerous Illustrations. New York: William Wood and Company. 1898.

THIS is a book which has long been needed by the general practitioner, who meets constantly in his reading with recommendations of hydriatic measures for the relief of various conditions, but who had nowhere to turn to learn how these measures were to be applied, or what was their rationale. There are not wanting treatises on hydrotherapy, but they are adapted to the use of the specialist rather than of the general practitioner, and in order to carry out effectively the procedures described in them a specially equipped sanatorium is necessary. The work is, however, as the author says in his preface, written by a general practitioner for the guidance of his colleagues. The first half of the book is given up to a description of the various means of employing water in the treatment of disease, and to directions for their application with the necessarily limited helps at the disposal of the ordinary practitioner. The full bath, the half bath, the wet pack, the cold rub, the sheet bath, the continuous bath, the various forms of douches, etc., are all taken up in turn and described fully and clearly. The only disappointing chapter in the book is that on the internal use of water, in which the author disposes in six short pages of this most effective means of preserving and restoring health. This branch of hydriatrics is, in regard to the preservation of health at least, more important than any other, and in the treatment of many diseases as well it often accomplishes what no douching or cold bathing or wet packing can ever do alone. In the second part of his book Dr. Baruch treats of the practical application of hydrotherapy in acute and chronic diseases, and here again, while discussing most intelligibly the special indications for the external application of water in its various forms, he strangely neglects internal hydriatrics. This is not to say that Dr. Baruch has not given us a work of inestimable value, and one which will guide many to a rational and successful treatment of some otherwise incurable cases, for that he has done, and he has accomplished a much-needed work in making his colleagues acquainted with one of the most effective of all therapeutic measures. No one who seeks to be familiar with all the weapons available in the warfare against disease can afford to ignore Dr. Baruch's manual of instruction.

Therapeutic Hints.

Prophylactic Gargle in Scarlatina.—

℞ Beta-naphthol ..... 3 i.
Camphoræ ..... 3 iv.
Glycerini ..... 3 iv.
M. S. For application to the throat.

—*North American Practitioner*, October, 1898.

Acute Bronchitis with Diffuse Pain.—

℞ Ammonii chloridi,
Sodii salicylat ..... āā 3 ij.
Tinct. hyoscyami ..... 3 vi.
Mist. glycyrrhiz. comp ..... q.s. ad ℥ iij.
M. S. One teaspoonful every three hours.

—HERWIRSCH.

Rheumatism.—

℞ Ac. salicyl. pulv ..... 3 i.
Ol. terebinth ..... 3 i.
Lanolin ..... ℥ i.
M. S. Use as an ointment, first cleaning the skin with soap and water. Use friction for five minutes.

—HUSSON, *Revue de Thérapie.*

Formulas of Secret Nostrums.—

BEECHAM'S PILLS.

℞ Saffron ..... gr. xxiv.
Sulphate of sodium ..... gr. xxiv.
Rhubarb ..... 3 iss.
Aloes ..... ℥ i.
M. Make into three-grain pills.

—*Indiana Pharmacist.*

SWAIM'S VERMIFUGE.

℞ Worm-seed ..... ℥ ij.
Valerian,
Rhubarb,
Pink-root,
White agaric ..... āā ℥ iss.
Boil in sufficient water to yield three quarts of decoction, and add the following oils dissolved in a quart of rectified spirits:
Oil of tansy ..... ♏ xxx.
Oil of cloves ..... ♏ xiv.

—*Secret Nostrums and Systems.*

AYER'S HAIR VIGOR.

℞ Acetate of lead 3
Flowers of sulphur 2
Glycerin 14
Water 70

—*Jour. d'Hygiène Pop.*

VITA NUOVA.

This nostrum, advertised to be free from alcohol, was found by an analysis (*Journal of Health*) to contain between eighteen and nineteen per cent. of alcohol.

Cocaine was found in appreciable quantities by R. G. Eccles (*Druggists' Circular*).

Recent examination shows cocaine in notable quantities and 19.5 per cent. by volume of alcohol.—*New Idea.*

Food for Infants.—As the food for the infant depends largely upon the peculiar idiosyncrasy of each child, no fixed rules can be laid down or followed. It must, however, be the rule in practice to adapt the food to the child's needs, and not the child to the food. The quality and quantity of the food is an insufficient guide. We should watch the stools to see if the food is thoroughly digested. It is safe to take

the stools as the guide, and if we find digestion complete, the continuation of the food is in order, but if we find that digestion is incomplete—noted by the color, consistence, and presence of cheesy masses in the stools—then the rule will be to change at once the food and to remove the element that gives rise to the difficulty. Milk is the really honest food to give to the infant. Modified to fit its condition, we are on the safe path to perfect health.—EDWIN ROSENTHAL.

Acute Tonsillitis.—

℞ Opii deodorati ..... gr. 1/10
Tinct. verat. virid ..... ♏ ½.
Hydrarg. chlor. mitis ..... gr. 1/10
Sacchari lact ..... q. s.
Olei anisi ..... ♏ 1/10
M. et ft. tabella No. 1. S. One tablet every hour for adults.

—NEWCOMB.

Typhoid.—

℞ Formaldehyde (40 per cent sol.) ..... gtt. i.
Elixir ..... ʒ i.
M. S. Every hour or less often according to severity, age, idiosyncrasy, etc.

—LIND.

Influenza, when beginning with high fever and nervous symptoms:

℞ Quininæ salicylat ..... gr. iij.
Phenacetin ..... gr. ij.
Camphor ..... gr. ½.

—BACCELLI, *Gaz. deg. Osped.*, No. 43, 1898.

Nitroglycerin in Angina Pectoris.—The most efficacious form of administering nitroglycerin in angina pectoris is said to be the following:

℞ Nitroglycerin ..... gr. iij.
Tr. capsici ..... ʒ ss.
Spts. rectificat ..... ʒ iij.
Aquæ menth. pip ..... ʒ iij.
M. S. Two to ten drops.

Turpentine Emulsion.—

℞ Oil turpentine ..... ℥ ss.
Powdered acacia ..... ʒ ij.
Cinnamon water ..... q.s. ad ℥ iv.

Place the powdered acacia in a mortar; put the oil of turpentine in a graduate, and three drachms of the cinnamon water in another graduate; pour the oil and water on the powdered acacia, rub thoroughly, add the remainder of the water, and strain.—*Bulletin of Pharmacy.*

Otitis Media.—

℞ Storacis,
Bals. Peru ..... āā gr. iv.
Alcohol.,
Aquæ destillat ..... āā ʒ iiss.
M. S. Drop into the ear p.r.n.

—BOLT.

For Amygdalitis and Non-Diphtheritic Anginas.—

℞ Salol ..... 2 gm.
Ol. amygdalæ dulcis ..... 4 c.c.
Syr. simplicis ..... 30 "
Aquæ destillat ..... 75 "
S. To be taken in three doses during the day.

—EPHEMERIS.

Hyperchlorhydria.—When the gastric juice contains an excess of hydrochloric acid, Wolff's mixture:

℞ Sodium sulphate ..... ℥ i.
Potassium sulphate ..... ʒ i ½.
Sodium chlorate ..... ℥ i.
Sodium carbonate ..... ʒ vi.
Sodium borate ..... ʒ iiss.
M. S. Half a teaspoonful in a half-glassful of water three times a day.

—BOAS.

Typhoid Fever.—The four most important agents are feeding, sponging, some antiseptic, like aromatic sulphuric acid, and tincture of digitalis or caffein. A happy result of this treatment is a more rapid convalescence than is secured when feeding is not crowded; but the course of the disease is not abridged in many cases.—J. M. G. CARTER.

To Mask Quinine.—

℞ Quininæ sulphat 4
Acidi citrici 10
Syr. simp.,
Syr. aurantii flor. ..... āā 10
Aq. destillat ..... ad 20 c.c.
M. S. Ten drops in fifty grams of water. Add three grams of sodium bicarbonate and drink during effervescence.

—*Ann. de Méd. et Chir. Inf.*, December, 1898.

Typhoid.—

℞ Spir. terebinth. rect ..... ʒ i.
Spir. juniper ..... ʒ ss.
Ext. hamamelidis fld ..... ℥ ij.
Pulv. acaciæ ..... ℥ iss.
Aquæ ..... q.s. ad ℥ vi.
M. S. Dessertspoonful every four hours.

—J. S. CHRISTISON.

Headache in the Gouty.—

℞ Potass. carbonat ..... ℥ iss.
Ammon. carbonat ..... ʒ i.
Tinct. serpentariæ ..... ℥ ss.
Aquæ camphoræ ..... ʒ iiiss.
M. S. Add an ounce to half an ounce each of water and lemon juice, and take twice or three times daily.

Tuberculosis in Children.—

℞ Balsam of Peru ..... gr. lxxv.
Cod-liver oil ..... ʒ iiss.
Powdered acaciæ ..... gr. lxxv.
Distilled water ..... ℥ iiss.
Syrup of orange ..... ʒ iv.
Dose: Teaspoonful every two hours after some nourishment.

—SCHMEY.

Neurasthenia.—

℞ Iron lactate ..... ʒ ij.
Iron arsenate ..... gr. iij.
Extract of nux vomica ..... gr. vij.
Extract of gentian ..... gr. xlv.
S. Divide into one hundred pills. Two pills to be taken three times a day.

Analgesic.—

℞ Codeine sulphat ..... gr. xxxij.
Aromatic spirit of ammonia ..... ʒ vi.
Whiskey ..... ℥ i.
Syrup of orange peel ..... ʒ iv.
Dose: From one to three teaspoonfuls once or twice daily.

—I. J. JONES.

Liniment for Neuralgia.—

℞ Ichthyol,
Mercurial ointment ..... āā ʒ i.
Chloroform,
Spirit of camphor ..... āā ʒ vi.
S. Shake well before using, and rub over the affected part.

—EULENBURG.

Bronchitis.—

℞ Terpinol,
Sodium benzoate ..... āā gr. ij.
Milk-sugar ..... q. s.
S. For one pill. From six to twelve to be taken daily.

Diuretic for Children.—

℞ Potassium acetate,
Potassium nitrate ..... āā gr. xv.
Oxymel of squill,
Comp. syr. of sarsaparilla ..... āā ʒ iiss.
Infusion of juniper berries ..... ℥ ss.–℥ iiiss.
S. To be taken during the day.

—COMBY.

Tetanus.—Dr. Ziengo (*Gaz. degli Osped. e del. Clin.*, No. 121, 1898) began treatment by the Baccelli method eight days after the first symptoms. Relatively large doses of the three-per-cent. phenic-acid solution in distilled water were employed from the start, and as no ill effects were observed the daily dose was maintained at from thirty to fifty centigrams of the

drug. In all nine hundred and seventy-eight centigrams were administered hypodermatically in a period of twenty-seven days. Morphine in daily dose of four to six centigrams was also given at first. After three days there was improvement, and at the end of nine days trismus disappeared. Out of thirty-two cases treated by the Baccelli method, there has been but one death.

In Acute Rhinitis.—

℞ Carbolic acid,
Ammonia water ..... āā 3 i.
Alcohol ..... 3 iv.
Water ..... 3 iiss.
M. S. Inhale.

—*Centralbl. f. d. ges. Therapie.*

Diaphoretic.—

℞ Camphor ..... 3 ss.–3 iss.
Opium ..... gr. ss.
Potassium nitrate ..... gr. iij.
Sugar ..... 3 ij.
M. S. In a cup of tea before retiring.

—V. Graefe.

Tenderness of the Gums.—

℞ Cocain. hydrochlorat ..... gr. ij.
Chloroform ..... ♏xv.
Glycerin ..... 3 vi.
Essent. rosar ..... gtt. vi.
M. S. Apply a small quantity to the painful portion of the gum.

Neuritis.—

℞ Ammonium bromide ..... gr. xv.
Ammonium salicylate ..... gr. ij.
Solution of potassium arsenite ..... ♏ i.
Simple syrup ..... ♏ v.
Peppermint water ..... 3 i.
This dose to be given every three or four hours.

—Curran Pope.

Gastric Neuralgia.—

℞ Chloral ..... gr. ij.
Sodii hyposulph ..... gr. v.
Aquæ menthæ pip ..... 3 i.
M. S. One dose.

—Hare.

Burns.—The following application quickly relieves the pain of superficial burns:

℞ Cocain ..... gr. v.
Camphoræ carbolat ..... ʒ ss.
M. et adde:
Olei olivæ ..... ʒ ss.
S. Apply.

Vaginismus.—

℞ Cocaine hydrochl ..... 0.05–0.10 cgm.
Ol. theobromæ ..... 5 gm.

or,

Pulv. opii,
Pulv. belladonnæ ..... āā 0.03 cgm.
Ol. theobromæ ..... 5 gm.

or,

Morphinæ hydrochlorat ..... 0.02–0.06 cgm.
Ol. theobromæ ..... 5 gm.

or,

Iodoform ..... 0.50–1 gm.
Ol. theobromæ ..... 5 gm.
Each for one suppository.

—Labadie-Lagrave, *Gaz. Hebdom.*, October 2, 1898.

Egg-Cognac.—Take the yolks of fifteen eggs, carefully freed from the white, and place in a quart bottle with ten ounces of Benedictine. Shake well, and fill up the bottle with German cognac and shake thoroughly again. Or add thirty centigrams of vanilla bean to twenty grains of simple syrup and two hundred of cognac, and let stand for an hour or more. Add the yolks of three eggs, beaten up with mucilage of gum-arabic into a foam, and finally add water up to two hundred cubic centimetres.—*Zeitschrift f. Krankenpflege*, August, 1898.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Annual Meeting, January 5, 1899.

William H. Thomson, M.D., President.

Report of Library Committee.—Dr. W. Gilman Thompson presented this report. He said that by the munificence of the governors of the New York Hospital in contributing its vast library to the New York Academy of Medicine the latter had been made the largest and best medical library in the country, with the exception of the one in Washington, D. C. During the past year 1,075 books had been purchased and 5,965 donated, bringing the total in the library up to 70,360. In the year just closed, 10,302 readers registered in the library. Many institutions had been aided by receiving triplicate copies from this library. The stack room was already practically filled. It had been ascertained that Dr. J. S. Billings, the librarian of the Consolidated Library of the City of New York, did not desire to build up a special medical department, but rather to co-operate with the Academy by referring medical readers to it, and adding to its own library works, such as those on biology, which would prove a valuable supplement.

Address of Retiring President.—Dr. E. G. Janeway delivered this address. He said, regarding the much-desired permanent endowment fund for the library, that the work of getting subscriptions had been seriously hampered by special and uncontrollable causes during the past two years. In the last year the children of the late Dr. W. T. Lusk had contributed one thousand dollars to this fund in honor of their father. Civic pride, civic obligations, and selfish commercial interests should all emphasize the importance of securing this needed endowment.

Debt on Building.—The debt on the building had been ten thousand dollars at the time of his inauguration, but this had been reduced to four thousand dollars.

The Laboratory.—His interest in having a laboratory attached to the Academy was as great as ever. He believed that it would draw many new members to the Academy, and would widen the scope of its work. In his opinion, it could be made self-supporting, and need not interfere with the work of the college laboratories.

Medical Expert Testimony.—Another subject which had been touched upon in his inaugural address was, as to what might be done in the way of rectifying the present abuses in connection with the giving of medical expert testimony. The committee having this matter in charge had met with two great obstacles, viz.: (1) The constitutional right to trial by jury; and (2) the attitude of the legal profession. It should be remembered that the judiciary were largely in favor of reform, but there would be no reform until the legal profession would accept a reasonable bill and were themselves desirous of abolishing the present great abuses.

Inaugural Address.—Dr. William H. Thomson then delivered his inaugural address. He said that a proper definition of the Academy of Medicine was given in its charter, viz.: "A body corporate for the purpose of promoting the advancement of medical science." Its proceedings, therefore, should be of interest to the profession at large, and especially to the busy practitioner. These meetings should furnish him with just the help required to keep him up with the pace set by medical science.

Lack of Interest in Academy Meetings.—In 1862

it had been the custom of the Academy to hold meetings every Thursday evening, and among other things to choose a subject of general interest for discussion at the next meeting. In several instances this discussion had extended over more than one meeting—in one case even to five meetings. The rapid growth of medical science had led to the formation of sections, and one effect of this had been greatly to lessen the interest of the general profession in the meetings of the Academy. This could be entirely remedied by the proper discussion of topics of wide and general interest at the general meetings of the Academy. In the discussion of such subjects it would certainly be desirable to call on various specialists for their views. If specialists alone discussed these subjects, the hearers were apt also to be only specialists. In order that such a plan might prove effective, however, the leaders in the Academy must be willing to give freely of their time to prepare properly for participation in the discussion. The present shiftless method led to the throwing out of ideas usually in inverse proportion to the words used, and certainly under such circumstances the busy practitioner could hardly be blamed for absenting himself from the meetings. The remainder of the address was devoted to a consideration of three important yet very obscure medical topics, which were selected with a view to demonstrating how the work of the Academy might be profitably enlarged in the future.

Immunity from Infection.—Regarding this interesting problem, the speaker said that the great fact of an immunity against variola by vaccination had been followed by a number of new discoveries, but these had been accompanied by nearly as many puzzles. It was found that by injecting sterilized toxins in small doses animals could be rendered immune, not only against the toxins but against inoculation with the original virulent bacteria. This discovery had put an entirely new aspect on the theory of immunity. An antitoxin was defined as a substance which was produced in the system as a result of the entrance of the toxins of bacteria, with or without the bacteria themselves, and the additional statement was made, that it was tolerably certain that the cells of the body generated the antitoxin by a vital process of their own, and that it was not a product either of the bacteria or of their toxins. There must be something very different, therefore, between artificial and natural immunity, for the former was always specific, whereas the latter was sometimes general, some people being susceptible to scarcely any of the common infectious diseases. In a certain sense natural immunity was specific, for it had been shown by animal experimentation that it was due to a specific vitality.

Etiology of Œdema.—Upon the second topic, the speaker said that while at first sight the causation of dropsy seemed to be comparatively simple, the subject was still a mooted one. In some forms of kidney disease the œdema was sometimes very marked, yet there was no venous obstruction. Again, what was the relation of œdema to inflammatory effusions, and how did œdema of the lungs sometimes occur so suddenly in Bright's disease without any dropsy elsewhere in the body? A study of the process showed that the subject of absorption—also but little understood—was involved. Against the mere mechanical theory that dropsy came from over-distention of the vessels, were such facts as that ligature of the femoral vein in a healthy person might have no effect on the leg, and that in animals even partial occlusion of the vena cava might not cause œdema. Dropsical fluids were virtually collections of unabsorbed lymph. Ludwig concluded that the chief factor in lymph formation was the presence of blood in the capillaries, causing a simple mechanical filtration through their walls, aided then by a process of osmosis. Heidenhain, on the other hand, maintained that his experiments were irreconcilable with the filtration doctrine, and that it must be assumed that the cells lining the capillaries take an active part in lymph formation—in other words, that lymph is a secretion rather than a transudation. The laborious experiments of our own fellows, Drs. Adler and Meltzer, on animals, while disappointing, had at least shown the limitations of our knowledge on this subject, particularly in connection with the rôle played by the lymphatics in absorption from the peritoneal cavity.

Pathology of Chill.—Under this heading the speaker took up the question of the nature of "catching cold." He said that it was evidently entirely different from a general cooling of the body, for its most typical and disastrous results might occur while the entire body was wrapped in warm clothes, although the feet were wet and chilly. One must look in the direction of the nervous system for an explanation. Cohnheim noticed, after long continued anæmia in a rabbit's ear, produced by ligature, that the blood-vessels became so permeable that the restoration of the circulation was followed by œdema, and that the vessels were texturally damaged. Any local shutting-off of arterial blood would promptly induce nutritive changes in the territory of that arterial distribution, which were, at least, analogous to the local inflammatory changes observed in catching cold. In this connection the rule was interesting, that the cutaneous nerves were always in association with the vasomotor nerves controlling the circulation in the parts and organs controlling that cutaneous area. A new and most important aspect of this subject had been brought out by the experiments of Orth and others, who found that traumatic lesions produced anywhere will cause a predisposition to infection.

A Research Laboratory Needed by the Academy.—The above themes, Dr. Thomson said, had been selected by him to show the vast and important practical bearing of experimental medicine. But such studies could not be carried out without many instruments of precision and laboratory facilities, not those furnished by the colleges, but a true research laboratory, such as should be a part of the New York Academy of Medicine.

Portrait of Dr. Joseph D. Bryant.—The friends of Dr. Joseph D. Bryant, an ex-president of the Academy, presented his portrait to the Academy, the presentation address being made by Dr. A. Jacobi. Reference was made to Dr. Bryant's long service as surgeon-general of the National Guard, as health commissioner, as teacher, and as president of the Academy. The speaker said that Dr. Bryant was both wise enough and strong to be above partisanship; he was quick to plan and always ready to execute. He was too just to do wrong, and too strong to take an unfair advantage. It was but natural that individuals possessing such qualities should be born leaders of men, and that their circle of influence should be a wide one.

SECTION ON SURGERY.

Stated Meeting, January 9, 1899.

W. W. VAN ARSDALE, M.D., CHAIRMAN.

General Peritonitis Treated by Enterotomy.—DR. H. LILIENTHAL presented two cases of this kind. They were intended to illustrate a method that he had been pursuing in cases of peritonitis associated with much distention. It had seemed to him, he said, that while the distention was indirectly due to sepsis, the distention itself not only caused great discomfort, but, by shutting off at least one important current of the body, tended to favor absorption of poison. In his

experience, death from this cause had seemed to be much more common in the cases characterized by extreme distention. The only effort which surgeons could make at the time of operation to relieve the distention was by free incision into the intestine. This not only allowed of the escape of gas, but also of large quantities of septic fluid. As many incisions should be made as were required to make the intestinal wall flaccid. The distended intestine was to be drawn out of the wound and the incision made at the farthest point from the mesentery. The patient was then turned on the side, so that gravity would aid the evacuation of the fluid. He had been surprised at the large quantity of fluid evacuated in this way. Each incision should be closed by suture.

The first patient was a boy of eight years, who had been admitted to the hospital on July 23, 1898. When first seen, the abdomen was very tender and greatly distended, and the boy was semi-comatose. The operation was done a few hours later. A considerable quantity of brown and foul-smelling pus was found and evacuated. There were few adhesions, except those around the appendix. Three incisions were made into the bowel, and a drain of gauze and rubber tissue was carried down into the pelvis. No other drains were employed. Secondary suture was done about two weeks later, and in about two weeks more the boy was discharged. The culture taken from the appendix and from the fluid in the abdominal cavity presented colon bacilli only.

The second case was that of a man, thirty years of age, who entered the hospital on May 5th in an extremely bad condition, although he had been sick only two days with appendicitis. On opening the abdomen, a large quantity of sero-purulent fluid was found free in the abdominal cavity. A very large and gangrenous appendix was removed. Distended and reddened coils of intestine were forced out of the wound by the vomiting, and, as it was important that they should be restored as rapidly as possible, four incisions were made into the coils of small intestine. A culture from the appendix gave the colon bacillus, while one from the fluid in the abdominal cavity showed the presence of the staphylococcus albus. It was his practice, as far as possible, to leave the incised portions of intestine in or near the abdominal wound.

Dr. R. H. M. Dawbarn suggested that in cases of peritonitis with marked distention additional aid might be rendered by the injection of a saturated solution of Epsom salts into the bowel, as had been advocated by Dr. McCosh. He would like to know the experience of others regarding the production of evacuations of the bowel by the subcutaneous injection of a solution of magnesium sulphate.

Aid from Stretching the Sphincter Ani.—Dr. R. T. Morris said that in his successful cases of this kind he had made use of only one incision, though he would admit that the operation might have been shortened possibly by making several incisions. He had sutured the bowel to the abdominal wall because the gas escaped slowly, and it was thought best to allow it to continue to do so for some hours. These fistulæ had healed spontaneously without much trouble. It was his practice now to use very small incisions, so that but little of the bowel was exposed. If necessary, when there was much distention he incised the first coil which presented. A little resource which might be found of service was stretching the sphincter ani in these cases of general peritonitis. Such patients found it very difficult to empty the lower bowel, even after an injection of Epsom salts. Defecation was greatly facilitated by this stretching of the sphincter.

Multiple Incisions Needed.—Dr. J. A. Wyeth said that the treatment of the distended bowel by incision seemed so logical that it was surprising that the practice had not become general long ago. He knew that it had been practised by individuals for at least ten years past in exceptional cases. The paralysis of the bowel in these septic cases seemed to be due to two causes, viz.: (1) The thick deposit of plastic lymph which clogs the muscular action; and (2) the hyperdistention from within by accumulation of gas or fluids. It was this second etiological factor that was removed by multiple incisions. He had not found much benefit from a single incision, because of the very limited area of gut that was relieved by such an opening. It seemed to him better practice also to make several incisions into the abdominal wall, rather than to drag much of the bowel out through one abdominal wound.

Distention Rarely a Direct Cause of Death.—Dr. F. Kammerer said that his experience, although somewhat limited in this class of cases, had been unfavorable in the use of the single incision. The part of intestine which was really involved in the trouble might represent only a small part of the peritoneum, and this should always be borne in mind in considering the value of the different methods of treatment. A distinction should be made between tympanites resulting from a general peritonitis and that, for instance, which resulted from simple obstruction in the intestine. He had himself never seen such intense degrees of inflation of the bowel following peritonitis as he had following obstruction. He did not believe the distention in these cases of peritonitis was very often the direct cause of death. Many cases of appendicitis with general peritonitis did well, irrespective of the presence or absence of distention. He was not prepared to offer an explanation of this.

Proofs of General Peritonitis Lacking.—Dr. F. Lange said that the value of the treatment under discussion could not be determined until one had the necessary data to prove the presence of a true general peritonitis and the existence of sepsis. Nothing had been said regarding the pulse and temperature in the cases reported, and he could not see any proof that they were really examples of general septic peritonitis. He doubted if a surgeon could speak positively regarding the presence of a general peritonitis, unless he had made extensive incisions and the abdominal contents were carefully inspected.

Physics of Intestinal Absorption.—The question as to the comparative absorbing power of the peritoneal surface of the intestine when flaccid and when distended was most interesting, and was a fit subject for experimental research. He was not, however, inclined to believe that there was a great difference in the two states. There must be a tendency to the formation of vacuums between the coils of intestine, because round surfaces had a tendency to touch each other tangentially, and there would, therefore, be a sort of negative pressure acting on the intestinal surface, and to this the intestine would yield more or less. Theoretically, there would be a tendency to the filling up of these empty spaces created by the separation of the coils of intestine from one another. Again, the inflammation of the serous surface was more or less connected with fibrinous exudation—the effort made by nature to protect the organism against absorption.

Opposed to the Incision Treatment.—His own experience with cases of undoubted general peritonitis had been exceedingly discouraging. In the few instances in which he had resorted to enterotomy the results had not been good, because of the paralysis of the bowel and the limited areas relieved, and this, he believed, was the experience of many other surgeons.

Dr. A. Ernest Gallant asked for the definition of what is called intestinal paralysis, as he had seen a

case of enormous distention of the bowel, accompanied by evidence of the most active peristalsis. He had lost a case of general septic peritonitis in which he believed, if he had resorted to enterotomy, life might have been spared. In this case, owing to the accumulation of pus around the iliac incision, it would have been safer probably to have drawn out the bowel through an incision in the median line.

True General Peritonitis Always Fatal.—Dr. Carl Beck said he did not believe that a single case of general peritonitis, in the true anatomical acceptation of the term, had ever been saved. He was in favor of a single incision.

Cleansing the Peritoneal Cavity.—Dr. Dawbarn protested against the use of small incisions in cases of general or extensive peritonitis, because he believed that the only safe method was to turn the entire contents of the cavity outside of the body, and rapidly and thoroughly cleanse them. Some years ago he had tried the following experiment: A goblet of milk was poured into the cavity of a cadaver, and diffused thoroughly through the peritoneum. The cavity was then flushed out with several quarts of water until the latter came away clear, after which the bowel was turned out, and a small quantity of the milk was still found in the cavity among the folds of the mesentery. The experiment was subsequently repeated, using the same quantity of pus as of milk, and with the same result.

Dr. Morris remarked that it was not necessary to remove all the pus from the cavity if the patient's absorbents were in a proper state of activity.

Dr. Sinclair Tousey remarked that theoretically, at least, incision into the bowel should promote absorption of the plastic material.

Favorable to Enterotomy.—Dr. W. W. Van Arsdale thought the mode of absorption from the abdominal cavity should receive further study. The absorption which most endangers life was that which goes on about the diaphragm above the level of the stomach. Peritonitis was a life-saving process; it was the absorption of septic material that was the lethal element. If the intestinal coils were distended there was less space, and consequently more pressure, and, as a result, the fluids tended upward toward the diaphragm where they were prone to be absorbed. If this pressure was relieved by either laxatives or enterotomy, the patient's condition would be thereby improved. Enterotomy he believed to be an advanced method of treatment. If the bowel was opened and kept open, as he had done recently, the patient was not only relieved at the time of the operation, but subsequent complications were anticipated. The current of lymph was changed, and quite probably was reversed. At the time the openings were made, decinormal saline solution should be injected into the bowel. In this way large areas of the bowel could be made to communicate with the opening, and so do away with the objection that had been raised regarding the very limited portion of bowel reached by each incision. It was significant that, working in the same hospital and independently of Dr. Lilienthal, they had both adopted essentially the same treatment and had obtained better results than the other surgeons.

Dr. Lilienthal closed the discussion. In reply to Dr. Dawbarn, he said that he did not think the attempt should be made to cleanse the peritoneal cavity thoroughly, but the patient should, instead, be placed in such condition that nature could complete the cure. He did not believe it was possible to remove all the infective material, even by turning the bowel outside of the body. As to the criticisms of one speaker, he would say that he was not deeply interested in knowing whether or not every square inch of the peritoneum was inflamed; it was enough to know that experienced clinicians agreed that a given case was one of what was commonly called general peritonitis. He had complete records of these cases, and intended to publish them in full. In his opinion, the distended gut would absorb more rapidly than the flaccid bowel provided with a vent.

Two Unusual Cases of Aneurism.—Dr. Carl Beck presented a man, thirty-nine years of age, an architect by occupation. His father died suddenly at sixty-five years of age, and his mother suddenly at the age of sixty. The patient himself denied syphilis, and there was no evidence of such infection. About five years ago, while lifting a heavy weight, he suddenly felt a pain in the left side of the neck, and at the same time a small protuberance was noticed there. He was admitted to the hospital, and was treated there, according to his statement, for torticollis. After a few weeks he was attacked with malarial fever. About eighteen months ago he was readmitted to that hospital for treatment. About a year ago he was treated by Dr. J. W. Gleitsmann, who reported that at that time the tumor was not larger than a large apple, and that there was considerable hoarseness present. When admitted shortly afterward to St. Mark's Hospital, the transverse diameter of the tumor, which proved to be an aortic aneurism, was seven and one-half inches. The atrophy of the bones produced by pressure had been so great that the sternum had entirely disappeared, with the exception of the xiphoid cartilage. The radial pulse on the left side was a little weaker than on the right, and was sometimes a little delayed. For the last few weeks the patient had been fed on large doses of gelatin, after the plan of the French school, the theory being that the gelatin increased the coagulability of the blood. It certainly seemed that the tumor had become harder under this treatment. The patient's good general condition was certainly remarkable; he was able to continue at his work. The pulse was ordinarily about normal in frequency, and there was but little dyspnœa except on exercise. Skiagrams were presented to give a better idea of the intrathoracic condition. These skiagrams seemed to him to offer an excellent method of controlling any mode of treatment of such conditions.

The Value of Skiagraphy.—In connection with this case, Dr. Beck reported another, that of a patient with femoral aneurism, upon whom he had operated five weeks ago. The patient could not be presented, because of an attack of pneumonia. He had been injured three years ago in the middle of the thigh by a blow from an iron bar. Three months ago a tumor, the size of a lemon, was first noticed on the inner aspect of the thigh. When first seen by the speaker, the tumor extended from the internal condyle of the femur to the groin, and was hard and free from fluctuation. His first impression had been that the tumor was an osteosarcoma. Two exploratory aspirations withdrew blood, and on microscopical examination nothing abnormal was found in this, except an increased number of leucocytes. The Roentgen rays were then called to his aid, and revealed the fact that the tumor was continuous with the sheath of the femoral vessels. On exploratory incision the true nature of the tumor was discovered, and the artery was ligated in Scarpa's triangle. Apparently the extreme hardness of the clots had obscured the pulsation. The patient developed a pneumonia some days after operation, probably as a result of embolism.

Dr. Wyeth suggested that the case of aneurism presented by Dr. Beck should be subjected to a treatment that he had successfully followed in a very similar case. The method consisted in thrusting twenty or thirty carefully sterilized harelip pins into the aneurism, just as pins are stuck in a pincushion. At first they were left in twelve hours, but on the second attempt they were allowed to remain thirty-six hours.

This manœuvre resulted in a very perceptible thickening of the aneurismal sac, and in the rapid improvement of the patient. He was practically cured, and remained well for two years, when he died of cerebral embolism.

Dr. Dawbarn said that he had assisted Dr. Wyeth in this brilliant operation, and could heartily indorse the treatment. Another method worthy of trial was the introduction of one or two metres of very fine piano-wire, coiled up so that after its insertion through a cannula it would coil up again within the aneurismal sac. This having been accomplished, the anode of a galvanic battery was attached to the wire, and a clay cathode applied to the back of the neck. A prolonged application of the current should be made. Care should be taken to insulate the wire at the point where it passes into the sac, so as not to cause destruction of the sac.

Ingrowing Toe-Nail: A Comparison of Methods of Operation.—Dr. E. M. Foote presented, in connection with a paper bearing this title, a boy whose toes he had recently operated upon. After reviewing the literature and calling attention to the fact that about seventy-five operations had been devised for the relief of this common affection, he pointed out that every part of the nail grew out straight from the corresponding part of the root, and that, therefore, to effect a permanent removal of the disability, it was only necessary to remove the corresponding part of the matrix, and was not at all necessary to remove the overlying skin. This was the basis of the operation advocated by him in the paper. The parts having been properly disinfected, a ligature was applied around the toe, and the parts were cocainized and again disinfected. The incision began at the free end of the nail, and continued through the skin overlying the matrix. Two little skin-flaps were reflected from the root of the nail, and, after carefully dissecting out all trace of the matrix, the flaps were brought together and united by several interrupted sutures. The large raw surface left after the Cotting operation took from three to six weeks to heal, but as the toe was more pointed than before, it might not be looked upon with disfavor by some persons. Another method consisted in removing a wedge-shaped piece of skin and subcutaneous fatty tissue around the toe, and suturing the ends of the wound.

Dr. C. N. Dowd said that the method described in the paper certainly promised well, because the matrix of the offending portion of nail was removed effectually, and without causing deformity. A few years ago he had reported a number of cases treated somewhat after the method of Angier, except that not so much tissue had been taken away. Since then he had done an operation similar to the one described in this paper, except that more of the side of the toe was removed. If the matrix was carefully dissected away down to the bone, and, if necessary, back almost to the joint, he felt sure there would be practically no recurrence.

Dr. J. E. Erdmann said that in the last few years he had entirely discarded sutures, simply putting a bandage around the toe and letting the patient go about as usual.

Close Proximity of the Matrix to the Joint.—Dr. Dawbarn said that for ten years past he had done an operation for ingrowing toe-nail, which had given him perfect satisfaction. The first incision was made just as described in the paper, and then a second one was made so as to include the septic granulation tissue between the two incisions. The portion of nail was then removed, and a flap dissected out from under the toe-nail. The soft parts could then be brought together easily. As a result of a careful series of dissection, he had demonstrated that the matrix of the nail went back to within one-tenth of an inch of the joint. In several instances he had accidentally opened the joint while operating for this condition. Having carefully removed all the cells of the matrix, the wound was closed by one suture of silkworm gut. The suture was taken out on the seventh day. Primary union almost always occurred. He rarely removed more than one-tenth of the width of the nail.

A Modified Cotting Operation.—Dr. S. Tousey said that he had operated upon ingrowing toe-nails about three hundred times. In most instances he had done the Cotting operation, or his own modification of it, as published a few years ago. No forceps were applied to the raw surface, but simply a firm bandage of gauze was used. On the second day after the operation, after prolonged soaking, the gauze was gently removed so as not to cause any oozing of blood. This fresh surface was then covered with a Thiersch graft taken from the arm. No anæsthetic was required, as it was not more painful than vaccination. The resulting deformity after the operation was so slight that it seemed proper to warn against removing too little of the side of the toe. Healing occurred in one week. He had never had a recurrence when this operation had been done. It did not seem to him that the essential thing was to make the nail narrow; in some cases of ingrowing toe-nails the nail was naturally very narrow.

Hamilton's Operation.—Dr. Van Arsdale thought most of these plastic operations on the nails were done on dispensary patients, many of whom are sewing-machine operators or persons who were required to be on their feet constantly, and that as they returned to their work at once, there need be no surprise at the disappointing results. The operation that he had used with the best results was one attributed to Hamilton. It consisted in removing the entire matrix of the nail from the semilunar border clear back to the joint. After removing this down to the bone, and scraping the periosteum, the two flaps that had been made were brought together, thus covering in the deficiency left by scraping away the matrix. In several cases he had removed half of the nail with its matrix, and the patient had returned in a few months with an ingrowing nail on the other side, where there was no special reason for it. Some people have developed ingrowing toe-nail while lying in bed, thus excluding the shoe as an etiological factor.

Dr. Foote closed the discussion. He said that the operation recommended by Dr. Dawbarn was one first described in 1853, but it had been rediscovered and described many times since then. It was the curve of the nail, not the width, which predisposed to the formation of ingrowing toe-nail.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 14, 1898.

T. Mitchell Prudden, M.D., President.

A Case of Congenital Cyst of the Kidney.—Dr. R. G. Freeman presented specimens from a case of this kind occurring in the practice of Dr. Holden. The kidneys were so large and cystic that the diaphragm was pressed up to within half an inch of the axilla. The congenital cysts of the kidney were full of small cavities, varying in size from that of a pinhead to a pea. The condition seemed to be the result of an imperfect formation of the tubules of the kidney. In addition to this abnormality in this case, there were others, *e.g.*, an encephalocele, also six toes on each foot and six fingers on each hand, with a rudimentary seventh finger on one of the hands. This condition is not extremely rare. Virchow ("Die krankhaften Geschwülste," Bd. I., p. 270) mentions having seen many

cases. Such kidneys may be so large as to hinder childbirth.

Cystic Kidneys in an Adult.—Dr. E. Hodenpyl, in connection with this case, also presented a specimen of cystic kidney, removed from a man fifty years of age, who died in hospital from lobar pneumonia. He was moribund at the time of his admission. The urine was not examined, and the bladder was found empty after death. Both kidneys were involved, and each measured about eight inches in its long diameter by three and one-half inches in width and four inches in thickness. They were composed of a mass of cysts, varying in size from that of a pea to an egg. Some of them contained clear albuminous fluid, but the greater number contained blood-stained fluid. Several of the cysts also contained concretions. The parenchyma of the right kidney was almost entirely destroyed; in the left a very small area of kidney tissue still remained.

A Case of Hydrencephalocele. — Dr. Freeman presented specimens from a case of this kind occurring in the New York Foundling Asylum. The sac differed from that in the preceding case, in that it was filled with a bloody fluid, which was surrounded by a thin layer of brain tissue. Such malformations were not very rare.

A Method of Determining Whether Milk has been Heated to 78° C. or Higher.—Dr. Freeman demonstrated this method. He said that originally Babcock had found that raw milk would break up peroxide of hydrogen into water and oxygen, and Storch discovered that when milk was heated above 78° C. this property was lost.[1] The determination of this question as to whether or not milk had been subjected to heat was an important one to those working upon the bacteriology of milk. With the development of bacteriology and the use of the determination of the number of bacteria in milk as an index of its cleanliness, the need of some test for determining whether milk had been heated before being submitted to the bacteriologist became evident. A milkman might produce a milk containing a very large number of bacteria, but obtain a favorable report from a bacteriologist by first destroying a part of them by heat. The same result might, of course, be obtained by chemicals. Milk preservatives were very commonly used, but most of them could be detected by well-known tests. Formalin was largely employed for this purpose, but the chemical test for its detection was fortunately extremely delicate. The test about to be described, however, did not show whether or not the milk had been pasteurized, because the temperature of pasteurization was below 70° C. (158° F.). The reagents used in making this test are: (1) a one-per-cent. solution of peroxide of hydrogen, containing one cubic centimetre of sulphuric acid to the litre; (2) a two-per-cent. solution of paraphenylene diamine (Merck) in hot distilled water, which is filtered. One drop of the first solution was added to about one drachm of the milk in a test tube, and then two drops of the second reagent were introduced. On adding this second reagent to raw milk, a dark indigo-blue was produced. Milk which had been heated to 75° C. gave nearly the same color, but if it had been subjected to 78° C. or a higher temperature, the color was pink, and became somewhat more bluish after standing. The specimens of milk used for the demonstration of the test had been practically heated only for a moment. In a number of experiments which had been made with different samples of milk, the test had seemed reliable.

Cancer of the Liver.—Dr. William Henry Porter exhibited specimens from two cases of cancer of the liver. The first was a primary carcinoma of the right lobe of the liver. On coming under observation the liver extended considerably below the umbilicus, and there seemed to be a large, nodular projection. The fact that the history extended over a period of three years and more had made him suspicious at first that the growth was not carcinomatous; but about six weeks before death a nodule in the left lobe of the liver became soft and fluctuating. On aspiration, cells were withdrawn which resembled those ordinarily found in the scrapings of a carcinoma. This fluid also contained bile pigment and fatty matter. No evidence of a primary growth outside of the liver could be found. The neoplasm seemed to have started in the centre of the liver in the acini, and the growth seemed to take the outline of the liver acini. He had never seen anything like this before. There had been no jaundice whatever. The right lobe of the liver was almost completely obliterated by the new growth.

The second case was one of primary carcinoma of the gall duct, with multiple deposits through the liver. It was interesting simply because it occurred in a man who was only thirty-one years of age. The patient had a syphilitic history. When first seen, the liver extended three inches below the free border of the ribs. In view of the jaundice and the history of syphilis, he was put upon antisyphilitic treatment, and under this the liver was reduced in size, so that it did not project below the free border of the ribs. In the epigastrium there was marked tumefaction, but nodulation could not be detected. The gall duct was found to be completely occluded by a hard growth, which was apparently connected with the gall duct itself.

Tumor of Uncertain Nature. — Dr. Elizabeth Mercelis presented for diagnosis gross and microscopic specimens of a tumor which had been removed two months ago from a patient at the New York Infirmary for Women and Children. Her family history was negative, and she had enjoyed perfect health up to a short time before admission. Three or four months before coming under observation, the woman had noticed a small tumor in the breast. This was found to be freely movable and firm, and the skin overlying it was perfectly normal. The diagnosis of an adeno-fibroma was made, and the mass was removed. On examination, the growth presented masses which could be enucleated and which were considered to be lymph nodes; however, microscopical examination showed no lymph-node tissue, but sharply circumscribed masses of cells resembling epithelial cells. Throughout were numerous spaces, bounded usually by low columnar or cuboidal epithelium, and giving an appearance of alveoli. These spaces upon close examination were found to be either blood-vessels or lymphatics. No characteristic arrangement of cells about the blood-vessels was found, but in a few places the appearance suggested an endothelial origin for the growth. There was only a small amount of reticulum, and this chiefly at the edge of the tumor. In view of these appearances, no positive diagnosis had been made.

Tumor of the Brain.—Dr. Leon T. Le Wald presented a tumor of the brain which had been taken from a male, thirty-six years of age, an Italian laborer. He had complained for a number of weeks of persistent and intense headache, localized chiefly in the frontal region. There had also been attacks of vomiting, without nausea or loss of appetite. On admission to the hospital he was fairly well nourished; his gait was staggering, and he was dull mentally. A diagnosis of cerebral tumor was made. There was no history of syphilis; nevertheless, he was placed on large and increasing doses of potassium iodide, but without improvement. After a time he became comatose, and died. The autopsy revealed a marked increase in the intracerebral pressure, and a decided flattening of the convolutions. A tumor was found in the right frontal lobe, involving practically the whole

[1] Zeitschrift f. Fleisch- u. Milch-Hygiene, October, 1898, p. 13.

of that lobe. It was not circumscribed. The centre was hard, but on the periphery were some softened areas. The tumor pressed backward upon and involved part of the corpus striatum, but apparently did not involve the internal capsule, and consequently there were no definite motor symptoms. The diagnosis was made chiefly upon the persistent headache, the vomiting, and the mental symptoms.

Dr. E. K. Dunham said that microscopical examination of sections of this tumor showed large cells, resembling ganglion cells, together with cells of neuroglia. The large cells he believed to have been derived from the neuroglia. They were very polymorphic, and presented numerous filamentous processes, which soon branched and became lost.

A specimen of the tumor was exhibited under the microscope.

Rupture of the Healthy Heart by Direct Violence.—Dr. Richard C. Newton, of Montclair, on invitation, presented the following report of a peculiar case of rupture of the heart:

F. M——, twenty-eight years of age, a carpenter by occupation, was a wheelman of some experience, and was reported to have ridden in some races. On September 19, 1898, at about ten minutes after five, he was riding his bicycle rapidly, when the front wheel came in collision with a stout rubber and canvas hose, four inches in diameter, which was lying on the ground across the road and was distended with water, which it was conveying, under pressure, from a hydrant to a water-cart. There were only two or three eye-witnesses to the occurrence, and their accounts of it differed somewhat. There seemed to be no doubt, however, that the "head" of the wheel was broken, near its junction to the fork, by the force of the collision, and that the rider was thrown a foot or two in the air and then fell heavily near his broken wheel. It is probable that he kept hold of the handle-bar and took it with him when he left the saddle. As he struck the hard macadamized road the handle-bar was turned over, and its post, a straight steel rod, six or eight inches long and an inch in diameter, was interposed between his body and the ground, and consequently struck him with great force in his chest. He got up, holding his hands to his left side, and staggered a few feet, and then lay or fell down in the road, where he remained nearly unconscious, groaning and writhing with pain.

He was quickly carried to the sidewalk and a doctor summoned. Dr. Wilson, of Bloomfield, saw the man a few minutes after the injury, and found him collapsed, cold, and sweating. He was nearly pulseless, and was lying curled up and in great pain. He was partly conscious, but gave no clear account of himself. A hypodermic injection of brandy was given him, which seemed to revive him somewhat. His pulse improved, and he expressed himself as feeling better. No marks or bruises were detected on the body or the head, although they were looked for as carefully as the circumstances would allow. In the mean time, a wagon having been brought, the man was removed as carefully as possible to the Mountainside Hospital. Before he arrived there he revived enough to tell his name and residence. On admission he was still in great pain, and had a tendency to throw himself over on his left side. He did not vomit or raise any blood, nor did the bowels or kidneys act. After he had been carried into the hospital, the writer, who was at this time the surgeon on duty, was summoned. The man's pulse was 78 and moderately strong. He called for water, but was only able to swallow a very little. There were no convulsions. The man quietly died at 6:45 P.M., before the writer arrived at the hospital, and a little more than an hour and a half after the fall. Dr. Washington, the county physician, was notified, and about eleven o'clock the next morning he viewed the body and directed a partial autopsy, the heart only to be examined if, as seemed probable, the cause of death should be found in this organ. The autopsy was performed seventeen hours after death. The body was that of a well-developed, muscular young man, about five feet six inches tall, and weighing about one hundred and forty-five pounds. Rigor mortis was marked. Two or three unimportant bruises were noted on the shins and about the knees. A small, semicircular, freshly made, depressed mark was seen on the skin over the sixth rib, about half-way between the nipple line and the sternum on the left side. This had apparently been inflicted by a piece of tubing, or other hollow cylindrical body, about an inch in diameter. A small depression, about an inch internal to this mark, was noted, as though one of the costal cartilages had been fractured and depressed, and pressure at this spot showed that this lesion had occurred. When the chest wall was opened, nothing abnormal was detected, except the fracture of the sixth costal cartilage, near its junction to the sternum, and some laceration of the intercostal muscles. The pericardium was intact, but was somewhat distended. When it was opened it was found to contain from eight to ten ounces of dark, clotted blood. When the heart was lifted up, its cavities were partly distended with blood. Its weight was eleven and one-quarter ounces after all the blood had been washed out of it. A transverse rent was discovered at the apex of the right ventricle, extending through its wall. The tear had nearly separated a triangular flap of the heart substance. The measurements were as follows: From apex of heart to upper extremity of posterior tear, one and one-fourth inches; from apex to upper extremity of anterior tear, one and five-eighths inches. At each of these extremities the epicardium was torn several lines further than the muscular tissue. This tear of the epicardium was more extensive on the anterior aspect. On turning up the flap, the rent measured from side to side, externally, one and one-half inches; and internally, through the endocardium, three-eighths of an inch. The internal rent was immediately contiguous to the intraventricular septum. In other respects the heart walls and valves were normal and competent. By permission of Dr. Washington, the heart was removed and placed in two-per-cent. formalin solution. The speaker said that there seemed to be no reasonable doubt that, after the collision and the breaking of the bicycle, the rider was thrown from his wheel with great violence, and struck against the end of a piece of tubing, which fractured the sixth costal cartilage without penetrating the skin, and drove the outer fragment (still attached to its rib) into the apex of the heart, during systole, with the result that the wound just described was inflicted. Dr. Newton said that Gamgee, in 1871, had reported twenty-nine cases of rupture of the heart, and he had himself collected about fourteen additional ones since that time, but in very few of these cases was the heart found to be healthy. Some of them had been ruptured by a comparatively slight injury.

Renal Adenoma.—Dr. E. K. Dunham presented three sections from what was supposed to be a renal adenoma. He had been puzzled to determine from what the growth had been derived. The relations of portions of the adenoma to the substance of the kidney itself were so close that it was difficult to believe that the tumor arose from the adrenal. There were certain appearances (mitotic figures) which seemed to indicate that the epithelium covering the glomeruli of the Malpighian bodies was proliferating, and the character of the cells in the tumor was much like the epithelium of the renal tubules.

Demonstration of Some Noteworthy Forms and Combinations of Malarial Parasites Observed at Camp Wikoff.—Dr. James Ewing presented four slides

from cases of malaria studied at Camp Wikoff. On the first slide was to be seen a mixed infection—the æstivo-autumnal and tertian malarial parasites. In the one field were two specimens of tertian ring-shaped organisms and three of the æstivo-autumnal ring-shaped organisms. These specimens were interesting as illustrating the differences in the morphology of these two ring-shaped parasites. The tertian rings are coarser than the æstivo-autumnal, although they may be of about the same size. The tertian rings showed a quite distinct and large achromatic spot, two or three times the thickness of the ring. It was probably the nucleus, as it stained with hæmatoxylin. The æstivo-autumnal ring did not exhibit any demonstrable achromatic spot of the size of the other. Both the tertian rings showed one or two very fine pigment grains, whereas the early æstivo-autumnal rings were entirely without pigment—as was usual in the cases of Cuban malaria examined. These three points were the distinguishing ones so far as his experience had gone. In the same field of the microscope was a young crescent, thus placing beyond doubt the question of a mixed infection.

The second slide furnished an illustration of "twinning" of the tertian parasite—a process not at all uncommon in tertian malaria, but much more common in the æstivo-autumnal form. In this particular instance the blood was taken about two hours before the expected chill, from a man suffering from quotidian paroxysms, and the specimen showed a segmenting body and a half-grown parasite in the same red cell.

The third slide showed another form of twinning of the tertian parasite, which he had seen only in the Cuban cases. In this specimen there were a great many cells containing parasites in which, evidently, the amœboid motion had been very active, and the parasites, instead of being in a more or less spheroidal form, were strung out into a number of fine threads with nodal thickenings. In each cell presenting this peculiar appearance there were two achromatic nuclear spots, indicating the presence of two parasites. He had never met with a description of this particular appearance, and could not state what was its significance.

On the fourth slide was to be seen a very richly pigmented leucocyte of enormous size—one of very many seen in a fatal case of mixed æstivo-autumnal and tertian infection. The importance of these leucocytes was very great in diagnosis, and their appearance, when typical, seemed to him to be quite as characteristic as that of the parasite itself.

Dr. Ewing asked if any of the members of the society had had experience with a new stain for the demonstration of the nucleus of the malarial parasite, recently described in a monograph by Ziemann. This observer used various proportions of a one-per-cent. watery solution of rectified methylene blue, and a one-per-cent. watery solution of eosin, and demonstrated throughout the body of the parasite certain reddish stained areas. Dr. Ewing said that he had been able by means of Ziemann's stain to demonstrate these areas, but they did not correspond to the nuclear spots which can be stained by hæmatoxylin, and it seemed to him very doubtful whether they represented the nucleus or some other portion of the parasite or of the disorganized red cell.

A Case of Pyrogallic-Acid Poisoning.—Dr. George P. Biggs presented specimens from a case of pyrogallic-acid poisoning. The subject was a Chinaman, thirty-seven years of age, who was interested in photography. He was taken sick with symptoms quite typical of appendicitis, and was admitted to the hospital on this diagnosis. On account of marked abdominal distention, vomiting, cyanosis, and partial collapse, it was thought that perforation had occurred, and cœliotomy was promptly performed, the sloughing but not perforated appendix being removed. It was necessary to give oxygen with the anæsthetic. Cyanosis continued after the operation, and the urine was found to be almost black in color. It was then learned that he had, before admission to the hospital, taken internally a solution of pyrogallic acid which he had for photographic purposes, thinking it would relieve his fever. The symptoms steadily grew worse until death, about forty-eight hours after taking the poison. At autopsy the blood was found practically all converted into black clots; the lungs were very much congested; the spleen was large, very soft, and of black color; the kidneys were intensely congested and of a dark-red color; the urine was scanty, almost black, rich in albumin, and contained many blood-casts. A microscopical examination of the fresh tissues showed marked fatty degeneration of the liver, but not of the heart or kidneys.

The Effect of Cauterization or Cleansing of Wounds Infected with Rabies, after an Interval of Twenty-four Hours.—Dr. F. Cabot read a paper on this subject, in which he described a series of experiments that had been undertaken at the laboratory of the New York health department, with the object—(1) of demonstrating, if possible, that even twenty-four hours after infection the development of rabies may be prevented; and (2) of demonstrating the comparative value of some cauteries and simple cleansing of the wound. In these experiments he had used two hundred and eighty-seven guinea-pigs. The first seventy-nine were employed to demonstrate at what point, when the cautery could be used, inoculations were most fatal. A portion of medulla was taken from a rabbit dead of laboratory rabies, and was beaten into an emulsion with sterile water. One cubic centimetre of this was injected into the upper and outer part of the thigh of a guinea-pig. The animal was then left undisturbed for twenty-four hours, when an incision, half an inch long, was made over the site of the puncture, exposing the nerve and the surrounding tissue. The wound was then swabbed out and the cautery applied. The first cautery used was chemically pure nitric acid. Sixty animals were experimented with, and of the thirty-four animals that were cauterized in this manner ninety-one per cent. lived. In another series of experiments fifty-nine animals were used, and forty-four were treated with the actual cautery. Of this number seventy per cent. lived, or twenty-one per cent. less than when nitric acid was used. The reason probably was that it was more difficult to reach all parts of the wound with the actual cautery than with nitric acid. In a third series of experiments, thirty-seven out of forty-five animals were cauterized with a stick of nitrate of silver. Of these, fifty-five per cent. lived, showing nitrate of silver to be inferior to the other two caustics. In a fourth series on forty-nine animals, at the end of twenty-four hours after infection, the point of infection was cut open, and in twenty-six the wound was swabbed out with dry absorbent cotton and then left open. Of these twenty-six, thirty-one per cent. lived. All the animals dying in these experiments had typical rabies. The author's conclusions were: (1) In ninety-one per cent. of the guinea-pigs rabies can be prevented from developing if the wound is cauterized with strong nitric acid within twenty-four hours after infection; (2) strong nitric acid is more effectual than the actual cautery or nitrate of silver; (3) some degree of benefit is derived from thoroughly opening and swabbing out an infected wound within twenty-four hours after the infection; (4) in cases in which the Pasteur treatment cannot be obtained, great benefit may be derived from the correct use of the cautery and proper treatment of the wound, and even when the Pasteur treatment is resorted to, early cauterization is

of great assistance; (5) in small wounds probably the only treatment indicated would be thorough cauterization; (6) that a small percentage, eleven to fifteen per cent., of guinea-pigs have a natural immunity to hydrophobia, as demonstrated in the cases of the controls used in each series of experiments when no after-treatment was employed.

Dr. Robert J. Wilson said that the percentages obtained with the cautery or with nitric acid were somewhat larger than he had personally been able to secure with the Pasteur treatment, but Dr. Cabot had introduced the virus under the skin, whereas the speaker had introduced it under the dura mater, making the infection certain. He was of the opinion that if dog-bites were cauterized thoroughly and early, there could hardly be any better preventive. Out of all the cases seen at the health department there had only been one which had been thoroughly cauterized.

Dr. W. H. Park said that about ten days ago three persons, each of whom had been bitten by a different dog, had applied for treatment, and in at least two of the three there was considerable doubt as to whether the dog was rabid. The bites from these dogs were all very slight. None of the bites had been cauterized, and the persons had not sought treatment until three days afterward. If these persons had been cauterized there would have been no need to go on with the Pasteur treatment for the ten days which necessarily elapsed before it could be decided whether or not the dogs were rabid. He believed that to Dr. Cabot was due the credit of having suggested the use of guinea-pigs instead of rabbits for inoculation experiments, to determine whether or not a given case is one of rabies. Rabbits took fifteen or sixteen days before showing the effects of inoculation, while guinea-pigs took only about ten days. Hence, by using guinea-pigs there was a saving in time of about one week. Guinea-pigs also possessed the advantage of being less susceptible to septic infection than rabbits, so that when somewhat decomposed brains were received from dogs, it was often found that the guinea-pigs survived until the rabies developed, while the rabbits died of acute septicæmia.

Remarks upon a Uniform Method of Testing Antitoxin.—Dr. W. H. Park read a paper with this title. The method developed in the laboratories of the New York City health department, by Mr. Atkinson and himself, consisted in a more careful selection and definition of the toxin to be employed than was required in the old Behring-Ehrlich method. Ehrlich himself first pointed out that toxins developed from different cultures, or even from the same cultures, had at times very different neutralizing values. An antitoxin tested by the old Behring-Ehrlich formula might, according to the toxin used, vary fully two hundred per cent. in the values given it by the old test. Their investigations revealed the fact that the varying neutralizing power of the toxin followed a general law. Early in toxin production, as pointed out in the speaker's article in the September number of the *Journal of Experimental Medicine*, a great many more fatal doses of toxin were neutralized by one unit of antitoxin than in older cultures; thus six hours after the beginning of toxin formation in a culture, one unit of antitoxin neutralized about one hundred and twenty fatal doses of toxin; five days later the toxin from the same culture would have but ninety fatal doses neutralized, and six weeks later but thirty fatal doses. Since then he had tested the neutralizing value of toxins developed by the same culture in differently prepared culture fluids, and had found that at the same period of toxin formation the toxins in these different media had the same neutralizing value for antitoxin. After having once tested at different periods the toxin of a culture with persistent characteristics, it was possible, therefore, at any time to obtain a new toxin which would have the same testing value as the previously used standard. They found, for instance, that one antitoxin unit always neutralized in the guinea-pig between eighty-five and ninety fatal doses of any toxin developed by the culture which we called No. 8, if the toxic fluid was removed from the culture upon either the fifth or sixth day of toxin formation. If this culture, which was already in the possession of over fifty laboratories, or some other, should be used by all antitoxin laboratories, a uniform standard toxin would be always on hand, and not only the same laboratory but all laboratories would have at hand the power to retain a permanent standard, and would not need to depend on comparisons with a standardized antitoxin which might have become changed in transportation.

Dr. T. Mitchell Prudden said that the teaching of many surgeons was that it did not make very much difference whether dog-bites were cauterized or not, especially after the lapse of a few hours; hence the great practical importance of this research. The use of the guinea-pig, in establishing a diagnosis, was also important, as a gain of five or six days was of very great advantage, especially to persons who must go long distances for the Pasteur treatment. It was well to record the fact that in certain parts of New Mexico and Arizona hydrophobia in the "domestic" skunk and in a variety of small wild spotted skunk was becoming a very serious matter, because the cattle and ranchmen and campers-out during the hot months were constantly exposed to this danger if they slept on the ground, as had been their custom. It was formerly the belief that these small spotted skunks were always in a condition to convey rabies, but this notion was waning, and it was now believed that only those skunks which had been bitten by other rabic animals were virulent. The matter had become so important in the Southwest that it was proposed to bring it to the attention of the territorial legislature for investigation.

Surgical Suggestions.

A New Operation for the Radical Cure of Hydrocele of the Tunica Vaginalis.—Dr. J. J. Pratt (*The Indian Medical Gazette*, August) describes an operation which he believes to be specially suitable to hydroceles of moderate dimensions. In the enormous hydroceles he thinks it would be best to perform a modified excision, removing the anterior part of the sac before everting. He performs the operation as follows: After careful shaving and thorough washing and cleansing of the parts, the scrotum is made tense by being firmly grasped in one hand, an incision is made along the whole length of its long axis, the tunica exposed, and the testicle almost entirely withdrawn from the scrotum; then, the tunica having been punctured with the knife, the puncture is enlarged with the scissors to a sufficient extent to allow of the testicle being drawn out through the opening. This having been done, the parietal tunica is turned inside out, and the opposite edges of the incision in the sac are united behind the epididymis by a single catgut suture. The cavity of the tunica thus ceases to exist, and the testicle and epididymis are covered almost completely by one continuous layer of serous membrane. The skin incision is closed with a continuous suture, and the operation completed.

Occipito-Iliac-Posterior Positions.—Should assistance be decided upon, it must be recollected that it is not to be attempted, in ordinary cases, until the head has reached the floor of the pelvis; in other words, until the head has reached that part of the pelvic cav-

ity where rotation takes place naturally and spontaneously. Sometimes rotation can be secured by the finger alone placed on the side of the forehead. Usually, however, bipolar pressure is necessary—that is, one or two fingers can be placed on the side of the forehead and a lever inserted over the side of the occiput. Often the best method is to apply the straight short forceps to secure rotation, and then complete delivery by aid of this instrument. None of these manipulations is to be done quickly or rudely; on the contrary, they should be kept up for a long time. Gentleness, not violent force, is essential to the safe and proper management of these often most difficult and trying cases. Constantly, however, the forceps will be found necessary, if not to secure rotation, at least to relieve a woman exhausted by a long effort, and a child in great peril from long pressure.—PANCOAST.

If the occiput does not rotate forward and the head does not advance an attempt should be made to rotate it forward with the hand; this can often be accomplished. If the occiput is to the right, the left hand is introduced and the head seized, the thumb being placed behind the ear. The head is then rotated from right to left and from behind forward; the hands are retained in position, otherwise the occiput will again turn backward. The right blade of the forceps is now introduced and entrusted to an assistant. By this means, when the left hand is withdrawn, the head is retained in place. The left blade is then applied and the blades are locked.—TARNIER.

Exposure of the Bowels a Factor of Shock.—In handling the bowel we must endeavor to keep it within the abdominal cavity as much as possible. The dragging of the bowel upon the mesentery, the chilling of the same by contact with the air, and the bruising resulting from manipulation, are all potent factors in adding to the shock, and thus lessening the chances of recovery.—DR. H. C. DALTON.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

"BLACKWATER FEVER" AT THE PATHOLOGICAL SOCIETY—SEAMEN'S HOSPITAL—PLAGUE—DEATHS OF PROFESSOR KANTHACK AND DR. CAMPBELL BLACK.

LONDON, December 30, 1898.

BLACKWATER fever is again prominent among professional topics. A case was brought before the Pathological Society on the 20th inst., by Messrs. W. H. Crosse and W. C. C. Pakes. The case is important, as the patient developed the symptoms more than a month after he left Nigeria, where he had served about fourteen months and had suffered from malaria and dysentery. He never had blackwater in Africa, but after his arrival home was attacked by what seemed an ordinary malarial fever, and after two days jaundice, green vomit, and porter-like urine appeared. There were some albumin and a few red discs in this urine. He had taken no quinine until six hours after the onset of hæmoglobinuria. He improved under the quinine when it was given, but had a slight relapse of hæmoglobinuria, which disappeared under larger doses of quinine. Three days after the onset the urine was pink, and gave a band of hæmoglobin but not of urobilin. Sugar and bile pigments were absent; albumin, 1 in 1,000; the leucocytes increased, with a number of granular casts and cells; there were very few red discs. In the peripheral blood hæmatozoa were found, resembling the æstivo-autumnal parasite. After the relapse no parasites could be seen; there was definite leucocytosis, and nucleated red discs were present. The casts and renal cells in the urine were fewer.

From these facts the authors thought three alternatives presented themselves: (*a*) That the disease is unconnected with malaria or quinine; (*b*) that it is caused by quinine; (*c*) that it is connected with malaria. If *a* be true, the disease could be acquired in England, or else must have a latent period of over a month. As to *b*, the blackwater preceded the administration of quinine by six hours. As to *c*, the connection with malaria was supported by the history and the fact that hæmatozoa were found as they have been by other observers. They think that it is really a complication of African malarial fever, much as we consider hyperpyrexia in reference to rheumatic fever.

Very similar views are, I believe, entertained by most of those who have had experience of the disease. Dr. Sims, American medical missionary on the Congo, who is now gone for a voyage for his own health, has seen many cases and looks upon them from a similar point of view. It must be nearly twenty years since the records of a number of cases of African malarial fever complicated with "bloody urine" were submitted to me, and led me to a similar conclusion.

As to the case before the society, Dr. Washbourn remarked that the characteristic feature of the disease seemed to be the presence of hæmoglobin in the urine, but the fact of blood cells also having been seen suggested some further change in the kidney which allowed the blood cells to pass. He thought the disease must be due to malaria, as it occurred only in those who had had malarial fever. As in pernicious forms of malaria the parasites may fix on certain organs—*e.g.*, the cerebral capillaries, and so simulating apoplexy; or in the intestinal capillaries, simulating cholera—so he thought it possible that the parasite might fix on the kidney and red marrow, thus producing hæmoglobinuria. The fact that only few parasites were found suggested that they were situated in some part of the body and did not become generalized.

The dispute at the Seamen's Hospital Society grows more complicated, but the committee seem as unable as before to justify their conduct and indisposed to apologize for their bad manners.

You will have heard of the case of plague arriving on our shores and the precautions taken by the sanitary authorities. Confidence is unshaken in their work, and there has not been, even locally, any panic.

Professor Kanthack died at Cambridge on the 21st inst., at the early age of thirty-five. His short professional career has been one of continual scientific work and success. He became M.R.C.S. in 1887, and took the fellowship the following year. He joined the College of Physicians in 1892, and was elected a fellow last year. His degrees were of the London University. In 1890 he went to India on the leprosy commission, and on his return was appointed to the John Lucas Walker studentship at Cambridge. Subsequently he was lecturer on pathology at St. Bartholomew's Hospital, where he did great work. Last year he received the professorship at Cambridge, and carried on his earnest work on his subject until malignant disease laid its fatal hand upon him.

You will think of Dr. Kanthack as the industrious contributor to our societies and journals, and as the learned pathologist. He was all this to us, and a most attractive teacher too—a man of wide culture and pleasant, unobtrusive manner. The energetic and laborious young professor has thus prematurely passed from us, and his place will not be easy to fill. The following tribute has been paid to his memory by Professor Virchow: "I am deeply distressed to hear of the death of my faithful friend Kanthack, whom I so recently saw in England. I bid him a last farewell. May English medicine never lack such men."

Dr. Campbell Black, of Glasgow, died rather unexpectedly on the 20th inst., aged fifty-eight years. He was a man of earnest purpose, an ardent medical reformer, and a pungent controversialist. The upholders of ancient abuses had a great dread of his pen, and some of them transferred their fear to his person, and did not scruple to oppose him in ways that hardly did them credit. On some questions he held rather unpopular or even heterodox views, which gave his opponents an advantage they could not obtain from his logic. He was for many years senior physician to the Glasgow Royal Infirmary, but was most unfairly passed over for the full physiciancy. But he held many other appointments, among them a professorship of physiology. If, like all strong and courageous men who are ready to sacrifice ease to promote right, he made some enemies by outspokenness, he excited the admiration of friends and fellow-workers, many of whom only a few months ago presented him with his portrait in oils as a token of their regard.

THE PROFESSOR OF DISEASES OF THE MIND AND NERVOUS SYSTEM IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.

To the Editor of the Medical Record.

Sir: In the Medical Record of December 17th, there is an article entitled "A Cheap Cure for Appendicitis," by T. J. Hutton, M.D., of Chicago, who includes among his titles that of professor of diseases of the mind and nervous system in the College of Physicians and Surgeons of Chicago. The only professor of diseases of the mind and nervous system that the College of Physicians and Surgeons has ever had is Dr. Oscar A. King, the present incumbent. Dr. Hutton is not a professor in that college, and is in no way connected with it.

We beg to ask room in your columns for this correction.

William Allen Pusey, M.D.,
Secretary College of Physicians and Surgeons of Chicago, Medical School, University of Illinois.

"THE PERPLEXITIES OF MEDICAL VISITORS IN NEW YORK."

To the Editor of the Medical Record.

Sir: The Medical Record of December 31st has just reached me, and I was much interested in the article headed as above, as during the present month I spent between two and three weeks in New York City as a "medical visitor," and regard my visit as most interesting and instructive. I was perhaps fortunate in having an acquaintance with several of the leading physicians and surgeons, but my experience was that, even where no such acquaintance existed, I was received with much courtesy and given every opportunity to witness operations and ask questions concerning them, which were always most willingly answered, even by those to whom I had had no introduction and to whom I was absolutely unknown. In several instances the operator would not only describe what he was about to do, but would also describe the different steps as he took them and his reasons for so doing, thus increasing the interest and benefit derived from witnessing them. It also confirmed Dr. Higgins' opinion of kindness extended when he was fortunate enough to find the men whom he wished to meet. From my experience I am thoroughly convinced that in the short two weeks no visitor could obtain so much medical and surgical knowledge in any city in Europe, unless he had personal acquaintance with the leading operators and understood perfectly the language spoken.

As you state, "if the writer had consulted the bulletin board at the left of the entrance in the Academy of Medicine he would have found cards announcing operations in many of the hospitals"; it would certainly be a great convenience to medical visitors to have cards posted much more generally than at present. Dr. Higgins is in error when he states that "the only hope of accomplishing anything is at three o'clock in the afternoon, and evenings are dedicated to amusements."

I certainly know of several operators of more than national reputation who do at least a part of their public work in the forenoon, and I attended some of the most interesting meetings and lectures of the various medical societies and sections at the Academy of Medicine and elsewhere during the evenings of my stay in the city, and had the pleasure of meeting, and listening to papers and discussions by, many of the leading men in the medical profession.

From my experience I believe that any physician visiting the city for a week or two would always be welcomed at those hospitals having large amphitheatres, like St. Luke's, Roosevelt, or the Presbyterian; while to visit those having smaller operating-rooms, like the Woman's Hospital, to prevent overcrowding it might generally be necessary to obtain a card of invitation.

Dr. Higgins asks for a practical remedy for the loss of time which he seems to have experienced, other than the one proposed by himself. I would suggest that the visitor desiring to see the public work of certain men connected with the various hospitals and public institutions of the city, address a note to each of those he desires to see at their work, either in clinic or operation, stating the week that he expects to remain in New York and his desire to observe their methods, inclosing a postal card with his name and address thereon while in the city. In this way I believe that he would be practically sure to receive from the men or their respective house physicians or surgeons an invitation to be present and observe their work at the hospital and date named on the card, in many cases the card also mentioning the cases to be treated or operations to be performed. I also believe that he would be most cordially received by most of the leading members of our profession, many of the best of whom commenced as general country practitioners themselves.

Edward R. Campbell, M.D.

Bellows Falls, Vt.

"MANSLAUGHTER, CHRISTIAN SCIENCE, AND THE LAW."

To the Editor of the Medical Record.

Sir: In my paper on "Manslaughter, Christian Science, and the Law," appearing in the Medical Record of November 26th, it was said that an English jury, in the case of Regina *v.* Cook, convicted one of the "peculiar people" charged with manslaughter in causing a child's death by withholding medical aid; the case should have been cited as Regina *v.* Senior. In Cook's case the jury found the parent guilty of gross negligence, but could not or would not agree that such negligence was the proximate cause of the child's death. In Senior's case, however, there was a conviction which the court for crown cases reserved has held properly found. This decision is thus noted in the *Law Times* of December 17th (vol. cvi., p. 151): "A parent is guilty of manslaughter if, in consequence of his wilful refusal to provide medical aid for his child, the child dies, whatever may be the parent's motive. It is a doctrine of a religious sect, calling themselves the 'peculiar people,' that it is sinful to administer drugs to the sick or to employ a physician. A mem-

ber of the sect refused to supply medicine to his sick child or to allow it to be attended by a medical man, and in consequence of the want of medical aid the child died. Held, that the parent was rightly convicted of manslaughter."

It would seem, however, that this decision rests upon the Act for prevention of cruelty to children (1894), 57 and 58 Vict., ch. 41, 10, which makes it a misdemeanor for one having charge of a child under sixteen years old wilfully to neglect it in a manner likely to cause injury to its health. The court here seems to regard deprivation of medicine as on the same plane with neglect to provide food; a point of view not taken by the court in Regina *v.* Wagstaffe, decided prior to the enactment of said statute.

The case is more fully discussed in the *Law Journal* of December 17th, vol. xxviii., p. 616, where it appears that in imposing sentence of four months' hard labor, Mr. Justice Wills said: "He did not believe the punishment which he thought it right to inflict would make the slightest difference with regard to the prisoner or other people with whom he was associated. Certainly it would not with regard to the prisoner, because it was the second child in respect of whose death he had been convicted."

Apropos of Harold Frederic's death and the discharge of the Christian scientists charged with it, the *Law Times*, which is much concerned of late with the harshness of the criminal law's administration, says: "The crown offered no evidence against the 'Christian scientists' when arraigned at the Old Bailey. By this judicious step one more forensic fiasco is avoided" (December 17, 1898). The *Law Journal* (December 24, 1898) says: "The prosecution which followed on the verdict of the coroner's jury of manslaughter against the persons who applied Christian science to the late Mr. Harold Frederic completely failed, the justices refusing to commit the accused for trial and the crown offering no evidence on the coroner's inquisition. But Mr. Justice Hankins carefully guarded himself against being supposed in any way to sanction the course taken, and the view of the high court in Regina *v.* Senior (*ante*, p. 616) as to neglect of medical aid to children would seem, if Regina *v.* Instar, 62 Law J. Rep., U. C., 86, be right, to apply equally to neglect of adult patients by those having care of them." Referring then to my paper in the MEDICAL RECORD, the *Journal* goes on: "The law in the United States seems to be near that of England; but to support a further proposition—viz., that wherever a statute makes the unlicensed practice of medicine a misdemeanor, if death result from the treatment by an unlicensed person he is guilty of manslaughter at least, no matter how honest his intent. This goes beyond the English law, which hitherto has punished the unqualified practitioner only where gross want of care or skill causes death (Regina *v.* Spooner, 10 Cox, C. C., 525)."

The last case referred to is misprinted, its title being Regina *v.* Spencer. The defendant was a qualified practitioner. He prescribed and also dispensed a tonic, after one dose of which his patient died, apparently of strychnine poisoning. Defendant, learning of this, took a dose himself to show the harmlessness of the remedy, but also exhibited signs of like poisoning. Willes, J., in charging the jury, said that the prisoner "being a competent man and properly educated in his profession, about which there seemed to be no doubt, this was not like the case of a quack who had not skill to master what he had undertaken"; and from this it might seem that it would have fared harder with the defendant if he had not been a qualified practitioner. The *Law Journal's* statement, however, seems sound. It is not a criminal offence in England, as it generally is in this country, to practise medicine without license; and even a "quack" is likely to escape conviction there of manslaughter except under very aggravated circumstances. The argument, too, against "constructive manslaughter," *i.e.*, unintentional killing by one engaged in a misdemeanor, is strong; but even under our laws a jury would be likely to incline strongly in favor of a person charged with such a crime; one value of juries being their disposition to disregard the letter of severe laws—as did that one which, in order to save a man's neck, found him guilty of stealing a guinea worth only a sixpence.

W. A. PURRINGTON.

59 WALL STREET. January 7, 1899.

INFLUENZA IN THE PUERPERAL WOMAN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Inasmuch as influenza has become a periodical visitor at our homes, it behooves us not only to consider the various characters it impersonates, but it is equally profitable to watch the rôle it plays either in forming entangling alliance, as it were, with other pathological intruders, or in choosing to travel incognito.

Undoubtedly the list of diseases into which the grippe enters as a complicating and aggravating element during its prevalence as an epidemic is quite considerable, and the study thereof interesting and profitable. However, to economize time and space I shall confine my remarks to the consideration of only one phase of the epidemic affection, namely, influenza complicating the puerperium.

As is well known, the puerperal woman is an easy prey to every infectious disease. Considering the remarkable rapidity with which influenza spreads its infection, and the universal medium—air—through which the latter is conveyed, there can be little wonder that during an epidemic of grippe, such as affects the community at the present moment, lying-in women are more or less shaken up. The recognition of the importance of an attack of influenza as a cause of the constitutional disturbance of a puerperal woman is the chief object of this communication.

Influenza attacks the puerperal woman in no way different from genuine septic puerperal infection. The initial symptom is invariably a chill. Then follows a rise of temperature—104°, 105°, or even 106° F. The tongue gets coated and dry, the pulse is rapid, and the headache is violent. This train of symptoms, which is precisely identical with that of a severe commencing septic puerperal infection, may remain unchanged for a period of twenty-four or forty-eight hours. It is just this period which is most trying for the physician in attendance. And it is precisely at this stage that the physician must pause to think of a possible invasion of influenza before he commits himself to an erroneous diagnosis and unnecessary and injurious treatment—the latter may range anywhere from an intra-uterine irrigation to a total ablation of the uterus and appendages. This period over, the protean affection will clearly resolve itself into one or the other of its several types, namely, catarrhal, pulmonary, cardiac, typhoid, or abdominal. The latter type of influenza as a complication of the puerperium merits special attention. For whereas the other forms when well defined are easily recognized, this, the abdominal form, when well established may all the more raise the suspicion of the presence of puerperal infection. The abdominal type of grippe is characterized, in addition to the above-mentioned initial symptoms, by severe intestinal colic, constipation, and tenderness over the abdomen. To illustrate:

Mrs. S——, thirty-eight years old, was delivered of her eighth child three weeks ago. Labor lasted four

hours and was in every way normal. Absolute cleanliness was scrupulously observed. On the third day she suddenly developed a severe chill, which lasted one hour. The chill was followed by a temperature of 104.5° F., a rapid pulse, great thirst, and headache. About sixteen hours later the woman complained of pain in the abdomen. Pressure intensified the pain. There were no vomiting, no diarrhœa, and no constipation, as the patient's bowels moved shortly before the attack set in. The pain and tenderness were universal, although at times she seemed to have had a trifle more pain on the left side of the pelvis. This condition lasted five days, the symptoms varying in intensity, sometimes severe and sometimes mild. The point of greatest interest is that the temperature hardly varied, and that the chill was frequently repeated, though never lasting more than five or ten minutes. The termination was sudden, as if by crisis. This case is an excellent illustration of the abdominal type of influenza, and how it may simulate "puerperal fever" when it overtakes the accouched.

Now what are the guiding points in the differential diagnosis?

In a paper published in the *American Journal of Obstetrics*, vol. xxxi., No. 6, 1895, entitled "Influenza Complicating the Puerperium; a Study Based on a Series of Sixteen Cases," I took occasion to state the circumstances which enabled me then to arrive at a correct diagnosis, and which I beg to repeat in this communication: "The uterus in every case was normally contracted and of normal size; no tenderness or pain over it or its appendages, either by abdominal palpation or vaginal examination. The lochia, which in the very severe cases were somewhat suppressed, yet in all were of the normal color and odor; the os was not patulous, and tympanites was absent." To these valuable data I may add that in almost every case there is that peculiar malaise so typical of influenza; there are pains in the arms, legs, and back; and irritation of the throat. The latter symptoms are particularly helpful in dealing with the abdominal type; they are seldom absent.

R. ABRAHAMS, M.D.

156 CLINTON STREET, NEW YORK CITY,
January 7, 1899.

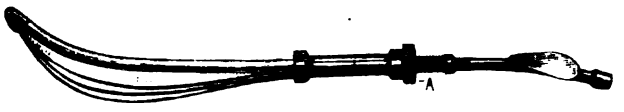
New Instruments.

A DILATING UTERINE DOUCHE.

BY CHARLES E. WILLIAMSON, M.D.,
BROOKLYN, N. Y.

I HAVE recently had my attention called to an improvement in uterine douches which has pleased me so much that I venture to record my experiences with the instrument, together with a brief description of it as it appears to me.

The douche in question consists of a bent tube,



round, of about one-eighth of an inch calibre, the distal end being perforated by an oval opening on the lower surface, and several slots on each side for the ready escape of fluid. The dilating apparatus is simply three stout wires, so placed as to lie flat against the tube when collapsed, and rapidly and easily distended by a thumbscrew, which works on the tube itself and by means of which any amount of dilatation can be secured.

The entire instrument is detachable, and can be readily taken apart for purposes of sterilizing. I have used it in several cases where thorough intra-uterine irrigation was required, and found its introduction while collapsed an easy matter, and its expansion while *in situ* very simple and effectual and at the same time perfectly painless to the patient, for the reason that the moment pain was experienced the operator could stop for a few moments and then proceed until the desired degree of dilatation had been secured, without losing that already obtained; thus providing an efficient exit for the return flow, establishing a most complete drainage.

After a curettage the dilatation and irrigation have been entirely satisfactory, no plugging of the instrument or blocking of the opening occurring.

Unless marked rigidity of the cervix is present, I believe the ordinary uterine dilator can be dispensed with, the douche taking its place, thus lessening the dangers of infection by having one less instrument to use, and there being only one insertion of an instrument that is being constantly flooded by an antiseptic irrigating fluid, making the operation as safe as possible.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 14, 1899:

	Cases.	Deaths.
Tuberculosis	203	147
Typhoid fever	17	3
Scarlet fever	161	12
Measles	170	7
Diphtheria	192	30
Laryngeal diphtheria (croup)	21	7
Cerebro-spinal meningitis	0	4
Chicken-pox	45	0
Smallpox	0	1

Right-handedness.—Kellogg believes that the child is born using both hands, arms, and legs equally well. Right-handedness is the result of careful training on the part of nurse and parent. Left-handedness is probably started by a burn, strain, or injury of the right hand during the critical period of babyhood. The great advantage of ambidexterity is dwelt upon, and Alexander Mott, Joseph Pancoast, Samuel F. B. Morse, Leonardo da Vinci, and Michael Angelo are mentioned among the other notable ambidexters. The crossed fibres to either brain are believed to be a switching-off apparatus, intended for only temporary use, and all arguments based on anatomy as forcing right-sidedness are thought to be weak.—*Massachusetts Medical Journal*, October, 1898.

Health Reports.—The following cases of smallpox and yellow fever have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending January 14, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Catherine	January 6th	Present.	
Collerine	January 6th	1	
Mobile	January 3d to 6th	2	
Illinois, Bethel	January 7th	2	
Media	January 7th	1	
Nebraska, Nebraska City	December 12th	63	
Nebraska City	January 7th	3	

SMALLPOX—FOREIGN.

Belgium, Antwerp	December 3d to 26th	19	6
Brazil, Rio de Janeiro	November 26th to December 2d	8	6
England, London	December 17th to 24th	..	1
Mexico, Monterey	December 28th	..	1
Russia, St. Petersburg	December 3d to 10th	3	

YELLOW FEVER.

Mexico, Monterey	December 30th to January 5th	..	3

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Original Articles.

MEMBRANOUS ENTERITIS AND ITS TREATMENT.*

BY MAX EINHORN, M.D.,

NEW YORK.

BY membranous enteritis (enteritis membranacea) is understood, as is well known, an affection in which more or less large pieces of mucus (usually ribbon-like) are passed with the fæces. The mucous evacuations frequently appear in the form of periodic attacks, preceded by colicky pains of variable intensity in the abdomen; diarrhœa of a few days' duration usually accompanies such an attack. Thereafter the patient feels better for some time, until he is again seized with the colic and mucous discharges. Although our knowledge of the affection under consideration is by no means of recent date, I may be permitted to give you my experiences on this subject, as it is of great importance to the practitioner.

History.—This affection seems to have been familiar to the medical world for several centuries. Paulus Ægineta,[1] in speaking of the passage of the inner membrane of the intestine, has certainly dealt with cases of membranous enteritis, and erred only in the explanation of these masses.

Sennertius and Morgagni[2] recognized these membranes as mucus, which had been inspissated and moulded in the intestine.

Mason Good[3] was the first to describe this affection under the name of "tubular diarrhœa," which name has also been accepted by Woodward.[4] The latter author adds that in case the membranes in a given instance have no tubular form, the expression "membranous diarrhœa" is suitable.

F. Siredey[5] contributed a very valuable paper in 1869 in reference to the knowledge of this affection. He described one case of mucous discharge in a man and six cases in women, and arrived at the conclusion that in some instances these mucous discharges occur in patients whose intestinal tract does not reveal any organic lesion whatever. For this reason Siredey considers this affection as an intestinal neurosis, occurring principally in hypochondriacs and hysterics.

Whitehead[6] describes this affection under the name of "mucous disease," cites the entire old literature, and gives detailed rules with regard to treatment and diet. He says: "Exercise, short of fatigue, should be taken daily. The diet is perhaps the point of all others where the greatest mistake is made. An idea, strongly felt by the patient, that a great amount of strengthening food is required, leads to the further exhaustion of an already enfeebled digestion. Impress upon the patients the fact that it is the quantity absorbed which means strength, and not the bulk swallowed, and it is possible to check the error they are so anxious to commit. Certain articles of diet should be strictly interdicted, the chief of which are the following: Liquid food, excepting milk, aggravates in the majority of cases every symptom; sugar is invariably hurtful; tea, coffee, and alcohol—Burgundy being the only wine from which I have ever derived benefit—vegetables, and fruit also prove injurious."

Cruveilhier and Laboulbène[7] discuss this ailment under the term "pseudo-membranous enteritis."

One of the best papers upon this subject was written by Da Costa,[8] who called it "membranous enteritis." This author gave a full description of this affection, recognized its nervous character, furnished several detailed cases, and put particular stress upon dietetic treatment. Da Costa permits eggs, milk, bread, and solid food, which is better borne than liquids; tea, coffee, and alcoholic stimulants are to be permitted only in very small quantities. As regards vegetables, we must observe whether they pass unchanged in the stools. Fresh meat juice is serviceable; from an exclusive milk diet, even faithfully carried out, he has seen no good. Furthermore, Da Costa recommends that great attention be paid to the action of the skin, and believes baths followed by systematic friction to be very useful. Daily moderate exercise is advocated, particularly in cool weather, and if possible an occasional trip to the mountains and living out of doors in the bracing mountain air. Everything that can be done to invigorate the digestive and nervous systems forms the essential part of the therapeutics.

A few years later there appeared an article by Edwards,[9] who coincided with Da Costa's views in most points, being, however, much stricter with regard to diet. He says: "Easily digested or even predigested food should be supplied, and care should be taken that undigested particles of food are not irritating the intestinal canal."

Leyden,[10] in 1882, directed attention to membranous enteritis in Germany, where also very soon appeared exhaustive publications on this subject. Nothnagel[11] suggested the name "colica mucosa," in order to show that a true enteritis need not exist in these cases and that the disease really is a mucous colic. Rothmann[12] was the first to publish a case of membranous enteritis —complicated with cancer of the skull—in which an autopsy was made. By means of Weigert's stain, or rather by Ehrlich-Hoyer's thionin (a specific stain for mucus), double-stained specimens could be obtained, which showed the presence of large quantities of mucus on the surface of the large bowel in the glandular tubules. In this paper Rothmann arrived at the following conclusions:

1. Membranous enteritis, or, more correctly, mucous colic (Nothnagel), is a disease of the colon.

2. It is caused by an increased secretion of the glandular cells, brought on by continued constipation.

3. The slightly inflamed state of the mucosa must be considered as of a secondary character.

4. The secreted masses consist of mucus.

Ewald,[13] Boas,[14] Kittagawa,[15] Pariser,[16] and others have added further contributions.

Ewald laid stress on a ptosis of the colon, Boas on atony of this organ as important factors in this affection.

Etiology.—Most authors agree that membranous enteritis is quite a rare affection; it occurs much more

* Read before the German Medical Society of New York, November 7, 1898.

frequently in women than in men (children being only exceptionally affected).

That the nervous element (hysteria, neurasthenia) plays a great rôle in the origin of this trouble, no one can doubt, and W. Mendelson[11] is right when he asserts that neurasthenia is not absent in any of his cases. Mendelson goes too far, however, when he says: "I believe that the reverse of the proposition may also as confidently be affirmed—namely, that if neurasthenic patients be closely questioned, very few will be found who have not had at some time repeated characteristic passages of stringy mucus, associated with abdominal pains." Membranous enteritis is found in nervous individuals (possibly the affection as such adds much to their neurasthenia); but only a small fraction of the great mass of neurasthenics is afflicted with this ailment.

With regard to the frequency of membranous enteritis, I examined my private patients of the year 1897 relative to its presence, and take the following data from my day-book. The total number of patients was 1,315—772 men, 543 women. Twenty of these patients suffered from membranous enteritis—two men and eighteen women. The frequency of membranous enteritis among sufferers from digestive disorders expressed in percentages is, in men, 0.25 per cent.; and in women, 3.31 per cent. Among these twenty patients, twelve had enteroptosis in a pronounced degree. Ewald has already pointed out that a prolapse of the colon is frequently found in patients with membranous enteritis. Our own observations fully confirm this statement, for with the prolapse of the stomach descent of the colon naturally must be presupposed. It appears that enteroptosis certainly creates a fruitful soil for the development of membranous enteritis, although it does not directly cause it. Enteroptosis is, as is well known, very frequent, while membranous enteritis is rare in comparison with the former. There must, therefore, be still other factors which are of importance in the causation of membranous enteritis.

In perusing the literature of our subject, I found no remarks on the condition of gastric secretion in this disease, and yet it appears as if the examination of the functions of the stomach may possibly be of some value in this respect.

Of the above twenty patients, twelve have been frequently subjected to examination of the gastric contents, and I may be permitted to state briefly the result of these in the annexed table:

TABLE OF PATIENTS WITH MEMBRANOUS ENTERITIS IN WHOM THE SECRETORY AND MOTOR FUNCTIONS OF THE STOMACH HAVE BEEN EXAMINED.

No.	Name.	Age. Years.	Duration of Disease. Years.	Position of the Abdominal Organs.	Examination of Gastric Contents, One Hour After Test-Breakfast.				Diagnosis with Reference to the Stomach.	Remarks.
					Quantity Obtained.	HCl.	Rennet.	Acidity.		
1	Mrs. Johanna B.	63	7	Enteroptosis, right movable kidney.	20 c.c., containing very little fluid; the pieces of roll unchanged.	0	0	Fluctuates between 0–4.	Achylia gastrica ...	The attacks are of severe nature and last from five to seven days.
2	Mrs. W. C. A....	52	5	Normal.....	15 c.c., little fluid; particles unchanged.	0	0	Neutral reaction.	do.	
3	Miss Mary S.....	40	12	do.	About 20 c.c., little fluid; particles of roll scarcely changed.	0	0	do.	do.	The patient suffered every two or three months from a severe attack of intense abdominal pains, mucous discharges, and diarrhœa for about one week.
4	Jacob R.....	55	2	do.	15 c.c., thick contents; particles of roll entirely unchanged.	0	0	4	do.	
5	Mrs. N. Z.....	48	6	Enteroptosis, hepatoptosis, right movable kidney.	20 c.c., containing very little fluid; particles of roll very little changed.	0	0	4	do.	
6	Miss Helen C....	22	7	Enteroptosis, right movable kidney.	80 c.c., contents show about one-third of mucus; particles of roll rather fine.	+	+	28	Gastritis glandularis chronica mucosa.	
7	Mrs. C. D.....	46	8	do.	60 c.c., contents show considerable mucus; particles of roll quite changed.	+	+	36	do.	The attacks are of a severe type, with vomiting of large amount of mucus of a stringy nature, lasting three to five days, and appearing every five or six weeks.
8	Mrs. Sara S	36	4	Enteroptosis, right movable kidney, ptosis of the colon easily proven by palpation.	30 c.c., containing little fluid; particles of roll slightly changed	+	+	44	Normal secretion; accelerated prochoresis.	
9	Mrs. J. M.....	30	5	Enteroptosis, right movable kidney.	20 c.c., containing little fluid; particles of roll almost unchanged.	+	+	52	do.	
10	Mrs. Celia B ...	38	9	Normal.....	About 20 c.c., containing little fluid; particles of bread almost unchanged.	+	+	40	do.	
11	Mrs. F. D	33	8	Enteroptosis, right movable kidney.	100 c.c., containing fluid in sufficient amount; bread changed into very fine particles.	+	+	52	Normal.....	During the attacks of mucous colic, severe obstinate vomiting appears.
12	George L.....	27	12	do.	70 c.c., containing considerable fluid; particles of roll nicely minced.	+	+	76	Hyperchlorhydria.	

What is most conspicuous in this table are the following two points:

1. The motor function (prochoresis) of the stomach—judged from the amount of contents found one hour after the test breakfast—was increased in eight cases and normal in the four remaining.

2. Five cases presented a typical achylia gastrica.

Considering the comparative infrequency of achylia gastrica, which hardly amounts to two or three per cent. of the digestive disorders, this large figure of achylia in patients with membranous enteritis—namely, five to twelve—is certainly noteworthy.

The three cases of membranous enteritis with normal acidity revealed, besides the increased prochoresis, still another feature in common with achylia—namely, the extraordinarily small amount of fluid surrounding the scarcely changed particles of roll, one hour after the test breakfast. Although this symptom may occasionally be met with in other cases than achylia, it is nevertheless, as a whole, characteristic of this affection. Therefore we are justified in making the following

statement: In many cases of membranous enteritis typical achylia is present, in some it is lacking, but even then some features characteristic to achylia are encountered. In membranous enteritis achylia thus plays a great part. Whether one condition causes the other, or one and the same factor (nervous influences) creates both, is difficult to say. The latter, however, is more plausible.

Symptomatology.—As mentioned above, the disease is characterized by attacks of rather violent colicky pains in the abdomen, which are followed by the passage of mucous masses with the stools. The mucus may be voided either alone, without any admixture of fecal matter, or it forms a considerable part of the evacuation. Usually the attack is preceded by a period of obstinate constipation, and often followed by diarrhœa, lasting a few days and sometimes accompanied by tenesmus. Gastric symptoms—as loss of appetite, frequent belching, now and again a burning sensation at the pit of the stomach—are generally quite pronounced during the attack. Vomiting may occasionally appear, while fever is, as a rule, absent. The attack lasts three to seven days, and then the pains subside, the diarrhœa ceases, and euphoria reappears. More or less constipation, however, and some other dyspeptic as well as nervous symptoms persist. These free intervals last various periods of time (four weeks to five or six months). In rare instances the mucous discharges may be present continuously.

With reference to the mucous masses, they present a grayish-white appearance, seldom yellowish, and have either a ribbon-like or membranous form; at times the pieces are several feet long; ordinarily, however, they are considerably smaller. Complete moulds of the intestinal lumen have been observed by several authors, and Leyden not unjustly has compared this process with that of croup of the larynx. As already stated by Cornil,[18] the false membranes consist of mucus, mixed with dried-up epithelial ovoid cells, which arise from a mucous metamorphosis of the cylindrical cells or the leucocytes. Nothnagel, as well as others, has proven the mucous nature of these discharges.

As suggested by Pariser, the mucous nature of these masses can be proven by treating them, first, with sublimate alcohol, and then staining them with Ehrlich's triacid solution. A green color appears, which indicates mucus (fibrin treated in the same manner assumes a red color). Judging from my experience it is unnecessary to dip these membranes first into sublimate alcohol, as the same result will follow when they are put directly into the weak triacid solution. Microscopically this substance reveals a somewhat fibrillary nature, and contains many shrivelled cells, so called by Nothnagel. Micro-organisms are found admixed, although they do not seem to play any important part in this affection. In two of my cases microscopically single-celled corpuscles were found in these masses, having a distinct nucleus and a tail-like process. (Accompanying drawing shows these corpuscles.) Whether these are metamorphosed goblet cells or infusoria, I have as yet not definitely concluded.

Diagnosis.—The diagnosis of membranous enteritis is, as a whole, simple when the above-mentioned characteristic symptoms, including the mucous discharges, are present. It is, however, necessary to be careful not to mistake for mucus other substances admixed in the fæces, which occasionally resemble shreds of mucous membrane—as, for instance, the fibre of an orange, tendons, pieces of tapeworm. A microscopical examination will guard against all such errors.

This affection will hardly be confounded with real intestinal catarrh, as it presents an entirely different picture, and only occasionally may have an abundant secretion of mucus in common with mucous colic. There are, however, cases of chronic intestinal catarrh which are complicated with membranous enteritis—that is, having typical attacks of mucous colic. The following case presents an instance of this kind:

Miss L. N——, twenty-eight years old, had diarrhœa eleven years ago for quite a while, which disappeared after two or three months. The patient was then well until four years ago, when she again began to be troubled with diarrhœa. Soon periods of obstinate constipation appeared, which alternated with diarrhœa. The patient reports having observed occasionally mucus in the passages; occasionally (about every five or six weeks) there appear abdominal pains, for about one or two hours, followed by an evacuation of pure mucus, the quantity being one to two tablespoonfuls. The appetite was always good. Now and again there was belching. Patient lost about twenty-five pounds in weight. Sleep is undisturbed, only at times restless for a few days. Her strength greatly failed. The palpation of the abdomen reveals spots sensitive to pressure in the entire course of the colon. The examination of the fæces in the free interval shows small

FIG. 1.—Microscopical picture of mucous masses found in the evacuation of Mrs. L., showing numerous cells having a nucleus and a tail-like process.

quantities of mucus well mixed with the fecal matter. The mucous masses voided after an attack of pains are free from fecal matter, appearing grayish-white and staining green when treated with Ehrlich's triacid solution.

Treatment.—Diet plays the principal part in the treatment of membranous enteritis. While the older writers laid stress on scanty light food, it is now generally accepted that abundant nutrition is of the greatest value. That a fluid diet is unsuitable, the older authors have already been cognizant of (Da Costa, Whitehead, Siredey), and this axiom holds good in its entirety even to-day.

Recently von Noorden[19] advised a very coarse diet, being guided by the idea that the intestinal tract should be exercised and strengthened by increased work. He recommends half a pound of bread per day containing plenty of chaff, leguminous vegetables, garden vegetables rich in cellulose, fruits with small pits and coarse skin, as currants, gooseberries, grapes—these being foods rich in undigestible material, thus forming much ballast for the bowel. Among fifteen patients subjected to this treatment by von Noorden, seven were permanently cured, seven improved, and one was unchanged.

This method has certainly much in its favor; it may be better, however, not to institute this diet abruptly, as suggested by von Noorden, but rather gradually.

I, for my part, for some years past have seen to it that my patients partook of an abundant and nutritious diet, without, however, advising substances that were too coarse. As a whole, I recommend ample food and try to keep the patients on a mixed diet containing plenty of vegetables. In patients who have lived on a strict diet (as, for instance, milk diet or beef and hot water), I arrange the change gradually. The principle here is the same as stated by von Noorden, only not carried to such an extreme. It appears sufficient if the intestines of the patient with membranous enteritis are trained to master the foods customary in healthy persons, and the accomplishment of this object is all that is required. If we subsequently see that the organism amply fulfils its work, a few less digestible foods may then be added. It is not necessary to recommend these immediately from the start, nor are they important for the cure.

With regard to therapeusis, two phases will have to be considered—the treatment during the attack and the treatment during the interval. In severe attacks, rest in bed, warm poultices over the abdomen, a cleansing enema (of ordinary warm water with the addition of some common table salt or essence of peppermint—one teaspoonful to a quart), and afterward the administration of codeine or opium, with or without belladonna, are of value. As long as the pains last it is necessary to give light food (small quantities frequently). In mild attacks a stay abed may not be requisite, nor the administration of an analgesic remedy, and the diet may be the same as during the interval.

In the interval free from pains the treatment consists in a methodical application of oil enemas, as suggested by Kussmaul and Fleiner.[20] These enemas are injected into the bowel at night, at blood temperature, the quantity being two hundred and fifty to five hundred cubic centimetres. The patient is then instructed to try and retain the oil in the bowel during the night. The patients seldom assert that they are disturbed in their sleep by these injections and have to answer nature's call. In such an instance the quantity of oil may be reduced to one hundred and fifty or one hundred cubic centimetres. The oil should be injected every night for three weeks; then every other night for three weeks; twice weekly for four weeks; finally, once weekly for five to six months. Besides, patients must accustom themselves to a regular morning evacuation, by promptly visiting the closet every day at the same hour in the morning. Next to abundant nourishment the methodical oil cure is of the greatest importance in the treatment of this affection, and the results achieved are, according to my experience, very satisfactory. The administration of oil injections in membranous enteritis is mentioned here and there in recent literature, especially by Ewald, but its value must be placed much higher than heretofore. The oil has not only a favorable influence upon the constipation which is always present in this malady, but at the same time also effects a diminution or a disappearance of the mucous discharges. How the oil brings this about is difficult to say. The favorable effect may perhaps be explained by the circumstance that by means of the oil the intestine is not left in an empty condition during the night, and thereby a spasmodic contraction is avoided, which must be regarded as one of the principal factors in the formation of mucus.

It is evident, according to our statement with regard to the etiology, that enteroptosis and anomalies of the gastric functions (principally achylia) exist in a large number of these cases. It will, therefore, be necessary to bear these points in mind and to treat the cases accordingly. The neurotic symptoms present in these cases should not be neglected in the general plan of treatment. We shall have to pay attention to a regular hygienic mode of living and ample physical exercise. In suitable cases occasionally hydrotherapeutic measures will be of value. The tonic remedies, like iron, arsenic, etc., will also prove beneficial.

20 East Sixty-Third Street.

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20. Fleiner: Berliner klin. Wochenschr., 1893, No. 3.

A SERVICE VIEW OF INGUINAL HERNIA.[1]

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If conservatism is a mark of wisdom in connection with surgery, then military surgery during times of peace, at any rate, should be especially commended. The young military surgeon entering upon his active duties is apt to be led astray by his title of surgeon, and to imagine that his daily routine work is to consist of major operations, or at least to be in the line of operative work. He soon finds, however, that he is expected by his patients to be not only a specialist of high grade in surgery, but likewise an expert in general medicine, diseases of the eye, skin, etc., and even on occasion to be a skilled and tried veteran in obstetrics and gynecology, with a "tactus eruditus" beyond reproach. As time goes on, however, broadening views of his responsibilities and the relation of his work to the welfare of his government and the efficiency of the service tend to bring about a conservatism that strikes an outsider as peculiar. In ordinary civil practice the surgeon has only the welfare of his patients to consider; everything else can usually be made to yield to that, and freed from all other trammels the surgeon can devote himself to his work with apparent ease.

In military life four great factors must be taken into consideration: First, the welfare of the patient; second, the responsibility of the government for the results of surgery; third, the maintenance of individual efficiency which makes the perfected general organiza-

[1] Presented to the American Association of Military Surgeons, June 1, 1898.

tion; fourth, the care of one's own reputation, which, as it is always a factor in civil life, is perhaps an even more important factor in military life.

From these considerations the military surgeon grows more and more cautious as to his examination of recruits, as to the treatment of his patients, and, above all, as to the possible outcome of any line of treatment, surgical or other, which may in any way tend to show any degree of thoughtlessness or lack of consideration. He can no longer interest himself simply as to the question of life and death of a patient; he must consider as well the question of pensions and whether without operation many years of service are not possible. Should there be a doubt, the surgeon naturally hesitates in undertaking an operation which may deprive the service of a certainty, even though the patient may desire operation and the surgeon may be fairly certain of success.

Perhaps one of the brightest fields for surgery in the service is in connection with cases which form the subject of this paper. It has almost grown to be a maxim that any case of hernia existing in persons up to thirty-five or forty years of age is justifiably operative. This was formerly the writer's own opinion, but when we are constantly brought face to face with men who are doing full duty with the use of trusses, and those who have apparently outgrown a hernia, one is inclined to hesitate in stating, as a general law, that all hernias should be operated on.

The importance of the subject of hernia in general is seen when we find that, according to the statistics of various authors, from one in three as a minimum, to one in seven as a maximum, percentage of the human race suffer from some form of hernia at some time of life. From these same men the services must be recruited, and many otherwise satisfactory applicants are turned away from this cause, and not only those with actual hernial lesions but also those who, by reason of large and lax abdomens and inguinal rings, show the probability of trouble to come if subjected to strain and sudden activity. This of course gives a still larger percentage of undesirable cases. If now a successful cure could be assured in many of these cases, the recruiting field would be much enlarged.

This, of course, could not be undertaken by the medical department of any service, but many men anxious to enter on a military career would gladly undergo a safe operation, providing it led to success in passing a recruiting examination.

At present, such is the state of past experience, that any man presenting with a hernial cicatrix from operation would probably be rejected. This, therefore, is not a feasible means of overcoming the objection at present, but with the improved methods of operating there would seem to be a probability in time that many of these unfortunates would be gladly accepted and many otherwise very desirable men obtained for service. In the European services, where military life is compulsory and where every man capable of doing service is needed at some time or other, the question of hernia has become of rather marked importance. From statistics it would seem that at least twenty per cent. of all those suitable for military service are found incapacitated therefor by reason of existing hernia. Thus Plahl reports that in five years (1889–93) in Austria-Hungary not less than 78,585 men, or 22.5 per cent. of those liable for service were found to have hernia. It seems to have been decided that operation for radical cure of hernia cannot be made compulsory in those not choosing the military life as a profession, but in those who have so elected the operation is of decided benefit.

In civil life the opportunities of contracting hernia are only too apparent, but here a choice of living may aid one in preventing such accidents; but in the service, as a rule, no such protection is possible. The demand at any time for prompt action, the varieties of strain, and the inability to think of personal welfare make every one, officers and men alike, peculiarly liable to this condition. In the army, even in times of peace, efficiency in drills demands prolonged and enormous strains that result frequently in rupture. In the navy, the perpetual gymnastics necessary in ship-life frequently results in various forms of hernia. Running up and down ladders, falls, strains from pulling ropes and boats, lifting, and even the twisting, bending, and cramped positions in examining double bottoms have all been known by the writer as the cause of hernial ruptures. It is to be noted, however, that in the vast majority of these cases there is often a predisposing abdominal laxity or a large, loose, and easily distended inguinal ring.

Such accidents occurring in the service are often lamentable in their results, both to the individual and to the service. A hernia changes a man's career in many ways; he instinctively keeps his failing in mind, becomes cautious and chary of exertion; he is always dreading the time when actual service conditions shall demand his utmost efforts, and the fear of incapacity coming in the midst of critical events haunts him. Such cases among officers especially I have found on several occasions. Many an otherwise brilliant career is abruptly ended in this way and years of waiting and labor are rendered void; so much for the personal factor. To the service, the loss forms a serious matter for consideration. The money and time devoted in training skilled and valiant men is wasted and the hernia becomes a burden to man and service, both being always on the anxious seat for fear of something impending.

To be able by a safe and sure method to relieve the hernial condition becomes then a matter of extreme importance and deserving of our serious attention. It is to be noted that our task is made somewhat easier by the fact that these hernias are usually of one variety, *i.e.*, inguinal.

Perhaps enough has been said to show the importance of the subject. Dr. C. H. Mastin says: "It is estimated that 1 death in every 600 occurs from hernia. Dr. Baxter, United States army, shows that out of 334,321 persons examined by recruiting officers for admission to the army during the late war, 17,226 were found and rejected, and inside of two years 38,132 were invalided on account of hernia and discharged. The ratio of cases on the Confederate side would probably show nearly as great. In civil life, in England, it was estimated by Hamilton that there were 1,250,000 persons suffering from hernia. The sale of trusses by a single house in Philadelphia in one year is said to have been 250,000."

It has long been evident that the solution of the hernial problem was almost within our grasp, but each new method has in time proved its weakness and been succeeded by others. At the present time success seems once more almost reached through the efforts of McBurney, Bull, Halsted, and others in America, and Bassini and many German, French, and Italian surgeons in Europe.

Recently the medical department of the United States army has inaugurated an attempt to relieve such cases in its service. The radical cure of hernia was agitated some three or four years ago, and the measure determined to be of enough importance to give it a trial. From the report of the surgeon-general of the army for 1896, the following is taken in regard to the "treatment of enlisted men who have been ruptured in line of duty."

"Cases of hernia suitable for an operation should receive surgical treatment, which, by the most approved modern methods, is successful in a large pro-

portion of the cases operated upon, and in skilful hands is attended with little risk. Operations for the radical cure of hernia will be performed, with the consent of the soldier, by medical officers specially designated by the surgeon-general of the army. Medical officers will report cases of hernia considered favorable for operation to the surgeon-general. If the case is considered unsuitable for operation, or if an operation is declined by the soldier, the fact will be noted upon the certificate of disability. (Decision Acting Secretary of War, August 14, 1895, 19,166, A.G.O., 95.)

"Since then twenty-nine cases of hernia have been treated by operation with the most satisfactory results, so far as can be determined at this early date. This gives an excellent promise of future benefit in cases that have been hitherto regarded as permanently disqualified for military service."

The report for 1897 continues: "During the past two years seventy-nine cases of hernia have been operated on by army surgeons: Officers, three; enlisted men, sixty-four; military cadet, one; discharged soldiers, four; and civilians, seven. The history of each case has been followed as far as possible to date, with the development, so far, of three instances of recurrence. In one, a second operation was performed with success; in the two others the men declined further operation and were discharged for disability. The occurrence of phlebitis in two of the cases is a subject of interest. In both cases the phlebitis affected the left leg, the operation having been performed on the other side. In one the disease was mild and did not delay the convalescence; in the other the phlebitis became developed in the right internal saphenous vein, and the man was discharged for disability about six months after the operation."

These reports are very encouraging, and if the cases reported as successful stand the test of time, would seem to amply justify the operation. The cases affected with phlebitis, two in number, were undoubtedly due to some intercurrent trouble and to be in no way ascribed to the operation itself. In only three cases are failures reported, and of these one case was successfully reoperated on. This makes but two failures in the entire list of cases, and certainly speaks well for the operation and the skill of the army corps.

It has been suggested that relief for hernial cases should be attempted in the navy, and there would seem to be no good reason why this operation should not become a part of our hospital work. Under the present energetic and progressive policy of the medical department of the United States navy our hospitals have been remodelled and put in excellent condition for advanced and efficient operative work. At the present moment, most if not all the hospitals are equipped with the very latest and best facilities for operative work, and with the growing professional interest, and the command of well-trained operators and assistants, there would seem to be no reason why this special work in hernia should not be taken up. It would seem fitting that at least one or two of our modern hospitals should take up this work specially, and with the constantly recurring cases there should be no fault of technique or special operative skill to make the effort highly satisfactory to all concerned.

It has already been pointed out that the only lesion we have to do with practically is inguinal hernia. It is our intention to notice the various methods briefly, and endeavor to point out the most suitable, and also to call attention to some steps in the operative procedures which seem to us to be of first importance in securing a permanent cure, and upon which stress is not usually laid in the numerous works on the subject.

Concerning the methods, we may sum up the results of centuries of study and present the following as worthy of mention:

1. External appliances, as ointments, plasters, injections, cauteries, trusses, etc.

2. Simple incision, returning the intestine and closing the abdominal ring.

3. Attempts to plug the canal by: (*a*) Simple sutures; (*b*) inverted sac; (*c*) by incision of the sac and plugging the canal by omentum, connective or other adventitious tissues at one's command; (*d*) by the incision of the roof of the entire canal and causing the canal to be filled with new granulation tissue, obliterating the canal (McBurney method); (*e*) extensive dissection of the whole field; exposure of inguinal canal and rings; isolation and removal of sac, absolute obliteration of peritoneal pouch; restoration of divided layers of abdominal wall; obliteration of former canal by buried sutures; an artificial canal for spermatic cord; perfect asepsis (Bassini and Halsted operations).

1. Of the first we have to say that the procedures are mostly palliative. External appliances should be looked upon in themselves simply as safeguards to prevent recurrence, temporary expedients, until some more radical measure may be applied. Of course, there are undoubtedly cases of intense strain where good, strong rings are forced open, and which are not sufficiently damaged to prevent their being perfectly efficient when the hernial protrusion is returned. Such a case came under my notice a few days ago. There had been a bubonocele, and on examining the ring and canal the day after the bubonocele had been returned, I was surprised to find a remarkably strong and tight ring. Such a case, I can imagine, would possibly not be attended by any return of the trouble, even without any interference. I am willing at this time to admit that some cases of hernia get well with trusses, but that the truss is ever the curative factor is extremely doubtful. Injections, which include Heaton's method, may be of use in some cases when there is but slight imperfection in the mechanism of rings and canal. I have tried this method of procedure, using iodine many times and with apparent successful results in a few cases, but never in what might be termed well-marked hernia. Of other methods under this heading, none need be mentioned at this time. The ancient procedure of returning all the hernial contents carefully, and using a cautery to destroy absolutely the canal, allowing granulations to spring up and fill the canal, at one time might have been looked upon as a fairly good procedure, but would scarcely be thought of to-day, and as an operative procedure lacks the essential element of restoring absolutely the peritoneal cavity by obliteration of the sac protrusion.

While on the subject of trusses, it might be well to mention that the pneumatic truss is, to the writer's mind, the best one, and all the various patterns which have been sent broadcast in the services might well be supplanted by a uniform pneumatic truss.

2. Concerning simple incision, returning the intestines, and closing the abdominal ring, there is nothing to be said except that this constitutes the simplest method of operating and is not now practised as a curative method in any sense. It might be resorted to in relieving a strangulated hernia when the facilities for further operative procedure were wanting, or in case one was not familiar with the technique of other methods. From such a procedure we should scarce expect a permanent cure.

3. Attempts to plug or close the canal. Under this head, *a*, *b*, and *c* may be put aside as out of date, and are not methods that commend themselves to any surgeon familiar with the later methods. Under these heads come all the older classical operations, such as those of Gerdy, Wurtzer, Agnew, Wood, McEwan, etc. These are many of them elaborate in detail and ingenious in their applications; each has had its advo-

cates and records of success, but none of them has proved worthy of implicit faith, and they have gradually disappeared, and it does not seem necessary at this time to discuss them further, when we have the easier and more certain methods of the present time.

(*d*) The open method. This procedure is to the mind of the writer one of the best methods of attempting to deal with inguinal hernia, whether strangulated or non-strangulated. It has so many features to commend it that, at first glance, it would seem to be the long-sought-for solution. The idea of the open method, pure and simple, is not of recent date. Czerny and Reisel were perhaps the first to advocate this method, and Dr. Charles McBurney, of New York, has in recent years perfected the operation and called special attention to its use. It is often spoken of as "McBurney's operation." It would seem to be nature's own method, and its only source of failure was found to be in the uncertainty of the final granulation tissue filling the inguinal canal. It was brought forcibly to the attention of the writer in 1887, in connection with a case of hernia operated on by the McEwan method. The wound in this case became septic and a large extraperitoneal abscess formed in the right iliac fossa. The wound was opened up, and in the process the inguinal canal was slit up beyond the internal ring to get good drainage. The large abscess cavity gradually contracted, and as it grew smaller the question of the final outcome of the case began to be considered. It was decided to continue the draining and healing of the abscess cavity until the process was complete, and then to try the McEwan operation again. In the mean time, as the abscess cavity and other inflammatory symptoms subsided, it occurred to the writer that as the inguinal canal was destroyed, if nature healed the abscess cavity and closed the former inguinal canal with granulation tissue, a cure would be accomplished. The canal would be obliterated and the possibility of a return of hernia would be improbable, for, if there were no canal remaining, how could the hernia return? This result actually occurred, and in time the patient made a complete and absolute recovery. It was nature's own way of dealing with the case, and it has always seemed that it might be called nature's cure for inguinal hernia. This case brings with it many important lessons; particularly does it emphasize the safety of the open method of treatment when there is any possible septic complication.

In the writer's experience the open method, or McBurney operation, has proved itself very satisfactory and efficient. Of nineteen operations since 1887, seventeen inguinal cases (and two femoral hernias in the female), all cases have been successfully completed, and a permanent cure effected, without the wearing of a truss or other appliances. No complications have arisen in any case, and, so far as I have been able to learn, there has been no return of the hernial condition.

In one case operated on in Hot Springs, Ark., there was a double inguinal hernia. One side had been operated on a short time before the writer saw the case. The nature of the primary operation I cannot state, except that it was some closed method. The hernia had returned immediately on the patient's getting about. The writer performed the McBurney operation on both sides, and the result was all that could be desired. The range of these cases has been varied from slight hernial protrusions to the largest scrotal hernias. The technique of these cases is reported in the writer's article in the *American Lancet* for November, 1889, and need not be repeated here. It is simply desired here to call attention to the fact that the open method is perhaps the safest operation all around, the easiest to perform, especially adapted for emergency operation when there may be any possibility of septic conditions—thus, on the field, or on board ship where perfect aseptic technique may be impossible. In cases in which the operator has any doubt as to his own requirements, this operation commends itself as the safest, simplest, and surest. Its use is always to be advocated when septic conditions already exist, and according to the writer's opinion in all cases of strangulated hernia in which there can be any possible question as to the condition of the intestine. It is true, there have been some failures by this method reported, due to the absorption, thinning out, and impermanent nature of the granulations, but it may be very possible that the more important steps of the operation, *i.e.*, the treatment of the sac or the care in the final healing, may have been the cause of these reported failures. Of this, mention will be made under the remarks on the treatment of the sac.

Dr. McBurney has kindly given me his opinion of this operation, which will be of special interest, as coming from the person best qualified to speak positively. I quote the following from Dr. McBurney with his permission:

"I have seen very perfect cures by this method. It is particularly suited for such cases as have a firm (that is, not lax) abdominal wall and for hernia of moderate size. At the same time, when it is applied to all indiscriminately, the percentage of relapses is greater than after the Bassini operation. The Bassini method has the advantage of being applicable to all sorts of individuals and to every mode of inguinal hernia.

"The quick healing after the Bassini operation is certainly a great advantage. It is more difficult than mine, and is much more liable to fail through infection of the wound in inexperienced hands. I now usually do the Bassini operation, and have a high opinion of it."

This sustains the opinion already expressed, that where septic conditions may prevail (as at times in the service) the open method is safer, surer, and gives the best outlook for permanent cure. Also for the general surgeon, who perhaps does the operation for inguinal hernia infrequently, this method is more likely to give good results.

(*e*) By the closed methods. Here I think there can be no question as to the operations to be selected at the present time, either the Bassini or Halsted method. Of these the Bassini operation seems to be the simpler operation, but I believe the Halsted operation gives the higher percentage of cures. The technique of either is by no means difficult, and in the larger military hospitals, such as the New York Naval Hospital with its perfected facilities for aseptic technique, these cases should certainly be given trial and the Halsted or Bassini operation employed, except with the limitations already referred to, when the open method should be used.

The results of operations in the United States service which I have been able to find show but two cases of failure, by any method employed, and no fatalities. This is certainly encouraging, but even if the percentage of absolute cures should be seventy, eighty, or ninety, the resulting benefit to the service would be sufficient to warrant the routine practice of the operation.

Of other methods the only one of importance that needs to be specially noted is that of Drs. Nélaton and Ombredanne (described in the *Presse Médicale*, July 31, 1897), and a notice of which appeared in the MEDICAL RECORD, as follows:

"They divert the proximal end of the spermatic cord from the inguinal canal and cause it to run through a hole made in the os pubis. By this method they are free to treat the inguinal canal without regard

to the cord, and to close it more effectually than in the method practised by Bassini. The entire inguinal canal is slit up, the hernia reduced, the sac removed, and the spermatic cord freed from adhesions and from its connection with the fibres of the cremaster muscle. The posterior wall of the canal is then divided on a grooved director. Then a button of bone as large as a centime piece is removed at a point about one-third of an inch below the upper border; this is effected by means of a punch-like instrument. A chain saw is then passed through the hole and the bridge of bone is divided at its inner edge, preserving its periosteal connection. This bridge bone is then raised inward by means of forceps and the cord is dropped into the perforation, after which the bone is replaced and secured in position. The abdominal wall is repaired in two layers; the deep layer is closed with a continuous suture *en surjet*, carried in from the conjoint tendons to Poupart's ligament. With the same thread the superficial layer is closed from below upward. The advantages of this operation as a means of curing hernia appear to be undeniable. The altered course of the spermatic cord lengthens it, which allows of more complete descent of the testicle in those in whom the latter organ is unduly retracted. A disadvantage which may accrue is the danger of damaging the spermatic cord by a growth of new bone around it. This has not occurred in any of the cases operated upon by the writers; before the latter condition could advance far certain pressure symptoms would be noticed, as varicocele and œdema; should these symptoms occur there would then be time to liberate the cord by cutting a channel downward and dropping the cord beneath the bone."

This operation strikes one as being somewhat unnecessary. It must greatly increase the difficulty and danger of the operation, and, so far as our observation and experience go, there seems to be no demand for the special care and treatment of the cord. We have yet to see any permanent trouble resulting from the usual method of enclosing the cord in its new bed of soft tissues. It would seem natural that the cord might become involved, but as a matter of fact it does not, or at least it must be very rare.

That the canal is able to be more entirely closed by this method of absolutely getting the cord out of the way seems true, but when the additional danger of compression of the cord between bony walls occurs, calling for a new operation and cutting through the os pubis, it would seem that the very slight improvement in closing the inguinal canal was not sufficient to counterbalance the increased and serious dangers that might arise from the imprisoned cord or after-attempts to relieve it.

In speaking of the various operations but little stress and sometimes no mention is made in text-books on the subject of the importance of the treatment of the sac. It is our opinion that the success or failure of any operation has more to do with the treatment of the sac than any other step undertaken. It is probably true that hernia never takes place where the contour of the peritoneum is perfectly preserved. It is only long continued strain, or immense sudden force exerted at the site of the internal inguinal ring, that permits this accident.

Once the perfect contour of the peritoneal covering of the intestine is gone, once the beginning of the sacculation, the pouching, the forming of the infundibuliform process of peritoneum with its attendant gut and omentum takes place, and its wedge-like action exerted on the inner ring, the question of more or less complete hernia is only a matter of strain or some other like factor.

As the condition of the peritoneum more than anything else prevents the hernial tendency, so in all our operative procedures the main endeavor should be to remove the tissue forming the wedge, *i.e.*, the infundibuliform sac, which if left behind, either after being returned to the abdominal cavity or left as a plug in the inguinal canal, results in the or[illegible] in destroying the normal symmetry of the peri[illegible] in the other by constant pressure, ir[illegible] and agglutination atrophies, and lea[illegible] same condition which we have tried [illegible] possibility and probability of a ret[illegible] If possible the hernial sac shoul[illegible] enough not only to restore the norm[illegible] peritoneum, but even to produce a [illegible] cavity inward instead of outward. [illegible] duce this outline, this restoration of [illegible] is certainly the cause of more relap[illegible] one factor, and its importance is gr[illegible] lection of any special method. All [illegible] feature carefully carried out will giv[illegible] ishingly good results, and without [illegible] Bassini, open method, or any other [illegible] a large percentage of failures.

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An important departure in regard [illegible] guinal hernia is found in the *Sem[illegible]* cember 22, 1897, as follows:

"Professor Duplay and M. Cazin, [illegible] of medicine at Paris, dispense with [illegible] the Bassini and other operations for [illegible] by using temporary silver wires. T[illegible] three U-shaped stitches brings the [illegible] gether over a roll of gauze. When [illegible] fect the cord is replaced and seven [illegible] through the superficial tissues, recor[illegible] terior wall of the canal, suturing the [illegible] ing the cutaneous wound at the same [illegible] additional stitches of the skin if nec[illegible] fine wire. The cord has ample space [illegible] layers of stitches. The superficial [illegible] moved in seven to eight days. The lo[illegible] tached for twelve to fifteen days and th[illegible] for eighteen to twenty days withou[illegible] The split ends of the sac are tied toge[illegible] beforehand, to assist in reducing the hernia. They consider silver wire much better for the operation than catgut, which is absorbed too rapidly to insure solidity, and their tests with kangaroo-tail tendons showed that they also were absorbed in fifteen days."

Regarding the cord, it is to be noted that while all possible care is to be taken to protect it, yet, as a matter of fact, it rarely if ever causes any trouble or comes to grief, whatever the mode of procedure. Regarding the position of the hernial sac and contents in operation, it is the writer's experience that it is far preferable to operate with the hernia well down in the canal. As the restoration of the peritoneal symmetry is of the first importance, it will be found very difficult to get hold of the sac and ligate it sufficiently high unless we have it in the canal at the time of operation. Many a recurrence is due to this failure to get at the peritoneal protrusion and absolutely remove it. To this end it has been my custom to have the hernia well down just at the time of operation, and to have an assistant retain the tumor in place during the preliminary anæsthesia administration. We have the protrusion well defined and can judge absolutely as to the proper position for the sac ligature, and at the same time we are able to examine the sac contents and to be definitely sure of the condition of the gut and omentum.

In attempting any of these operations, the most careful aseptic methods are specially called for as an element of success.

To add to this article a description of the aseptic procedures best adapted for use at the present time would be unnecessary and foreign to our purpose. Probably one of the best accounts of surgical technique

for use is to be found in the excellent and clear monograph by Dr. George E. Brewer in the MEDICAL RECORD for March 26, 1898.

The service conditions justifying operation for hernay be summed up under the following headings:

Those cases absolutely incapacitated for duty in h the physical condition is such as to stand operprocedures.

All cases up to thirty-five and forty years of age, good muscular development, whether incapaci. for work or not.

Cases in which immense strain has forced a herprotrusion, and left the ring, otherwise strong, ired.

All cases in which trusses prove irritating or erous.

The operation is to be recommended for otherwise able applicants for enlistment, and these men are : considered fit for enlistment after the operation roved its permanency by four to six years' trial.

In all cases in which strangulation is actually nt or threatens, or in which recurring discomfort ain show the tendency to hernia, and in which ight repeated engagement of the intestine in the ial ring calls attention to the liability of this ent.

conclusion, after a careful review of the importof the subject to the individual and to the seralso of the frequency of this condition of inguinal a, of the comparative freedom from any untoward s of operative interference, the abundant facilit our command, made possible by the recent exe and elaborate fittings in many of our institupecially designed for the treatment of just such we can realize the widespread interest in the : of surgical work made possible to such ends.

TOXIN, DIPHTHERIA, AND STATISTICS.

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I. CONCLUSIONS, however much enthusiasm they may arouse, are never stronger than the premises from which they are derived. The value of antitoxin as a specific remedy for the successful treatment of diphtheria is proved most frequently by conclusions expressed statistically. But statistics are not facts, but their envelopes. Statistics facilitate the memorizing and transportation of the results of much and complicated mental experimentation. Statistics always presuppose a good deal, because they never are elementary, but final statements of facts or supposed data. And because statistics take so much for granted, they are often so bewilderingly meaningless to the ignorant or uninitiated. They are also often alluring traps for unwary or careless and hasty thinkers to fall into. Honestly, generously, and studiously considered, statistics are profitable compounds to wrestle with. Statistics often give strength to preconceptions; and sometimes they demonstrate the unexpected.

In weighing and comparing the "antitoxin-in-diphtheria" statistics of different antitoxin advocates, and those statistics with old-time non-antitoxinized diphtheria statistics, in all instances we should strive to be sure that unlike things and conceptions are not being manipulated as though there were no existent differences and no distinctions to be noticed.

Antitoxin is no well-defined entity or substance. It is a more or less arbitrary something, biologically, technically, and logically. In the next place, it is a pathological derivative and a poison. And, finally, its units of strength are arbitrary and irregular, which, with age and under varying conditions of temperature, are fugacious. Samples from different factories examined by competent analysts have been sometimes found "so feeble in antitoxin properties as to be practically worthless for therapeutic purposes. More of them, however, contained greater antitoxin properties than fell below the strength stated on the label."[1] The brand that may come in for a large share of praise with one friend may be damned by the next. For instance, Dr. Charles Graefe, of Sandusky, Ohio, found that "the results, both as to the apparent time elapsing between the injection and the separation of the membrane, and the mortality results," in diphtheria treated with a particular make of antitoxin, after a while were not so good as formerly; and he then asked the makers for an explanation. The merchants replied, as merchants do, that their antitoxin was up to the standard and that the trouble must be with the disease—that is to say, the disease had probably become more virulent. Dr. Graefe's disappointments were not assuaged by this stock explanation, because in his practised judgment he had given sufficiently large doses of antitoxin of that particular make, and, moreover, he had repeated his doses. He then tried another maker's antitoxin, and then he congratulated himself and the new makers on his revived and better successes. But strange is fate. This very make, which gave rise to new hopes in Sandusky,[2] showed itself capable of allowing one-third of the cases (in which it was given) at Philadelphia[3] to die.

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to the cord, and to close it more effectually than in the method practised by Bassini. The entire inguinal canal is slit up, the hernia reduced, the sac removed, and the spermatic cord freed from adhesions and from its connection with the fibres of the cremaster muscle. The posterior wall of the canal is then divided on a grooved director. Then a button of bone as large as a centime piece is removed at a point about one-third of an inch below the upper border; this is effected by means of a punch-like instrument. A chain saw is then passed through the hole and the bridge of bone is divided at its inner edge, preserving its periosteal connection. This bridge bone is then raised inward by means of forceps and the cord is dropped into the perforation, after which the bone is replaced and secured in position. The abdominal wall is repaired in two layers; the deep layer is closed with a continuous suture *en surjet*, carried in from the conjoint tendons to Poupart's ligament. With the same thread the superficial layer is closed from below upward. The advantages of this operation as a means of curing hernia appear to be undeniable. The altered course of the spermatic cord lengthens it, which allows of more complete descent of the testicle in those in whom the latter organ is unduly retracted. A disadvantage which may accrue is the danger of damaging the spermatic cord by a growth of new bone around it. This has not occurred in any of the cases operated upon by the writers; before the latter condition could advance far certain pressure symptoms would be noticed, as varicocele and œdema; should these symptoms occur there would then be time to liberate the cord by cutting a channel downward and dropping the cord beneath the bone."

This operation strikes one as being somewhat unnecessary. It must greatly increase the difficulty and danger of the operation, and, so far as our observation and experience go, there seems to be no demand for the special care and treatment of the cord. We have yet to see any permanent trouble resulting from the usual method of enclosing the cord in its new bed of soft tissues. It would seem natural that the cord might become involved, but as a matter of fact it does not, or at least it must be very rare.

That the canal is able to be more entirely closed by this method of absolutely getting the cord out of the way seems true, but when the additional danger of compression of the cord between bony walls occurs, calling for a new operation and cutting through the os pubis, it would seem that the very slight improvement in closing the inguinal canal was not sufficient to counterbalance the increased and serious dangers that might arise from the imprisoned cord or after-attempts to relieve it.

In speaking of the various operations but little stress and sometimes no mention is made in text-books on the subject of the importance of the treatment of the sac. It is our opinion that the success or failure of any operation has more to do with the treatment of the sac than any other step undertaken. It is probably true that hernia never takes place where the contour of the peritoneum is perfectly preserved. It is only long continued strain, or immense sudden force exerted at the site of the internal inguinal ring, that permits this accident.

Once the perfect contour of the peritoneal covering of the intestine is gone, once the beginning of the sacculation, the pouching, the forming of the infundibuliform process of peritoneum with its attendant gut and omentum takes place, and its wedge-like action exerted on the inner ring, the question of more or less complete hernia is only a matter of strain or some other like factor.

As the condition of the peritoneum more than anything else prevents the hernial tendency, so in all our operative procedures the main endeavor should be to remove the tissue forming the wedge, *i.e.*, the infundibuliform sac, which if left behind, either after being returned to the abdominal cavity or left as a plug in the inguinal canal, results in the one case in destroying the normal symmetry of the peritoneal surface, and in the other by constant pressure, imperfect adhesion, and agglutination atrophies, and leaves in the end the same condition which we have tried to remedy and the possibility and probability of a return of the hernia. If possible the hernial sac should be ligated high enough not only to restore the normal symmetry of the peritoneum, but even to produce a tendency to a concavity inward instead of outward. The failure to produce this outline, this restoration of peritoneal contour, is certainly the cause of more relapses than any other one factor, and its importance is greater than the selection of any special method. All methods with this feature carefully carried out will give certainly astonishingly good results, and without it the Halsted, Bassini, open method, or any other is bound to have a large percentage of failures.

An important departure in regard to sutures for inguinal hernia is found in the *Semaine Médicale*, December 22, 1897, as follows:

"Professor Duplay and M. Cazin, both of the faculty of medicine at Paris, dispense with buried sutures in the Bassini and other operations for inguinal hernia, by using temporary silver wires. The under row of three U-shaped stitches brings the deep tissues together over a roll of gauze. When coaptation is perfect the cord is replaced and seven wires are passed through the superficial tissues, reconstituting the exterior wall of the canal, suturing the pillars and closing the cutaneous wound at the same time, with a few additional stitches of the skin if necessary, with very fine wire. The cord has ample space between the two layers of stitches. The superficial threads are removed in seven to eight days. The lower row is not detached for twelve to fifteen days and they have been left for eighteen to twenty days without inconvenience. The split ends of the sac are tied together beforehand, to assist in reducing the hernia. They consider silver wire much better for the operation than catgut, which is absorbed too rapidly to insure solidity, and their tests with kangaroo-tail tendons showed that they also were absorbed in fifteen days."

Regarding the cord, it is to be noted that while all possible care is to be taken to protect it, yet, as a matter of fact, it rarely if ever causes any trouble or comes to grief, whatever the mode of procedure. Regarding the position of the hernial sac and contents in operation, it is the writer's experience that it is far preferable to operate with the hernia well down in the canal. As the restoration of the peritoneal symmetry is of the first importance, it will be found very difficult to get hold of the sac and ligate it sufficiently high unless we have it in the canal at the time of operation. Many a recurrence is due to this failure to get at the peritoneal protrusion and absolutely remove it. To this end it has been my custom to have the hernia well down just at the time of operation, and to have an assistant retain the tumor in place during the preliminary anæsthesia administration. We have the protrusion well defined and can judge absolutely as to the proper position for the sac ligature, and at the same time we are able to examine the sac contents and to be definitely sure of the condition of the gut and omentum.

In attempting any of these operations, the most careful aseptic methods are specially called for as an element of success.

To add to this article a description of the aseptic procedures best adapted for use at the present time would be unnecessary and foreign to our purpose. Probably one of the best accounts of surgical technique

for use is to be found in the excellent and clear monograph by Dr. George E. Brewer in the MEDICAL RECORD for March 26, 1898.

The service conditions justifying operation for hernia may be summed up under the following headings:

1. Those cases absolutely incapacitated for duty in which the physical condition is such as to stand operative procedures.

2. All cases up to thirty-five and forty years of age, with good muscular development, whether incapacitated for work or not.

3. Cases in which immense strain has forced a hernial protrusion, and left the ring, otherwise strong, impaired.

4. All cases in which trusses prove irritating or dangerous.

5. The operation is to be recommended for otherwise desirable applicants for enlistment, and these men are to be considered fit for enlistment after the operation has proved its permanency by four to six years' trial.

6. In all cases in which strangulation is actually present or threatens, or in which recurring discomfort and pain show the tendency to hernia, and in which the slight repeated engagement of the intestine in the internal ring calls attention to the liability of this accident.

In conclusion, after a careful review of the importance of the subject to the individual and to the service, also of the frequency of this condition of inguinal hernia, of the comparative freedom from any untoward effects of operative interference, the abundant facilities at our command, made possible by the recent expensive and elaborate fittings in many of our institutions specially designed for the treatment of just such cases, we can realize the widespread interest in the service of surgical work made possible to such ends.

ANTITOXIN, DIPHTHERIA, AND STATISTICS.

BY ADOLPH RUPP, M.D.,

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I. CONCLUSIONS, however much enthusiasm they may arouse, are never stronger than the premises from which they are derived. The value of antitoxin as a specific remedy for the successful treatment of diphtheria is proved most frequently by conclusions expressed statistically. But statistics are not facts, but their envelopes. Statistics facilitate the memorizing and transportation of the results of much and complicated mental experimentation. Statistics always presuppose a good deal, because they never are elementary, but final statements of facts or supposed data. And because statistics take so much for granted, they are often so bewilderingly meaningless to the ignorant or uninitiated. They are also often alluring traps for unwary or careless and hasty thinkers to fall into. Honestly, generously, and studiously considered, statistics are profitable compounds to wrestle with. Statistics often give strength to preconceptions; and sometimes they demonstrate the unexpected.

In weighing and comparing the "antitoxin-in-diphtheria" statistics of different antitoxin advocates, and those statistics with old-time non-antitoxinized diphtheria statistics, in all instances we should strive to be sure that unlike things and conceptions are not being manipulated as though there were no existent differences and no distinctions to be noticed.

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claim to prove the potent beneficence of antitoxin, we should not forget that antitoxin and diphtheria are not two conceptions that fit one the other like nut and screw. Antitoxin is as fickle and uncertain, as merchandise and as a remedy, as diphtheria is at different times and places a variable disease complexion. In neither case are we dealing with fixed and rigid standards and certainties.

II. Has antitoxin any marked influence on the pseudo-membranous deposition, inhibiting it or hastening its disappearance? Serum advocates usually say, "Yes! most decidedly." How do they prove it? They say in two or three days after the serum has been injected the pseudo-membrane begins to disappear or has done so. And then they jubilantly tell us that is about one-half the time that it takes non-serumized cases to get rid of the pseudo-membranes.[1] Baginsky gives the membranes three or four days to disappear —also earlier, he says, but also later; that is, the sixth or seventh day after the injection of serum.[2] A friend of mine has reported a case in which, in an adult, the membrane persisted for several weeks, although antitoxin had been used several times. In the first antitoxin case I had the opportunity of observing, in which large doses of serum had been used, the membrane continued to grow, and the older portions did not roll up at the edges, etc., and disappear, according to the classic fashion described by antitoxin enthusiasts. Alonzo Clark, writing in 1861, says: "It is very common to observe the membrane fall off after a duration of from one to two, three, or four days—and re-form in the same place." This same peculiarity is seen to occur in serumized cases too. I have seen it do so in my serumized cases—form again on places where it had fallen away. I have seen this happen in cases treated by some of my friends. I have seen this re-formation of membranous deposit take place in different cases that had been treated with different brands of antitoxin. In the two dozen cases in which I used antitoxin, and in the antitoxin cases of my friends, I have not been able to convince myself that antitoxin had any marked and undoubted influence in either checking the deposition and spreading of membrane, or hastening its disappearance. The membrane seems to me to develop and retrograde under antitoxin treatment very much as it does in cases that have not been treated with antitoxin. It should not be forgotten that in different cases membranes show up differently, and that different epidemics develop varying peculiarities concerning the character of the membranes, the rapidity with which they form and disappear.

It having been shown that evidence is not wanting which proves that antitoxin is evidently a remedy of irregular, uncertain, and indefinite power for good; that immediate favorable effects on the constitution of the patient do not become evident; and that, everything considered, its effect for good on the pharyngeal pseudo-membranes is *nil* in all probability—it is not unjustifiable to conclude that antitoxin, as we know it and have known it, has no power to check or mitigate diphtheritic laryngeal processes. But let us see what can be said for and against it in

III. Laryngeal Diphtheria.—A good many if not all antitoxin advocates lay special stress and emphasis on the great good that antitoxin accomplishes in laryngeal diphtheria. What many antitoxin enthusiasts mean by laryngeal diphtheria and croup is not always clear to others. Some dignify hoarseness, cough, and indications of stridor with the diagnosis of croup. Others call cases croupal when there are laryngeal spasms and obstructed laryngeal respiration, and cyanosis to some extent. Jenner[1] taught that "membranous inflammation of the larynx is one of the gravest diseases; it kills rapidly. If the termination be fatal, it usually is so within a few days from the outset; rarely does the disease last a week, supposing the windpipe has not been opened." This same excellent observer says: "I have never known laryngeal symptoms (due to diphtheritic pseudo-membranous deposition) commence after the first week of the disease. In rare instances death may occur within twelve hours from the time that laryngeal symptoms are first noticed. Some cases may last five days." And "rather more than half the fatal cases of diphtheria" he had seen resulted directly from disease of the larynx.[2] Thus the conception croup is an elastic one. Croupal symptoms are not always caused by pseudo-membranous deposits in the larynx. Œdema above, or below, and between the vocal cords is a frequent cause. And, however anxious croupal symptoms may make us feel in the start, they soon ease our anxieties or increase our apprehensions of worse things to follow. Bearing all this in mind, we are apt to shake our heads when we are told that "over one-half of all laryngeal cases[3] (of diphtheria) treated with antitoxin recover without operation," and we say, "a consummation devoutly to be wished."

Assertions like this one of Caillé's have no general applicability or value, although they are true enough to arbitrary definitions and to particular personal experience and practice. But arbitrary definitions and particular personal experience, however ample and important, are insufficient to settle questions like these connected with laryngeal diphtheria. These questions are settled largely by means of statistics, and statistics simulate but the last stroke of the hammer that breaks the rock. They imply so much, and take so much for granted.

Caillé's assertion has statistical foundation, and his assertion implies several conclusions which can or cannot be substantiated by statistics.

1. If antitoxin be the specific it is claimed to be, it should diminish the number of croup cases every time and everywhere. And diminishing the number of croup cases also implies the diminution of the relative number of croup operations—relative to croup cases and to cases of diphtheria all told.

2. If antitoxin be the specific it is claimed to be, epidemic influences should become scarcely noticeable in antitoxinized cases; at least the great differences and variations noticed in non-antitoxinized statistics should become very much minimized in those antitoxinized.

Baginsky, in a series of 799 cases of true scientific diphtheria observed in the course of three years, says there were 258 cases of laryngeal stenosis. Twenty-two of these were diagnosed as being simply catarrhal in character. One hundred and thirteen of true croup got well without operation, and this agreeable result is attributed to antitoxin. Six patients died of "sepsis," and on them no operation was attempted. One hundred and eight cases were operated upon, ninety-four were intubated, four were tracheotomized, and seven were tracheotomized after intubation failed.

Do not Caillé's claim and Baginsky's figures alongside of Jenner's teaching make us conclude that different teachers and observers are guided by different conceptions?

Many writers, especially those who wrote before antitoxin was a commodity and bone of contention, conceive croup in Jenner's sense, and, in writing of croup, treat only of the operative cases. Croup cases

[1] O. Wiemer: "Das Diphtherie-Heilserum," p. 97.

[2] H. Baginsky: "Diph. und diph. Croup," p. 315, Wien, 1898

[1] "On Fevers and Diphtheria," 1849 to 1879, p. 565.

[2] *Op. cit.*, p. 516.

[3] August Caillé, M.D.: "The Modern Treatment of Diphtheria." Reprint from the Post-Graduate, p. 16.

that get well may be happily left to themselves, and then for our particular purpose they will give rise to no misunderstanding and dispute. In what follows we shall compare only croup cases that called for operation, those which were serumized and those which were not serumized. Of Baginsky's 799 cases of diphtheria, 15.39 per cent. though serumized, demanded operative relief; and the mortality of these croup cases, though serumized, was no less than 32.38 per cent. Allowing our trained imaginations to play with Baginsky's other figures, we conclude that the type of his diphtheria as a whole was somewhat better or more favorable and milder than the type of diphtheria that Dr. Welch dealt with in 1897 at Philadelphia, in the Municipal Hospital. Dr. Welch says: "The proportion of deaths among laryngeal cases requiring operation was considerably larger (in 1897) than in any year since 1894. The number that required intubation was 182, and of these 127 died, making a death rate of 69.78 per cent., as against 60.25 per cent. in 1896, and 54.91 per cent. in 1895." (In all these years antitoxin was used, but in none of them so thoroughly as in 1897.) Of these 182 cases, 167 received antitoxin and 115 of them died, making a death rate of 68.86 per cent., as against 56.06 per cent. in 1896, and 52.94 per cent. in 1895. Welch does not give the whole number of croup cases; but 16.81 per cent. of all the whole number of serumized cases (993) had to be intubated. When we compare Baginsky's figures with those that Welch gives, we see that, although the Philadelphia diphtheria had been getting worse, in the number of cases needing operation in the judgment of the respective men the difference of only 1.42 per cent. existed. Their general and their operative mortalities differed a good deal more. Baginsky's general mortality was only a little over 9 per cent., and his operative mortality, as already stated, was 32.38 per cent. Welch's general mortality was 26.28 per cent., and his operative mortality was 68.86 per cent. Both observers report results influenced by serum-therapy, and yet what a difference! Just about as many cases proportionately to the number of patients with diphtheria needed operation, but only half as many died at Berlin as died at Philadelphia. What is this difference of thirty-six per cent. in operative results due to? Certainly not to technical ability. Probably not to antitoxin potencies. Possibly, to some extent, to a difference in the run of cases. But, most of all and mainly, to a difference in the type of the disease as respects severity and the complexion of pathological processes, and other reasons which our imaginations are ready to explain, but concerning which it is best to say nothing about. One fact, however, which these German and American figures make evident, and which it is proper to direct attention to in passing, is this: When the general mortality is low, the operative mortality will be low also, and *vice versa*. This fact or law is evident in non-serumized cases too. Thus at Zürich, in 1883–84, the general mortality for diphtheria was eleven per cent., and for tracheotomy in croup, forty per cent.—a mortality much better than Welch's serumized mortality for intubation, and no worse, on the whole, than Baginsky's intubations and tracheotomies. In 1889 (at Zürich) the general mortality for diphtheria was thirty-one per cent., and for croup tracheotomies, eighty-three per cent.[1]

Serumized cases of tracheotomy for diphtheritic croup vary as widely in mortality percentages in hospitals treated in London at the same time as intubations do in hospitals located in cities as far apart as Berlin and Philadelphia, in different though successive years. In London,[2] in the six hospitals of the metropolitan asylums board, 197 tracheotomies were done in cases of diphtheria that had been serumized, and 80 of them died—a mortality of 40.6 per cent. The general mortality for diphtheria was 25.9 per cent. The lowest mortality for tracheotomies of the six hospitals was 24 cases, 7 deaths—29.1 per cent. The general diphtheria mortality here was 19.7 per cent. (Fountain Hospital). The highest tracheotomy mortality—38 cases, 24 deaths—was 63.15 per cent. The general diphtheria mortality was 21.80 per cent. (Western Hospital). And all these tracheotomy cases had been serumized! Alongside of these serumized tracheotomies place the following tracheotomy statistics which are innocent of sero-therapy. Kohts reports from the Strasburg Hospital[1] forty-four tracheotomies and eleven deaths—a mortality of twenty-five per cent. The general diphtheria mortality was only six per cent. Suppose that had been a serum year! This is another illustration of the law that a low general mortality allows a low operation mortality. A. Jacobi has told that from 1872 to 1874 he had fifty consecutive tracheotomies for croup, and all of them died. On the other hand, Drobrink had, in the course of five and one-half years, one hundred and seventy-six tracheotomies—no serum used—and a mortality of only thirty-seven per cent. At Zürich, in 1884, the mortality for tracheotomies was twenty-nine per cent. And now to end up our tracheotomy instances with secondary tracheotomies in serumized cases: At the Hôpital Trousseau, Paris, in 1897, where the epidemic has been about as favorable as at Berlin, in fifty-six cases where intubation failed and secondary tracheotomies were done, forty-five deaths resulted, or a mortality of eighty per cent.[2] Of course we willingly admit that these were tough cases, but can we overlook the little good antitoxin exerted? And Baginsky had twenty-two tracheotomies in cases that repeated intubation failed to relieve—all serumized cases—and fifteen of them died—a mortality of 68.2 per cent. In 1892 George McNaughton[3] tabulated seventy tracheotomies following intubation—eleven recoveries—or a mortality of 84.29 per cent. And this is not so very bad alongside of the secondary tracheotomies of the Hôpital Trousseau, and they show how inutile antitoxin is. Of course McNaughton's cases are non-antitoxinized and reported by twenty-nine physicians and surgeons.

And now a few words concerning intubation statistics in particular. Before serum-therapy was introduced, it was the effort of intubation advocates to prove that intubation in croup gave better results on the whole than tracheotomy could. It was claimed by George McNaughton[4] that of every hundred cases operated, six more are saved by intubation than by tracheotomy. If this is true, let the fact not be forgotten when serumized intubations are compared with tracheotomies, serumized and not serumized, in so far as their respective mortality percentages are concerned.

The American Pediatric Society's serumized intubation statistics have been fulsomely quoted and favorably commented on as proving the great beneficence and power of antitoxin in reducing the mortality rate everywhere in Europe and America. They have been pointed to and utilized over and over again in the way of argument; as though they were elementary, ultimate, and indubitable facts. And yet what do they amount to? It has been said: "The fact that these statistics were drawn from different and widely separated localities, and therefore under every possible variation as to local conditions, severity of epidemic, etc., gives them a value much greater than that of statistics shown from single institutions, and effectually

[1] Martin Neukomm: "Die epidemische Diphtheria, etc., in Canton Zürich," p. 57. Leipzig, 1886.
[2] Report for the year 1896, p. 30.

[1] Therapeutische Monatshefte, April, 1895.
[2] Monatsschrift für Ohrenheilkunde, September, 1898, p. 429.
[3] "Treatment of Croup by Intubation of the Larynx," tables.
[4] *Op. cit.*, 1892, p. 26.

answers the argument that the favorable results of the use of antitoxin are due to the mildness of epidemic, inclusive of a large number of mild cases owing to report of Klebs-Loeffler bacillus, special facilities for antiseptic treatment, etc." This is not mixed metaphor, but it is a mixture of fact and not fact, and so much so that the whole paragraph is void of sense. To collect its data, the American Pediatric Society sent out thousands of circulars, and only 615 physicians recorded their experience in only 3,384 cases. And to these cases were added 942 and 1,468 cases respectively treated at their homes by the New York and Chicago boards of health. The mortality was 713 deaths—12.3 per cent. The above paragraph quoted to the contrary, epidemic influences and the Klebs-Loeffler bacillus have played no unimportant part in the building of the American Pediatric Society's statistics. And the factors summarized as "human nature" have in the opinion of many practitioners contributed a vitiating quantity to the compounding of these statistics, not only by what went into them but also by what remained out of them. And then the health board additions demand a modicum at least of what has been called worldly wit to interpret them in such a way as to make them fit the probable natural facts and not interested considerations.

To go on with the American Pediatric Society's report: In one-half of the laryngeal cases intubation was not required. That fact is unimportant, because of its elasticity. It is important to know that of 537 cases of laryngeal cases demanding operation, 25.9 per cent. died. Intubation is presumed to have been the operation in all cases. We have here a low general mortality for diphtheria, and consequently a comparatively low operative mortality. Each physician reporting these cases had an average field of observation of only between five and six cases, and not a whole operative case. Everything considered, the average field of observation is a very meagre one; and the collective whole or composite picture which results is a rather blurred water-color. It lacks definition and finish, because the results obtained and the conclusions based on these are compared only with the worst that has happened, and not with the favorable aspects of diphtheria results and statistics of former times. The American Pediatric Society's final findings are not so good as Baginsky's quoted intubations by sixteen per cent., and better than the intubation percentages of Welch by thirty-four per cent. Such differences, and serum was faithfully and carefully used in every instance!

To show to what false conclusions limited views can lead, Dr. McCallum may be quoted. McCallum tells us that "in the Boston City Hospital, during the year ending October 31, 1896, there were two hundred intubations (serumized), with a fifty-three-per-cent. mortality rate."[1] He says that many of these cases were moribund. And further to mitigate this large serum mortality, we are told that the intubation mortality of 1895 was eighty-three per cent., a difference of thirty per cent. in the two years—and this betterment is attributed to the influence of serum therapy as the only possible explanation. Such thinking strikes one as rather electrical, when we know that in the history of diphtheria even greater differences and contrasts have occurred between two successive years, when no antitoxin was used. Thus in Zürich, in 1883, out of fifty-four tracheotomies forty-one died—a mortality of seventy-six per cent.; while during 1884, out of thirty-eight tracheotomies, comparatively speaking, only thirteen died, or a mortality of twenty-nine per cent.—a difference of forty-seven per cent.

It would be easy to multiply instances to prove the points I have been trying to make clear, but nothing would be gained thereby. Life is short and the MEDICAL RECORD space limited, and this essay must be kept within reasonable bounds.

Remembering that croup in diphtheria is an early complication, usually secondary to nasal and pharyngeal disease, and that croup cases call for operation between the second and seventh or eighth day of the disease most frequently; and remembering, furthermore, that antitoxin, to be most effective, should be administered during the first three days of the disease, and to be effective at all before the seventh or eighth day, it would seem to be a good test as to its effectiveness if the length of time during which the tube must remain in the larynx were evidently indisputably shortened. In these cases the disease and complication of croup are most active during the time that the antitoxin is supposed to develop its greatest antitoxic virtues. This is the condition most fitted for the grand remedy to win honors. And the proof would be, as already stated, lessening in an unmistakable manner the length of time that a tube must remain in the larynx or a cannula in the trachea.

In 1896, Dr. Joseph E. Winters, with the boldness of a clear-sighted and fearless clinician, asked the fair and pertinent question: "If antitoxin does not cause a 'melting away' of the membrane, and does not lessen the duration of the membrane in the visible portions of the throat, what reason have we for supposing that it influences the duration of the membrane in the larynx?"[2] It has been claimed by Bokai that, because of the liquefying effect of the antitoxin on the laryngeal diphtheritic processes, the intubation tube can be removed about eighteen hours sooner than used to be the case. This would not be a great gain, and the assertion is based on a too limited basis. What are the facts on a broad and time-extended basis, and all other influences allowed for?

In 1892 George McNaughton[3] said: "The proper time for the removal of the tube is a point to be decided by the operator; the average time will be about five and one-half days, but I have not been in the habit of determining by time, preferring to wait until the disease has stopped and the diseased tissues have taken on healthy action, as indicated by the cleaning of the tongue and other signs that are expected in convalescent patients." Baginsky says that the tube was allowed to remain in the larynx in pre-antitoxin days, as a rule, six and seven days. Here we have a difference of from one-half to one and one-half days as to the average time during which circumstances necessitated the lodgment of the tube in the larynx in diphtheritic croup when antitoxin was unknown. But in antitoxin cases O. Wiemer[4] teaches that the tube may be taken away on the third day after operation in intubation. Baginsky, in serumized cases, makes it the fourth day. Here, with two enthusiastic antitoxin teachers, we have an optimistic difference of twenty-four hours at least. In one of my cases in which the diphtheritic process was rapid, in a five-year-old girl, the tube being inserted on the first day of the croup and the second day of diphtheria, and into whom about 3,500 units of antitoxin had been injected within the first forty-eight hours of the disease, the operator thought it well to let the tube remain in the larynx for one week. Here was a case that certainly should have corroborated the rule laid down by Wiemer or Baginsky: rapid disease process, early croup complication, and sufficient antitoxin within the first twenty-four and forty-eight hours of the disease; but

[1] Boston Medical and Surgical Journal, December 31, 1896, p. 676.

[2] "Clinical Observations upon the Use of Antitoxin in Diphtheria," etc. Reprint, p. 46.

[3] "Treatment of True Croup by Intubation of the Larynx." Reprint from the Brooklyn Medical Journal, p. 5.

[4] "Das Diphtherie-Heilserum," p. 100. Leipzig, 1898.

the disease remained and continued indifferent to the antitoxin.

Tracheotomy is, on the whole, a less favorable operation than intubation, and yet Solis Cohen[1] tells us that in occasional instances the cannula may be removed on the first day after operation. And this was at a time when sero-therapy was unknown. In other instances decannulization could not be accomplished until a week or two after operation. But the usual time was, for decanulement, between the fifth and ninth days. Sanné found it possible to remove the tracheal cannula before the end of the eighth day in sixty-one cases out of one hundred and eight tracheotomies.[2] And Neukomm reports, from Zürich, that in eighty-one recoveries from tracheotomy the cannula was removed on the fourth day after operation in four cases; on the fifth day in twenty-one cases; and on the sixth day in sixteen cases.[3]

Not only do individual peculiarities count in this matter, but the epidemic type most of all. Baginsky's cases seem to me not to have been of an extraordinary or severe type. The severity as well as the frequency of croup are in all probability beyond the control of any remedy we know of, in the sense and to the degree that Baginsky and others would have us believe. In one case of mine that had been well serumized—or was at the time so considered, with more than two thousand units—a four-year-old boy—and then tracheotomized, I was obliged to retain the tube seven days. When we consider that McNaughton's average time of extubation was about the fifth or sixth day after operation in cases where the mortality was sixty to eighty per cent., and Baginsky's average time on the fourth day after operation in cases whose mortality was only nine per cent., which indicated a mild type of diphtheria, I fail to be able to pronounce in favor of antitoxin when extubation and decanulement are concerned.

IV. Mortality Statistics.—The foregoing remarks and facts are only a very small portion of all facts and interpretations of them that relate to the topics discussed; but they present the facts fairly and in quantity sufficient to justify the opinions expressed and conclusions emphasized. The conclusions are that antitoxin does not check the disease or limit its time duration, and that it has no influence of a material and self-evident character on the local pharyngeal process or on the croup complication. This being so, antitoxin might, in some way not evident to crude clinical observation, exert such influences on the constitutions of patients and the diphtheritic processes going on in them, as would lessen the mortality rate in a manner that could not be misunderstood or doubted and denied. Does it? What do statistics say? Generally stated, epidemics of diphtheria have prevailed that have killed as few as two to five of every one hundred of its victims, before antitoxin was in vogue. And there have been times when as much as fifty and ninety per cent. have succumbed to it. Diphtheria is the most erratic of infectious diseases. Its mortality rate differs at different places at the same period of time. We find that diphtheria has been spreading in London and increasing its mortality rate from 1885 to 1894 (inclusive) thus:

Year.	Deaths from Diphtheria.	Year.	Deaths from Diphtheria.
1885	896	1890	1,417
1886	846	1891	1,361
1887	953	1892	1,885
1888	1,311	1893	3,265
1889	1,616	1894	2,670[4]

[1] Solis Cohen: "Croup in its Relation to Tracheotomy," p. 59. Philadelphia, 1874.

[2] Solis Cohen: *Op. cit.*, p. 59. [3] *Op. cit.*

[4] Pages 34, 35, Twenty-fifth Annual Report of the Health Department of the City of Boston, Mass., for 1896.

During this period the death rate for diphtheria has been lessening at Paris, France; and at Berlin it has, when not stationary, lessened. Or take Zürich, from 1879 to 1884, during which time the morbidity increased from 834 cases of diphtheria in 1879 to 1,562 in 1884, and the death rate diminished from thirty-one per cent. in 1879 to eleven per cent. in 1884; thus the sick list almost doubled, and the death rate became two-thirds less![1] At Hamburg, Germany, the number of sick with diphtheria at one time diminished, but the number of deaths due to the disease increased.[2] And Wunderlich tells us that sometimes older children and adults are preferably attacked by diphtheria; whereas usually it is a disease commonest and most fatal in children under five years old. These facts, and facts like them or similar, must not be overlooked in all considerations that deal with particular conclusions or groups of statistics bearing on serumized or unserumized mortality statistics.

To begin: Dr. J. Febiger (Copenhagen) reports, from May 13, 1896, to May 13, 1897, that 484 patients having diphtheria and croup were admitted into the hospital. Those admitted on one day were serumized, and those coming the next day were treated without serum. Those treated with serum, 239 cases, had a mortality of only three per cent.; and those treated without serum, 245 cases, had a mortality of twelve per cent.[3]—a difference of nine per cent., which, when everything is considered, is not very great. I have a letter before me from Dr. William M. Welch, of Philadelphia, in which he gives notes of an epidemic of diphtheria affecting the students of Girard College in that city. He says: "During this prevalence of the disease there were in all one hundred and twenty-one cases, with three deaths. Five of the cases received antitoxin, and the three deaths occurred among these. Among the one hundred and sixteen cases which did not receive antitoxin, no deaths occurred. It is fair to state that the ages of the children in Girard College range between seven and seventeen years, and, as you know, age has much to do with the death rate in any series of cases. The disease was in good part mild, yet there was a large number of severe cases." Do not these two instances, put in juxtaposition, in many respects neutralize any argument in favor of antitoxin?

Now turn to the Municipal Hospital of Philadelphia. During March, 1896, 44 cases of diphtheria were treated with antitoxin; 18 died, giving a mortality of 40.9 per cent.; but during October 126 cases were treated with antitoxin, 21 died, and the mortality was 16.66 per cent.[4] Here is a mortality difference of no less than 24 per cent. in a spring and an autumn month in the same hospital in the same year. And then there is Professor Hennig, who lost only 59 cases of diphtheria in a total of 1,927 gathered in the course of eighteen years, or a mortality per cent. of 3.06, and this without antitoxin.[5]

So far figures show that antitoxin runs a lame and halting race. And yet Baginsky feels himself justified in teaching that, in so far as prognosis is concerned, the cases treated with antitoxin are as much more certain of getting well than non-serumized cases of diphtheria, as cases of varioloid are than smallpox.

Let us see whether the day of administration of antitoxin will clear up matters to justify Baginsky's varioloid analogy. Here are two tables showing the

[1] Neukomm: *Op. cit.*, p. 37.

[2] Arthur Newsholme: "Origin and Spread of Pandemic Diphtheria," p. 109. London, 1898.

[3] Internationales Centralblatt für Laryngologie, etc., Jahrgang xiv., No. 11, p. 547.

[4] Annual Report of the Bureau of Health of Philadelphia for 1897, p. 92.

[5] Verhandlungen des Congresses für innere Med., 1896, p. 250.

mortalities of diphtheria according to the days of the disease on which antitoxin was given. Take Biggs' table first:[1]

Day of Disease.	1.	2.	3.	4.	5 or Later.	Unknown.	
Cases treated.	44	05	73	50	62	30	344 cases = 13.2.
Deaths.....	3	11	4	6	20	3	
Mortality per cent..	6.7	11.5	5.5	12	32	10	

And now take Baginsky's table:[2]

Day of Disease.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	Totals.
Cases treated.....	96	240	139	111	64	26	22	28	24		750
Deaths	1	5	8	23	4	5	6	4	4		60
Mortality per cent...	1.07	2.08	5.7	20.7	6.9	19.2	27.2	14.2	16.6		8

Neither of these tables includes any moribund cases. Now notice the mortality percentages in both tables on the corresponding or like days of antitoxin administration. Biggs' table shows that of 44 cases that had antitoxin given them on the first day of the disease 3 died, or a mortality of 6.7 per cent. Baginsky's first day gives us 1 death in 96 cases, or a mortality of only 1.07 per cent.—a difference of over five per cent. The second day gives Biggs a mortality of 11.5 per cent., Baginsky 2.08 per cent.—a difference of about nine per cent. Why should antitoxin treat Baginsky with so much more favor on these most favorable antitoxin days than Biggs? On this second disease-day of antitoxin administration, the mortality difference between Baginsky's and Biggs' mortalities is fully as great as the mortality rates or percentages of Fibiger's quoted serumized and non-serumized cases. These figures speak for themselves. On the third disease-day Biggs' antitoxin mortality drops almost on a line with Baginsky's—5.5 per cent. and 5.7 per cent. But when the fourth day is tackled, Biggs' mortality advances to 12 per cent., and Baginsky's to 20.7 per cent.—a difference of nearly 9 per cent. in favor of New York. And in the enthusiasm of their "will to believe," we have had New York sero-therapists frighten us into the belief that after the third day of the disease antitoxin will fail to show up agreeably.

We must now leave Biggs to his fate, with 32 per cent. mortality for fifth and later-day cases. But we continue with Baginsky's table. Absurdly enough, and it may be provoking too, his fifth-day injections give a mortality of only 6.9 per cent., which is not much worse than his and Biggs' third-day injections, and is better by 14 per cent. than the fourth day. Antitoxin is a good deal of a flirt. On the sixth day it gives a 19.2 per cent. mortality, and on the seventh 27.2 per cent., and then on the eighth day drops to 14.2 per cent. We need do no more addition and subtraction. Biggs is jubilant with a general mortality rate of 13.2 per cent., and Baginsky congratulates himself with an eight-per-cent. general mortality.

Kohts, of Strasburg, concludes from his experience that cases injected with serum on the first and second days of the disease result in no better mortality rate than non-serumized cases do which come under proper medical care on the first and second days of the disease.[1] After these figures have been looked over and compared, have we not more than sufficient reason to ask: How much swing do antitoxin advocates wish granted to themselves, and yet have us believe that they are maintaining a just equilibrium?

What Kohts has found, that cases treated without antitoxin and coming under medical care on the first and second days of disease do as well as serumized cases, I have heard men here say who have been practitioners for thirty and forty years. Cases treated after the third day with serum turn out very unequal mortality percentages, as the quoted tables from Biggs and Baginsky show. All of us who can claim only an ordinary experience with diphtheria for from ten to twenty years know that we feel more hopeful of and for our diphtheria cases, even when they are more than mild or even severe, when we begin to see them early; and after treating them for five or six days and finding croup and other complications not progressing, we begin to feel pretty sure of a favorable termination. Therefore, when the most favorable disease-days for the administration of antitoxin turn out no better mortality statistics—not in one but in all places and at all times—than when sero-therapy is not resorted to, why should we use antitoxin? Should we do so because the American Pediatric Society and other writers, who see things from a point of view all their own, wish us to believe and think as they do?

At a society discussion of the antitoxin question, in which I took part, a year or two ago, one of the most enthusiastic of antitoxin advocates stated that under his supervision fifty or more mild cases of diphtheria had been treated without serum, and that no deaths had occurred. And yet about this same time we find Dr. Caillé laying down the law: "The practitioner who *thinks* [the italics are his] a case is mild, and waits for severe symptoms before using antitoxin, utterly fails to grasp the situation, and will be frequently disappointed."[1] We do not hear of disappointment coming in these mild cases untreated with serum. But what do Caillé's quoted words imply? First, that there are practically no mild cases, and if there are mild cases the practitioner cannot diagnosticate them; and, second, the practitioner must not think, he need not discriminate and differentiate—all he need do is to squirt indiscriminately as "scientifically" commanded or advised, and he will be held in high estimation, and as being abreast of the times, and all else that is good and true and beautiful, *sans* will and *sans* phrase. It is one of the touches of human nature that makes the whole world kin, to get on the safe side, and medical practitioners are as wise in this respect as the rest of humanity. They will seek the safe side, but they will do some thinking, and say little or nothing, and suit their actions to the facts that present themselves to their senses and reasoning powers. When we are still exhorted not to think and not to believe, except as it is done for us, and it is thought proper and easy to jolly us with such half-truths as "Probiren ist besser als studiren" (trying is better than studying), as though the trying without studying were worth anything; and the Hunterian witticism, "Try, young man; don't think," is flung at us with supercilious condescension—and all this done in the solemn name of science and officialism—we cannot help thinking that such science is a new superstition or an old one masquerading, the supposedly long-dead "Authoritätenglaube." And all this being so, we have cause to thank our stars that Joseph E. Winters, Lennox Browne, Kassowitz, Adolf Gottstein, and others have had, and still have, the courage and public spirit to protest against this "authority-faith" in public, when the public bowed to it, and believed much and did not think, and willing allowed itself to be done by it.

Conclusions.—1. Antitoxin is not always and uniformly of certain and fixed unit strength; and even when it is supposed or believed to be so, it fails to mitigate the evil mortality rates of diphtheria.

2. The differences in mortality rates or percentages

[1] "Health Department Report on Antitoxic Serum in the Treatment of Diphtheria." Reprint from the Medical News, p. 6.

[2] Baginsky: "Weitere Beiträge zur Serumtherapie, etc.," pp. 6. 7. Stuttgart, 1898.

[3] Therapeutische Monatshefte, April, 1895, p. 190.

[1] Caillé: "The Modern Treatment of Diphtheria and Croup," p. 9.

vary as much in different places and at different times among antitoxin cases as they do among cases that have not been antitoxinized.

3. Antitoxin has not diminished the relative number of croup cases that call for operation; nor has it diminished the mortality rates of operated cases, all facts, conditions, and disease-type differences considered.

4. At the present time, at certain places, the general mortality rates are low, and consequently the operative mortalities for croup are also low. At other places where the general diphtheria mortalities are high, so too are the operative mortalities high—whether antitoxin has or has not been used.

5. Allowances being made for the milder type of diphtheria that is prevalent, not everywhere, but at most places, it does not appear evident that the time during which the tracheal cannula or O'Dwyer tube must remain in the trachea or larynx, as the case may be, after croup operations, has been lessened by antitoxin therapy.

6. Antitoxin is a toxic agent in the human economy, which in the vast majority of instances in which it is given produces effects that are so evanescent as not to be noticed, and in many instances gives rise to disquieting pruritus, dermal eruptions, arthralgias, cardiac irregularities, diarrhœas, etc., and is in exceptional and very rare instances followed by death; but as a therapeutic agent it is a rank failure, despite all the hopes it enkindled and the assumption of scientific infallibility in its favor.

406 West Thirty-fourth Street.

ALBUMINURIC RETINITIS, WITH SPECIAL REFERENCE TO ITS OCCURRENCE DURING PREGNANCY.[1]

By JAMES FRANCIS McCAW, M.D.,

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The subject of this paper is of interest to the obstetrician and general practitioner, as well as to the ophthalmic surgeon, and my object in bringing it before the society is to draw out a discussion as to the best lines to be pursued in dealing with the class of cases to be mentioned.

Before passing to a consideration of the subject proper, I will report a case coming under my observation a short time ago.

The patient, Mrs. T——, aged twenty-six years, was a native of the United States, housewife; her family and previous personal history, so far as I could ascertain, were negative. Three months before I saw her she was delivered of her first child. At about the fifth month of gestation her feet and ankles began to swell, with some impairment of sight and quite severe headaches; but she thinks she was passing about the normal amount of urine (?). Four weeks prior to the birth of the child the headaches became more frequent, with blurring of the sight like a veil over the eyes. All these symptoms continued: the headaches and œdematous condition of the feet and ankles were intermittent in severity, but the blurring of sight seemed progressively to get worse, notwithstanding the fact that she was constantly under treatment by her family physician. When I saw her she said her sight had been gradually failing since the birth of her child, and that there seemed to be a cloud before her eyes. Upon testing her sight I found O. D. V = $\frac{20}{100}$, O. S. V = $\frac{20}{70}$ with no improvement. Upon ophthalmoscopic examination it was made out that she was suffering from an albuminuric retinitis of marked degree in both eyes, but the active process had apparently subsided.

In looking over the history and studying this case, one is immediately impressed with the typical character of it. To my mind the albuminuric retinitis began some time prior to the fifth month of gestation, and her symptoms at that time were indicative of congestion and exudative changes in the retinal tissue, which, as we see by the subsequent history and examination, were followed later by fatty degeneration and atrophy. It is my opinion that in those cases in which there is the slightest suspicion of retinal changes an ophthalmoscopic examination should be made as soon as possible; for it is of vital importance to your patient whether, after her delivery (if she is carried through the period of gestation), she is left with $\frac{1}{3}$ or $\frac{1}{6}$ vision or is totally blind. The general practitioner is very apt to attach too little importance to the premonitory symptoms of retinitis albuminurica and pass them over lightly, without knowing the real condition of the fundus oculi, which is of paramount importance in determining whether gestation shall be allowed to progress. We cannot attach too much importance to this trouble. It is a treacherous disease, making irreparable inroads into the retinal tissue, while we are waiting for further developments.

Here was a woman who, prior to her pregnant state, was apparently in perfect health and with good sight, so far as could be determined from her previous history. Now we find her sight greatly diminished, kidneys in a state of chronic inflammation, and a condition in the fundus oculi which indicates an unfavorable prognosis. Albuminuria is one of the serious complications of the puerperal state, and, according to a number of observers, is found in about six per cent. of the cases. From the obstetric side the importance of the renal complication is associated with the liability of such cases to eclampsia and its exceedingly bad results. Fürbringer says that about one-fourth of the pregnant women suffering from albuminuria are attacked by eclampsia, with a mortality of about thirty per cent.

The seriousness of the renal complication is increased by the failure of the sight, which is present in a certain number of these cases. It has been shown that retinitis associated with chronic Bright's disease is indicative of a very limited period of life, frequently only months, while two years is considered the maximum. With the albuminuria of pregnancy the retinitis is of less grave import in this respect, but as far as vision is concerned it is attended with very serious results. Culbertson (in the *American Journal of Ophthalmology*, 1894) has collected the cases of albuminuric retinitis, and finds that 23.33 per cent. have terminated in blindness, 58.25 per cent. have resulted in only partial recovery of sight, and only 18.54 per cent. have recovered.

Silex, in his cases, found that about 18 per cent. were nearly blind, 42 per cent. recovered vision about $\frac{1}{6}$, and 40 per cent. less than that. The bad results in these cases are due to optic atrophy, choroido-retinitis, and detachment of the retina. The latter is liable to come on late in the disease. Retinitis may show itself at almost any period of pregnancy, but it is uncommon during the first three months.

The changes which take place in the retina are inflammatory and degenerative. In the earliest stage of the disease, upon ophthalmoscopic examination one may recognize more or less hyperæmia of the papilla, slight increase in the calibre of the veins, diminution in the size of the arteries, diffuse opacity of the retina, with hemorrhagic areas, and the formation of yellowish-white patches of exudate, which at first are confined to

[1] Read before the City Medical Society of Watertown, N. Y., October, 1898.

the region of the posterior pole. Later white patches of fatty degenerated exudate make their appearance in the retina, and about the same time some swelling of the papilla occurs. These white patches are for the most part found in the region of the macula, where they are arranged in a star-shaped form radiating from the fovea centralis. Scattered here and there over the fundus may be seen other patches of degeneration, which may become confluent and thus form extensive atrophic areas. The retina is thickened by exudation and often unevenly so, which is shown by focussing on the retinal vessels, and seeing them appear and disappear beneath these thickened masses. The hemorrhagic areas may increase, and in some cases the hemorrhages are so extensive as to give rise to detachment of the retina. The degree of blindness produced by retinitis albuminurica varies very much, and as a rule depends upon the extent of the pathological changes at the macular region, but cases have been reported in which blindness or great impairment of sight has been present with absence of ophthalmoscopic signs, but these are very rare.

The gravity of the retinal affection, as shown by the changes in the fundus, is not always commensurate with the defective vision complained of; for this reason it is advisable that pregnant women with albuminuria should undergo ophthalmoscopic examination at frequent intervals. Most of the careful observers have found that with the termination of gestation improvement of sight is apparent in a few days, the amount of improvement depending upon the extent to which the process has been allowed to go.

De Schweinitz, in the latest edition of his work on diseases of the eye, page 434, says: "In the albuminuric retinitis of pregnancy, the prognosis in regard to vision and life of the patient depends upon the duration of gestation. With the termination of pregnancy the inflammatory deposits may subside and good vision may be restored, provided the process has not been continued so long that the secondary changes have taken place. For this reason the induction of premature labor has been recommended as a therapeutic measure." This is the opinion of most observers, so far as I have been able to learn. Furthermore, it has been shown that a patient who has once suffered in this way is much more liable to be affected in the same manner during her subsequent pregnancies, and predisposed to more marked changes in the retina, with greater impairment of vision.

In dealing with these cases one has to draw a distinction between those in which the retinal process comes on early, and those in which it appears only toward the end of pregnancy. In the latter case the time in which the process has to develop is limited, and it is thought that vision is less affected than in those cases in which the retinitis appears early.

From the foregoing it would appear that the following deductions are warranted:

(1) In all cases in which retinitis appears before the sixth month of gestation, emptying of the uterus should be recommended.

(2) Cases occurring after that period should be judged according to the amount and severity of the retinitis and the rapidity of progress.

(3) Cases in which retinitis has shown itself in a previous pregnancy should be carefully watched for eye and urine changes, for in these cases the most serious results are apt to follow.

35 Washington Street.

ELEPHANTIASIS OF THE VULVA, WITH REPORT OF A CASE.[1]

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Elephantiasis of the vulva is a well-recognized affection, of common occurrence in the tropics, but rare in this climate.

The etiology, except in the parasitic form, is not well understood. In those localities where the disease is endemic, the filaria sanguinis hominis is so frequently found in connection with this disease that it is justly considered a causative factor. But cases do occur in the tropics in which the most careful examinations fail to reveal the presence of the parasite.

In two cases of scrotal elephantiasis examined by Osler, the filaria was not detected, and he expresses

Fig. 1.

the opinion that, although it is stated that the parasite is always found in the cases observed in China, the majority of the cases of elephantiasis occurring in this country are of non-parasitic origin.

Jacobson quotes Mr. Hutchinson as saying: "I do not believe there is any real distinction between the elephantiasis of the tropics and that which occurs in Great Britain." And later:[2] "A difference in the degree of frequency is, in so far as I can see, the only one that can be traced. There can be no doubt that an unhealthy climate, the exposure to a hot, moist atmosphere, and other influences which impair the tone of the system, have a very important influence in favoring the development of elephantoid conditions. It is probable, also, that the presence of the filaria sanguinis hominis takes its share in aggravating the disease; but abundant clinical facts make it quite impos-

[1] Read before the surgical section of the Academy of Medicine.
[2] "Clinical Surgery," vol. ii., p. 49.

sible to believe that this parasite is the sole cause of the disease or of any peculiar form of it."

Any condition producing an obstruction of the lymph channels, such as tumors pressing upon the lymphatic trunks or erysipelatous inflammation causing thickening of the lymphatic walls, may give rise to this affection. That irritation is an exciting cause is demonstrated in individuals suffering from syphilitic ulcerations, or who are addicted to masturbation or sexual excesses.

The pathology of this condition is well described in Ziegler's recent edition of pathology,[1] so it needs no description here, except as the pathologist found it in the case to follow.

The literature of to-day, briefly stated, describes two distinct classes of cases—namely, the endemic, associated with attacks of fever and turgescence of the growth; and the sporadic, attended by no systemic effect except that due to the local condition.

As to prophylaxis, the employment of boiled water for drinking purposes, care to avoid washing in stagnant water, etc., seem to be measures of great importance.

The treatment of the different forms of elephantiasis is varied. If the patient has a syphilitic history, specific treatment appears to be of value. If the affection depends upon erysipelatous inflammatory processes, and fever is present, the treatment of the existing conditions is indicated. Change of climate has also proved of value. The only known method of cure, however, is removal of the growth by the knife, electro-cautery, or ligation. The risk of operation increases in proportion to the bulk of the mass and the inroad the disease has made upon the patient's strength, as shown by visceral degenerations and progressive anæmia.

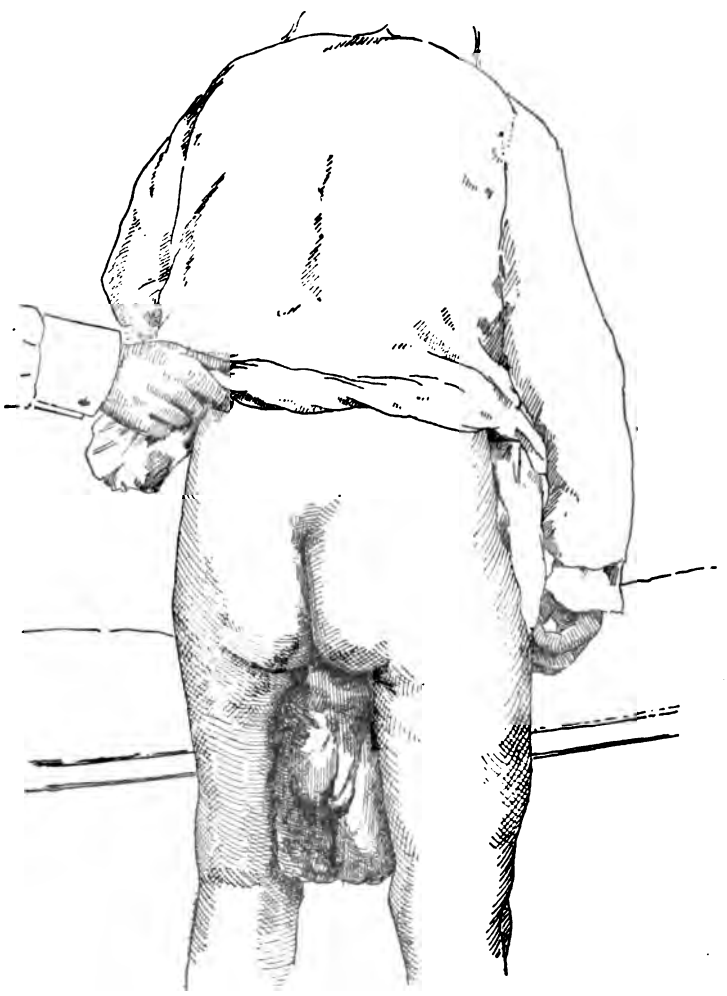

FIG. 2.

No attempt will be made to give a *résumé* of the American literature upon this subject, except to state that the author, in perusing the journals at his disposal, was able to find but a very few cases of elephantiasis of the vulva reported. In none of these cases was the development so rapid or the enlargement so great as in the one herewith reported.

Mrs. H——, cook, aged thirty-nine years; born and always lived in New York City. Her family and past history was negative in every respect. She had had no children, no miscarriages, and, so far as could be learned, there was no history of syphilitic taint or of any of the so-called exciting causes. She enjoyed good health up to twenty-seven months ago (June, 1898). Her first intimation of any trouble was after taking a free bath from one of the city docks, when she felt a severe itching on the inner side of the left labium. On examination she discovered a number of small lumps resembling pimples. She thought little of this phenomenon, and the pruritus gradually subsided. The growth of the labium, however, dated from this time. Aside from a sense of weight and annoyance in walking, she experienced no embarrassment from the increased size of the parts. About a year later the opposite labium began to enlarge, and after twenty-two months the clitoris became involved. During all of this time she continued her occupation, lived with her husband, and was not seen by any physician. For a period of two years, no history of chills and fever or other systemic manifestations referable to the increase in growth was obtainable. At this time the irritation of the surfaces of the growth, caused by friction against the thighs and the flow of the urine and fæces, gave rise to ulceration. The case then came under the observation of Dr. Edwin C. Chamberlin, of New York, who kindly referred her to me.

On examination there was observed an immense vascular tumor, occupying all the space from the pubes to the knees, and emitting a most offensive and penetrating odor. This tumor was divided into three parts. The one upon the left was by far the largest, apparently attached to the whole perineal region, and from midway to the umbilicus in front to the coccygeal fold behind. The superior surface was dark brown in color, hard and nodular to the touch, and seamed with deep fissures filled with a brownish, ichorous secretion. The one on the right was about the bulk of a good-sized muskmelon, chocolate in color, soft to the touch, and arose from a labial pedicle, six inches in length and about the size of a man's forearm. The central tumor closely resembled a banana in appearance, and was the hypertrophied clitoris. All of these tumors were comparatively hard, covered with secretion, and so exquisitely sensitive as to render a thorough examination impossible; consequently, the location of the vagina and urethra could not be determined at this time. Immediate operation was advised, and the patient was sent to the Carter Sanitarium.

Forty-eight hours were spent in trying to overcome, with permanganate of potassium and other antiseptics, the extremely septic condition of the tumor. At the same time the patient was stimulated by nutrient enemata, strychnine, and whiskey, with the object of overcoming as much as possible the severe septic absorp-

[1] "Lehrb. d. allg. Path.," 9te Aufl., 1898.

tion which was constantly taking place from the inner sides of the macerated thighs and the surface of the tumors.

At the time of operation the temperature and pulse of the patient were about 100° F. and 104 respectively.

Operation: The patient, thoroughly anæsthetized, was put in a Clover's crutch and the surface of the tumor rendered as aseptic as possible. The weight of the tumor made it very difficult to handle; but, by the aid of two heavy steel corkscrews embedded in its substance, it could be lifted with ease. By these means the mass on the left side was suspended to a bar placed above the patient. In order to control hemorrhage, two extra long Wyeth's hip-pins were passed through the pedicle, as close to the pelvis as possible, and the growth was then surrounded by a heavy elastic ligature. The whole mass upon the left was then amputated with a circular incision, two assistants clamping all bleeding vessels as they were severed. There was very little hemorrhage, however, and, after ligating numerous large vessels whose walls were held open by the fibrous tissue, the elastic ligature was removed. Some oozing followed this step, but this was readily controlled by clamps and ligatures, about sixty ligatures in all being employed. The mass on the right was then tied off in sections by passing heavy catgut ligatures on a needle through different portions of the pedicle, and tying and cutting until the whole pedicle was severed. The central, banana-like portion was then amputated with a stroke of the knife, and the hemorrhage controlled by clamps. As the patient's condition seemed fully as good as at the commencement of the operation, it was decided to do the plastic operation after removal of some few small remaining infiltrated areas. After loosening some of the tissues on the inner sides of the thighs, the tension on the skin was relieved. The urethra and labia minora being intact, a fairly good vagina was formed. This accomplished, the skin edges could be approximated and were sewed together with catgut over the stumps of the pedicles. About fifty-five minutes were consumed in the operation. The patient was returned to bed in good condition; the pulse was about 100, strong and regular; respirations were 20 to the minute. The condition did not change until evening, about five hours after operation, when the pulse grew more rapid and the respirations slower but deeper. She was energetically stimulated, but, although the pulse at first responded, it failed later, and death supervened twelve hours after operation.

The writer was present at the bedside for about four hours before death occurred, and was much impressed by the respirations, which grew slower and slower down to 6 per minute, even then deep and full. The condition closely resembled death from morphine narcosis, but no morphine was given at any time. Enemata and every form of stimulation were employed, with no response. On several occasions the author has seen patients die of shock in this manner, but never observed this condition in death from hemorrhage. After consultation with several surgeons present at the operation, the author was convinced that a septic condition and a greatly reduced vitality were the cause of death, as sufficient blood had not been lost to account for the collapse.

The pathologist, Prof. Henry T. Brooks, of this city, reports the histological structure of the tumor as follows:

FIG. 3.

"Microscopical examination of sections made from portions of tissue removed from hypertrophied labia shows, in the depth of the growth, a large amount of dense, irregularly arranged fibrous connective tissue, including a small number of large spindle cells resembling involuntary muscle, and enclosing larger or smaller groups of closely packed cells with large amount of protoplasm and vesicular nuclei. The cell groups constitute the lesser portion of the tissue, and are well separated from each other. They are sometimes sharply circumscribed and more or less spherical, though the majority are irregular in contour, forming solid elongated and branching columns and diffuse infiltrations. Many of these cell groups appear to occupy lymph spaces and to be derived from the lining of these channels, as there is decided evidence of proliferation at these points. There are few blood-vessels in this region, and those observed had greatly thickened walls, which partially occluded the lumina.

"At the cutaneous margins and for some distance beneath, there is a very extensive cell proliferation, the cells being smaller in size than those in the deeper cell groups and arranged as in lymphoid or granulation tissue; and here are numerous, widely dilated, thin-walled blood-vessels, filled with blood, some extravasation, and deposition of blood pigment.

"The histological features closely correspond to fibrous elephantiasis (lymphangioma)."

The features of interest in the case seem, to the author, to be as follows:

1. The rapidity of the growth and the size of the tumor.

2. The patient had always lived in New York City.

3. The control of all hemorrhage by Wyeth's pins and ligature in severing a pedicle eleven inches antero-posteriorly and five to eight inches laterally, composed of a most vascular tissue.

FIG. 4.

4. The obscure causation.

5. The death with slow and deep respirations and respiratory paralysis.

302 MADISON AVENUE.

Progress of Medical Science.

Cyclic Vomiting.—Professor Whitney (*Archives of Pediatrics*, November, 1898) reviews the subject of paroxysmal vomiting in children, and relates a case in which the attacks occurred at regular intervals of three months. Periodic vomiting was first described by Leyden in 1882. The affection is rare, but often very severe, attacks coming on without discoverable cause and persisting for a long time, and being followed by prostration. The gastric crises occur at intervals of from six weeks to six months. It appears to be a gastric neurosis. Rachford has found a large excess of poisonous alloxuric bodies, particularly paraxanthin and heteroxanthin, in the urine. Treatment relates to general hygienic measures, milk diet, free use of one of the lithia waters, and salicylic acid or salol.

The Influence of Menstruation on Lactation.—The uncertainty and prejudices of physicians on this subject, and the lack of attention paid to it in text-books and works on pædiatrics and obstetrics, caused Dr. B. Bendix to make a study of the relation of menstruation to lactation, which formed the basis of a paper read before the Society of German Naturalists and Physicians in Düsseldorf (*Wiener medizinische Blätter*, No. 42, 1898). His statistical observations were made on one hundred and forty women and their children, material derived from the Children's Polyclinic of the Charité, Berlin. Twenty chemical analyses were made in eight cases in which the women menstruated during the period of lactation, to determine the quantity of sugar, albumin, fat, ashes, and dry substances in their milk. The comparisons were always made on the same woman, and at short intervals during and just before and after menstruation. The results may be summarized as follows: 1. The larger proportion of women become unwell and menstruate regularly during the period of lactation (about sixty per cent. of the cases observed). 2. The appearance and regular recurrence of menstruation was very seldom a cause for taking the child from the breast. 3. Quantitative changes in the milk were very seldom observed. As regards the qualitative analyses, the only changes of any moment were in the amount of fat. It should be recalled, however, that slight qualitative changes in the milk do not affect the child, and that there is a normal daily variation. 4. Only in a very small number of cases could any effect on the general condition of the infant or its passages be proved. In reply to the question, "What shall be done when the mother or wetnurse becomes unwell?" he says: Never take the child from the breast for the sole reason that menstruation has reappeared. When noticeable changes in the milk occur during menstruation (diminution, watery milk, etc.), they again disappear and do not affect the nursling. If the child does not seem to thrive, then the scales should decide the question. There is no foundation for the statement that the nursling of a mother or wetnurse who menstruates during lactation becomes rachitic.

Leucocytosis in Tympanic Suppurations is very common (79.5 per cent.), but it is often absent (20.5 per cent.). It therefore fails to be of diagnostic value in differentiating tympanic suppurations from secretory catarrhs or in proving the existence or absence of brain or sinus complication or of septicæmia.—DR. J. ORNE GREEN, Boston Society of Medical Science, November, 1898.

Dietetic Causes of Inebriety.—(1) Inebriety is a most complex neurosis. The causes are equally complex, and include all the various states of degeneration which influence and disturb nutrition. (2) Obscure indigestion begins, and for this, drugs and bitters containing alcohol are used. The narcotism which follows is so grateful that it is continued. (3) Dietetic delusions are fostered in the minds of parents and children, and from this many different forms of inebriety begin. (4) Often the most maniacal and chronic inebriates are from these delusional dyspeptics. (5) Starvation is present in many of these cases. The quality and variety of foods are deficient and defective nourishment follows. (6) The uniformity of taking foods and the quality and variety are essential. This and nutritional rest and mental anxiety are important factors. (7) The inebriety following these conditions is successfully treated by elimination of the toxins and special correction of the nutrition. (8)

Nutrition is a very active cause in the production of inebriety, and should receive a careful study in all cases.—T. D. CROTHERS, *Journal of the American Medical Association*, December 17, 1898.

Sero-Diagnosis in Lepra.—Since Spronck has succeeded in obtaining pure cultures of Hansen's bacillus (*La Sém. Méd.*, October 28, 1898), the possibility of applying such sero-diagnostic tests as those of Widal in typhoid seems probable. Indeed Spronck, to whom this possibility suggested itself, has found that serum of healthy non-leprous individuals reacted to Hansen's cultures much the same as does the serum of non-typhoid persons to the Eberth bacillus—that is to say, in non-leprous subjects agglutination is very feeble or entirely absent. On the other hand, in twelve trials with the blood of different lepers agglutination was observed in every case in dilutions varying from one in sixty to one in eleven hundred. If subsequent provings substantiate these findings, the method will go far to clear up the controversy as to the relationship between lepra, syringomyelia, and the various states generally included in the term Morvan's disease.

Early Diagnosis of Carcinoma of the Uterus.—In an address delivered at Birmingham, Ala., October, 1898, Dr. T. S. Cullen, after a critical review of the literature and an examination of over ninety cases, gives the following simple classification: (*a*) Epithelioma of the cervix; (*b*) adeno-carcinoma of the cervix; (*c*) adeno-carcinoma of the body of the uterus; (*d*) epithelioma of the body of the uterus (rare). From this classification it is readily seen that varieties (*a*), (*b*), and (*c*) correspond to the three varieties of epithelium found in the uterus. The diagnosis in the early stages cannot, as a rule, be made without the aid of a microscope. The changes in carcinoma are so characteristic that a histological examination will invariably allow one to make the diagnosis. Our chief hope lies in the early diagnosis, as in the later stages no operation can avail.

Sleeping-Sickness.—In a clinical lecture at the Charing Cross Hospital Dr. Patrick Manson drew the following conclusions: The working hypothesis suggested by the facts—analogical, clinical, and experimental—is to this effect: that the germ of sleeping-sickness operates primarily on the encephalon; that this germ is possibly filaria perstans; that the parasite in its wanderings, either by entering the brain, or by interfering more or less directly with its nutrition, may gradually bring about a cessation of its function, ultimately leading to secondary neuro-muscular malnutrition and symptoms of sleeping-sickness. If it can be shown that filaria perstans is the cause of sleeping-sickness, the next step will be to ascertain the life history of this parasite outside the human body; this once known, it will become easy to indicate an efficient prophylaxis. So far it has proven incurable. Liberal dosing with thymol may rid the patient of round worms and ankylostomata.—*British Medical Journal*, December 3, 1898.

Functional Dysphagia may be paralytic or spasmodic, and is seen mostly in those of hysterical temperament. It may be associated with organic disease. The œsophageal bougie should be passed for diagnostic purposes with forethought and circumspection only as the last step in an examination. If there is suspicion of aneurism or malignant disease, it is not to be passed at all. When a reflex point of irritation is discoverable the treatment is obvious. The irritation must be combated and, if possible, removed. Ovarian or uterine irritation as well as gout and rheumatism may require attention. The cases in which the condition is chiefly one of "aphagia" are generally the result of some functional spasm or are associated with it, so that the same treatment is applicable to both forms of functional dysphagia. In the diagnosis of many of these cases we would do well to remember that carcinoma is the most common of all the affections of the œsophagus. In approaching the diagnosis of any case of dysphagia we should have present in our minds the following possibilities in the following order of frequency: cancer, aneurism, other forms of ulceration (traumatic, syphilitic, and tuberculous), and functional disease. The old advice is very applicable in cases of dysphagia—viz., to hope for the best and prepare for the worst.—ST. CLAIR THOMSON, *The Lancet*, December 3, 1898.

Experimental Studies on the Origin of Diseases of the Air Passages after Ether Narcosis.—As a result of his studies Dr. Holscher, of Kiel (*Archiv für klinische Chirurgie*, Bd. 57, H. 1), arrives at the following conclusions: 1. Aside from a slight increase of mucous secretion ether vapor has no other irritative action on the tracheo-bronchial mucous membrane. 2. That the tracheal gurgle of ether narcosis is a result of the aspiration of the mouth secretions, and can be avoided by proper technique—attention to the free exit of the mouth secretion by lowering and turning of the head and elevation or separation of the angle of the lips; attention to the maintenance of constant free respiration by holding the lower jaw forward, and preventing the tongue from falling back into the tracheal space. 3. The affections of the air passages following ether narcosis are usually the result of the aspiration of infected mouth contents. 4. The glistening appearance of the bronchial and tracheal epithelium is not altered during narcosis. 5. The increased salivary secretion during ether narcosis, although chiefly due to the narcosis, is not entirely the result of the local irritation of the ether vapors; more often there is also a central action.

Report on Fifty-Two Bacteriological Examinations in Cases of Infectious Diseases of the Urinary Tract.—Dr. Max Melchior summarizes the data obtained by his examinations (*Monatsber. über d. Leistungen auf d. Gebiete d. Krankh. d. Harn- u. Sexualapp.*, 10, 1898) under the following paragraphs: 1. The bacterium coli is the most frequent cause of bacteriuria in acid urine. 2. Aside from the bacterium coli, bacteriuria can be caused by the uric-acid-decomposing bacteria. 3. The bacteriuria may be of renal or vesical origin; in the latter case the prostate gland plays an important rôle as the seat of infection. 4. The bacterium coli is the most frequent form of bacteria found in cases of cystitis, pyelitis, and suppurative pyelonephritis. 5. In a large number of cases the cystitis is associated with acid urine. 6. Even bacteria causing uric-acid decomposition can produce a cystitis with acid urine. 7. In women a coli cystitis is frequently observed, the result of urethral auto-infection. 8. The bacterium coli can be supplanted by a cystitis due to other—uric-acid-decomposing—bacteria. 9. The bacterium coli can apparently produce cystitis and pyelitis by conveyance from the intestinal canal through hæmatogenous infection. 10. Pyelitis caused by the bacterium coli is frequently associated with secondary cystitis. 11. Uric-acid-decomposing bacteria can occasionally cause a pyelonephritis without any complicating cystitis and with acid urine.

Pyelonephritis in Childhood.—Dr. A. Baginsky reports (*Arch. für Kinderheilk.*, xxii., S. 232) four cases of pyelonephritis which had the following symptoms in common: 1. The development of severe gastro-dyspeptic symptoms, anorexia, vomiting, pain in the region of the kidneys, and the lingering duration of these symptoms. 2. Obstipation, and in one of the

cases the passage of membranous masses with the fæces. 3. The peculiar changeable quality of the urine, which varied from normal, with absolute clearness and absence of all morphological elements, to severe pathological changes, the result of the admixture of large quantities of pus and mucus. 4. A distinct, although not an exactly regular, type of intermittent fever. 5. The presence of large numbers of the bacterium coli (in pure culture) in the urine. Dr. Baginsky considers it very doubtful whether the reasonable conjecture that the bacterium coli is the causative factor in this disease is correct; for he has frequently observed the colon bacillus in the urine of children free from disease, and certainly not affected with pyelonephritis.

Luetic Phlebitis.—Langenbeck first directed attention to syphilis of the veins after finding a gumma of the neck growing from the external coat of the jugular vein. Dr. Barbe has recently brought up the subject anew in *La France Médicale*, describing gumma in connection with the femoral vein. The saphenous veins are, according to the thesis (1898) of Heuzard, those involved principally in secondary syphilis. Red lines like those of lymphangitis are at times observed over the course of the vessels in association with œdema of the extremity. In the later stages of syphilis alone is there danger of occlusion or obliteration.

Acetanelid in Threatened Miscarriage and Habitual Abortion.—According to Dr. Harnsberger (*La Sem. Méd.*, No. 56, 1898), acetanelid is an antiabortifacient of the first order. In doses of from one-half to one gram every four or two hours, or when necessary every hour, it stops all uterine contractions, even when more or less abundant metrorrhagia has already appeared. In habitual abortion it is administered in doses of from thirty to fifty centigrams every one to four hours for several successive days at a time corresponding to the menstrual period. Harnsberger has never had any evil results or seen any injury following this medication, aside from slight cyanosis, which otherwise was of no moment.

Co-ordination of Heart Muscle Without Nerve Cells.—If the apical half of the ventricles of the dog's heart is severed from the base, a cannula tied in the *ramus descendens* of the left coronary artery, and the apex preparation perfused through the cannula with defibrinated dog's blood, co-ordinated contractions of both ventricles can be maintained for several hours. Both ventricles are seen to beat synchronously in the fashion of the heart *in situ*. As nerve cells are absent from the apical half of the heart, it follows from this experiment that the co-ordination of the ventricular contractions does not depend upon nerve cells.—W. T. PORTER, *Journal Boston Society of Medical Sciences*, November, 1898.

On Unusual Complications of Epidemic Parotitis (Endocarditis-Peritonitis).—The two cases reported by Dr. W. Zinn (*Centralblatt für die med. Wissenschaften*, No. 51, 1898) tend to show that occasionally inflammation of the serous membranes may occur in instances of epidemic parotitis. In the first case, that of a schoolboy thirteen years old, there developed during the course of an epidemic of mumps high temperature and an endocarditis with signs of mitral insufficiency. The symptoms became insignificant after the subsidence of the mumps. The second patient, a laborer twenty-two years old, when first observed, had high temperature, diarrhœa, and symptoms of peritonitis; on the seventh day a double-sided mumps developed; as the parotid inflammation diminished the abdominal symptoms disappeared. The peritoneal symptoms in this case were then regarded as merely prodromal signs of the mumps.

On Nervous Dyspepsia.—The thesis on nervous dyspepsia by Dr. Theo. Rosenheim (*Centralblatt für die med. Wissenschaften*, December 19, 1898), delivered before the twelfth international congress at Moscow, may be summarized as follows: 1. Nervous dyspepsia, according to Leube's meaning, is a distinct type of disease. It is a neurosis of sensibility characterized by direct dependence of all the grievances of the patient on the digestive power of the stomach. 2. The motor and secretory functions of the stomach in nervous dyspepsia may show deviations from the normal; anacidity, subacidity, superacidity, diminished flow of gastric juice, hypermotility, or finally atony. The condition found is subject to frequent changes. If, on the other hand, the condition is constant and the functional derangement of a more severe type, then as a rule we have to deal, not with a nervous dyspepsia, but rather with a gastritis resulting therefrom, or with a motor insufficiency of a higher grade. 3. Nervous dyspepsia is not a common disease. Dyspeptic phenomena, without other symptoms, occurring in nervous subjects, do not belong to this category. 4. Nervous dyspepsia in the majority of instances is associated with other marked nervous manifestations, so that not infrequently it completes the picture of a neurasthenia. 5. It cannot be maintained that nervous dyspepsia is always only a part-symptom of neurasthenia. 6. Although constitutional treatment is the rule in these cases of nervous dyspepsia, symptomatic therapy is of great value.

Ergot in Chronic Malaria.—Dr. A. Jacobi sums up the subject in a paper read before the American Climatological Association (*Medical News*, October 22, 1898): 1. There are cases of chronic intermittent fevers with large tumefaction of the spleen, that after having resisted the action of quinine, arsenic, methylene blue, eucalyptus, and piperine are benefited by ergot. 2. When enlargement of the spleen is not old and not firmly established, the contracting effect of ergot is noticed within a reasonable time. 3. The attacks will disappear before the diminution in the size of the spleen is very marked. 4. Though temperatures, after the employment of ergot, remain irregular and now and then somewhat elevated, chills, as a rule, are not noticed with this elevation. 5. Plasmodia do not seem to disappear from the blood so rapidly as they do after quinine, when the latter is effective. But even while some are still present, the attacks being more or less under control, the patient will feel better. 6. Complicating local pain requires additional treatment with ice, or cold douches, or heat; chronic hyperplasia demands iodide of potassium or iodide of iron. Digestive disorders may indicate, as they often do, when quinine is expected to act, before the employment of ergot, an emetic, or a purgative, or stomachics. 7. An experience extending over forty years, in which I have used ergot in many instances, justifies me in asserting at least this much: that there are many cases of chronic malaria, apparently intractable, that will get well with ergot. 8. There are cases, occasionally, in which the return of elevations of temperature after the successful use of ergot makes the combination of ergot and quinine, or ergot and arsenic, advisable, though quinine and arsenic had not been successful previously. 9. Ergot, like quinine, probably by its sudden contracting effect on the spleen, and by the forcing of large quantities of plasmodia-laden blood into the circulation, is, in chronic malaria when hydræmia and spleen tumor are excessive, capable of bringing on the very first attack of chills and fever. 10. Recent cases of malaria have got better, or were improved, under the extensive use of ergot, but many resisted a long time; that is why acute cases should rather be treated with quinine.

MEDICAL RECORD:

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REORGANIZATION OF THE ARMY MEDICAL DEPARTMENT.

THE lessons of the late Spanish-American war have emphasized the necessity of an entire reorganization of the medical service. It is very evident that in order to secure an experienced sanitary corps of medical officers, we should either have a large standing army, with a medical corps fully equipped for any and every emergency, or provide this special training in some other way. A few years ago Dr. I. V. Hoff of the army made an effort to induce medical colleges to give instructions in military surgery and hygiene, and more recently Dr. George M. Kober, in a paper read before the Association of Military Surgeons and in an address on higher medical education delivered at the decennial anniversary of the Medical and Surgical Society of Washington, made a strong plea for the better training of the volunteer medical officers, and from personal experience concludes "that it is no more difficult to interest the average student in these studies than in any of the subjects taught, provided the course is made obligatory and he is required to pass a satisfactory examination. "While it cannot be expected," he says, "that every young physician will or can choose the army or other public service for his professional career, there will be ample opportunities for the application of this knowledge as sanitary officers of health boards, as physicians in charge of public institutions, medical examiners of life-insurance companies, police and ship surgeons, etc." In order to supplement theoretical instructions by practical experience he points out that "legislation should be invoked to enable reputable medical colleges to recommend to the surgeon-general a certain number of students for admission to the Army Medical School. Upon completion of the course, those passing the most creditable examination should be chosen to fill vacancies in the Army Medical Department, while the remainder should be appointed additional assistant surgeons for a term of two years, at the expiration of which they should return to civil life obligated to render service whenever the exigencies of war require it." It seems to us that this plan for the admission of candidates and the creation of a reserve medical corps possesses many advantages over the present system, and the Government could very well afford to increase the usefulness of the present Army Medical School, established about five years ago by General Sternberg, and also take care for one year of a small corps of medical cadets at one of the military posts in the vicinity of Washington, especially when it is considered that it provides all this and more for the training of military officers at West Point.

Section II. of House Bill 11,022, introduced by Mr. Hull, provides, "That the Medical Department shall consist of one surgeon-general with the rank of brigadier-general, ten surgeons with the rank of colonel, twenty surgeons with the rank of lieutenant-colonel, one hundred and ten surgeons with the rank of major, three hundred and sixty assistant surgeons with the rank of captain or first lieutenant. . . ." While this bill increases the number of medical officers from one hundred and ninety-two to five hundred and one, no provision is made to enlarge the powers of the surgeon-general, and it seems to us only fair, when great responsibilities are thrust upon an officer, that he should have full powers to discharge them. But apart from this the bill contemplates a most glaring injustice to the medical corps in this, that only two per cent. of its *personnel* will enjoy the rank and pay of colonels, while 8.3 per cent. of the members of other staff corps are thus provided for. We fail to see why this invidious distinction should have been made between men who have expended thousands of dollars upon their medical education, and staff officers who for the most part have been educated for four years at West Point at the expense of the Government.

If this bill should become a law, very few members of the medical corps can hope to attain the rank and pay of a colonel, which means that men of the highest professional attainments, even after forty years of faithful service, can scarcely hope to enjoy an income of $4,500 per annum, a mere pittance when compared with the earnings of such men as Thomson, Norris, Conner, Weir, Marsh, Asch, Gouley, and others who have left the service.

This is a question which involves the honor and dignity of the entire medical profession, and we therefore urge our readers to address personal letters to their Senators, especially the Hon. Joseph R. Hawley, to prevent the enactment of such gross injustice.

A TEACHING UNIVERSITY FOR LONDON.

IT has long been the earnest aim of many of the more prominent London physicians, as well as the ardent wish of those about to enter upon their medical studies in that city, that a teaching university should be established there. That it is a distinct reproach to the largest and wealthiest city of the world not to have one is admitted on all hands. Edinburgh, Glasgow, Dublin, Aberdeen, together with smaller towns like Dundee and Durham, possess in this respect facilities for the acquiring of the much-sought-for degree in medicine, which are denied to London. Within the past two or three years it has seemed that the many obstacles in the way of making the desired plan a success would be removed. Unfortunately, however, clouds

have again arisen on the horizon, and unless some other scheme than that already suggested is brought forward, there would appear to be every likelihood of it falling to the ground. The proposal that University Attached College, which institution will soon have the newest and most suitable hospital in London, should be made the headquarters of the proposed medical university has met with strenuous opposition on the part of some of the other large metropolitan medical schools. It is pointed out that University College with its up-to-date hospital, and with the advantages accruing to it as a seat of the university, would enjoy an unfair advantage over all the remaining schools; in fact, that it would mean their ruin. Therefore the general wish would seem to be that the new university should be affiliated to no particular hospital, but that all the schools should be equal participants in its advantages. The contention is made that the rivalry engendered by a healthy competition among the various institutions, corporations, and schools is greatly for their good. We hope that a plan may be shortly devised that will conform to the wishes of all concerned.

THE DRINK QUESTION AND ITS SOCIAL ASPECT.

THE temperance question is one that like a tidal wave ebbs and flows. At the present time, owing to a discussion between several prominent divines—in which the New York *Sun* has taken a vigorous part—with regard to the desirability of liquor saloons from the workingman's outlook, the question may be said to be decidedly on the flow. The wordy tilt at arms originated from some apparently incautious phrases used by Bishop Potter in describing the said saloons when speaking at the Waldorf-Astoria a few days ago. The bishop proclaimed as his opinion that to the workingman the liquor saloon is a "social" necessity, and went on to designate it the "poor man's club," which satisfies his "recreative instinct." These expressions brought forth a strong protest from the lips of Father Doyle, a well-known champion of temperance, who, taking upon himself the position of spokesman for the toiler, denounced the bishop's assertion in no measured terms. It certainly seems to us that Father Doyle's language was justified. The argument that liquor saloons are a "social necessity" to the poor man, or, indeed, to any one, is too specious to hold water. At any rate, in this country there is but little of the "poor man's club" pertaining to them. Of course, the meaning Bishop Potter intended to convey by his words was that the workingman when he needed recreation had no resort answering in purpose to the rich man's club. But it must be confessed that in declaring the "liquor saloon" to be to the poor man what his club is to the rich man, he displayed a deplorable lack of knowledge of the manner in which the vendors of intoxicants manage their business. At its best the liquor saloon is but a sorry makeshift when recreation is the object, and the instruction a workingman is likely to gain in it is scarcely calculated to elevate or improve his mind. So long as he has money and will spend it with alacrity his company is welcome, but when his pockets are empty his society is no longer regarded with favor by the proprietor. As *The Sun* aptly puts the case, the saloon-keeper is not a man of sentiment, but invariably keeps his eye on the main chance. This being so, the question must be faced as it really is and not judged from an optimistic and imaginative point of view. The truth is that the liquor saloon in America is not a "poor man's club," a place in which he can give his "recreative instincts" fair play, but simply and solely a house for the sale of strong drinks at a large profit to the proprietor. If the liquor saloon does satisfy the workingman's "recreative instinct," all we can say is that if he does not possess the bibulous instinct we are sorry for the intelligence of the workingman. The great majority of medical men nowadays are quite agreed that alcohol does no good to a healthy man, and, taking into consideration the incalculable amount of harm that has been wrought by its agency, it is best that the matter should be judged on its merits, and that the ignorant and careless should be warned of their danger. It is right and just that the workingman should be afforded the opportunities of mixing in congenial society which the rich man enjoys, but he must not look for it in the liquor saloon. From a consideration of the social side of the saloon question to that of the abuse of drink is but a step. Where, then, is the remedy to be sought in order to abolish or counteract an evil which is acknowledged on all sides to be widespread and extremely pernicious? Permissive laws have been tried, but that these have been by any means universally successful can hardly be alleged with absolute veracity by their most devoted upholders. Besides, in some countries binding measures strictly to control the sale of intoxicants are wholly at variance with the sentiments of the inhabitants. These laws are there regarded as an encroachment upon the liberty of a free people. The view that habitual drunkenness is a disease and should be treated as such is the one most generally held in these days. Dr. Norman Kerr, the best-known British authority on the matter, says: "Deal with the inebriate as you have successfully dealt with the maniac. Frown not on him as a hardened criminal. Remember he has fallen by the power of a physical agency which has crushed to earth some of the noblest and most gifted. Treat him as a patient laboring under a baffling and inveterate disease and amid many discouragements. Such a measure of success will follow your true curative treatment as will gladden your hearts as men, while it will attest your skill as physicians."

Following in these lines, as we mentioned in the MEDICAL RECORD of April 9th last, an Inebriate's Act was introduced into the British Parliament. This act has become law and came into force on January 1st of this year. Criminal habitual drunkards who commit some grave offence are placed in state inebriate reformatories. Habitual drunkards who commit some petty offence are detained in certified inebriate reformatories, where they are not, as in the case of the former class, treated as felons, but merely undergo a curative

treatment. Both the state inebriate reformatories and the certified inebriate reformatories will be maintained at the expense of the state or the local authorities. This experiment, which is certainly a forward movement, will be watched with intense interest in this country. The news, too, comes from Russia that excellent results have been obtained by the treatment of inebriates in special homes, and the conclusion has been reached that it is the one intelligent treatment of drunkards.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

THE preliminary programme for the approaching meeting of the State Society has just been issued, and it must be admitted that there is to be found in it none of the symptoms of senile degeneration such as one might expect in a society which is about to celebrate its ninety-third birthday. We note, with much pleasure, a new departure, or rather a return to a former custom, *i.e.*, the division of the society into a medical and a surgical section. It has been too much the custom of late years to have the scientific papers presented to this society with unseemly haste—indeed, it would be nearer the truth to say that they have been flung at the society, instead of submitted with that dignity and deliberation which should characterize the presentation of a scientific communication to a scientific body. The reason for this scramble is to be found in the very large amount of time wasted in political bickering and legislative wire-pulling. It goes without saying that, under such circumstances, there can be no discussion of papers, unless a few commonplace remarks and impromptu criticisms may be dignified by that name. We feel sure that if it were not for the large attendance at these meetings great difficulty would be experienced in securing meritorious papers—indeed, even with this redeeming feature we have heard physicians in this city frankly express their belief that it was not worth while to expend very much time and labor in the preparation of a paper for the Albany meeting. Be this as it may, the very existence of such a feeling is sufficient proof that there is something fundamentally wrong with the management of these gatherings, and it is solely with the object of attracting the attention of those who shape the destiny of the society that this is written.

From the wording of the announcement, it is evident that the business committee feels the heavy responsibility it has assumed in making this innovation, but we congratulate it on the step taken, and bespeak for the subject the thoughtful consideration of all the members who sincerely wish to see the scientific work of the society placed on a higher plane. We do not mean to say that the mere fact of dividing the society into sections must necessarily result in better work, but the change is significant, and augurs well for the future. Doubtless there will be differences of opinion concerning the best way of attaining the end in view, but let the committee not falter; let the members of the society face the issue squarely; let the scientific part of the programme be given, as it should be, the place of honor; for then, and then only, will the scientific portion of the proceedings of this society be worthy of a body which is supposed to represent truly the medical profession of the Empire State.

News of the Week.

To Prevent Bovine Tuberculosis. — An antituberculosis bill has been introduced into the New York State senate, providing that all cattle brought into the State shall have had a test thirty days previous at the hands of a State official, and shall be admitted only after this official has furnished a written permit to import them. All transportation companies are forbidden to carry cattle without such permit. No indemnity is to be paid for slaughter of diseased cattle brought into the State without a permit. Violation of the law imposes a fine of $25 to $250 for a first offence, and six months' to one year's imprisonment for a second offence.

A Premature-Burial Bill.—A bill has been introduced into the New York legislature, the object of which is to prevent premature burial. It provides that in cities or places where there are one hundred or more interments annually, each cemetery shall have a mortuary or mortuaries with a number of rooms sufficient to enable everybody that is received to be placed and kept therein a certain time. Each of these rooms must be at least ten feet in length by six fee in width, and ten feet in height, with a door at least six and one-half feet high and four feet wide. Over the door there is to be a transom kept open at all hours. The door must be kept unlocked at all times, and permission to inspect the body deposited shall be given at all hours of the day to the relatives or friends of the deceased. There is to be in each of the rooms a window at least two feet wide and three feet high, opening into the outer air. The attending physician or coroner must mention in the death certificate whether or not one or all of the following signs of death have been noted: 1, Permanent cessation of respiration and circulation; 2, purple discoloration of the dependent parts of the body; 3, absence of blistering around a part of the skin touched with a red-hot iron; 4, rigor mortis; 5, signs of decomposition. No body shall be buried, cremated, or otherwise disposed of before twelve hours shall have elapsed from the time of death, as stated in the certificate of the attending physician or coroner, and before unequivocal signs of decomposition shall have appeared. The bodies of those dead from small-pox, scarlet fever, diphtheria, or Asiatic cholera are not to be exposed in the mortuary, nor need such exposition take place in cases in which death has resulted from an injury causing the destruction of any vital organ, nor any body which shall have been found dead in an advanced state of putrefaction; but in all cases the certificate of death must make mention of the five signs of death above given.

The Study of Yellow Fever. — The American commission for the study of yellow fever, composed of Drs. Wasdin, Geddings, and Menocal, which began its labors last winter in Havana, but was driven away by the breaking out of the war, has now taken up work again, and established a laboratory at No. 22 Mercaderes.

Perception of x-Rays by the Blind.—A French physician has recently reported to the Académie des Sciences the result of his experiments on blind children. Among two hundred and four he found five boys and four girls who were able to recognize the Roentgen rays. Some saw the *x*, cathodic, and fluorescent rays, others only the cathodic and *x* rays, and one described them as being of reddish color.

Dinner to Dr. Lewis A. Sayre. — Dr. W. Gill Wylie gave a dinner, at his residence in West Fortieth Street, to Dr. Lewis A. Sayre, on the evening of January 21st. There were present many of Dr. Sayre's old friends, most of them alumni of Bellevue Hospital. Speeches were made by Drs. Gill Wylie, L. A. Sayre, J. W. S. Gouley, Stephen Smith, George F. Shrady, George B. Fowler, and Charities Commissioner Keller. There were given many reminiscences, grave and gay, of hospital life, and many personal experiences of the older boys were appreciatively received by the audience.

The Sanitation of Havana. — Surgeon-General Sternberg, who recently returned from a tour of sanitary inspection of Havana and adjacent military posts, is reported as saying that it will be entirely impracticable to place Havana in such a condition that it will be safe for non-acclimated persons to remain there during the coming summer without serious risk, especially if they frequent the more unhealthy parts of the city. Occasional cases of yellow fever occur in that city throughout the winter months, but the epidemic prevalence of this disease does not usually commence before the month of May, and the extent of an epidemic depends entirely upon the number of unacclimated strangers exposed in the infected localities during the unhealthy season. Yellow fever is epidemic every summer at Havana, Matanzas, Cardenas, Cienfuegos, Trinidad, and various other seaport cities, and it occasionally prevails at Puerto Principe, Holguin, Pinar del Rio, Remedios, and several other interior towns. Dr. Sternberg could not, of course, criticise the secretary of war for his scandalous delay in this matter, which is so necessary for the protection of our own country next summer; but the mere civilian may be permitted to inquire why this duty is neglected. Colonel Waring left a legacy of warning to the country for which he died, and yet months have passed and our supine secretary of war has taken no steps whatever, so far as the public is aware, looking toward the sanitation of Havana. Reports from that city are to the effect that the cleaning of streets, which is now practised daily, has shown important results already in the health of the inhabitants, and that the other measures taken for the cleaning of the city promise to bring a radical improvement in the health of the soldiers and of the people. When such a little scraping away of the surface filth can produce results like this, one may well ask if Mr. Alger has the faintest conception of the frightful responsibility he has taken upon himself in refusing to undertake renovation of Havana.

Deaths of the War. — Casualties of the Spanish war, as officially reported to the house committee on invalid pensions, were: Officers killed, 26; enlisted men killed, 257; officers wounded, 113; enlisted men wounded, 1,467. Deaths from disease and wounds made a total of 5,248.

New York Foundling Hospital.—At the last meeting of the medical board of the above institution the following new members were elected to the board: Attending obstetrician and gynæcologist, John Aspell, M.D.; attending physicians, successors to J. Lewis Smith and Joseph O'Dwyer, deceased, L. Emmett Holt, M.D., and Rowland G. Freeman, M.D.

"The St. Paul Medical Journal" is the name of a new monthly publication begun January 1st. It is under the editorial supervision of Dr. Burnside Foster, and will be the organ of the Ramsey County (Minn.) Medical Society. The pecuniary profits will be devoted to the building up of the library of the society.

Stomach Extirpation.—Since the MEDICAL RECORD first announced to the American profession the successful removal of the entire stomach by Dr. Schlatter, of Zurich, in September, 1897, two operations of similar nature have been successfully carried out in this country—one by Dr. Brigham, of San Francisco, and the latest by Dr. Maurice Richardson, of Boston. In April, 1897, a cancerous growth was discovered in the stomach of an elderly lady living near Boston. In May an operation was undertaken, but upon making an exploratory incision it was found that the cancer involved almost the entire organ, so that the only chance of success was in total extirpation. This operation was accordingly done, and at the present time it is reported that the patient is not only still alive, but has been for some time in a state of comparative good health.

Quarantine in Cuba and Porto Rico.—The President has signed an order, providing that the medical examination in ports of Cuba and Porto Rico of incoming and outgoing vessels, and necessary surveillance over their sanitary condition, as well as of cargo, passengers, and crew, and of all personal effects, is vested in and will be conducted by the Marine Hospital service. Medical officers of that service will be detailed by the secretary of the treasury as quarantine officers at the ports of Havana, Matanzas, Cienfuegos, and Santiago immediately, and at other ports in Cuba and Porto Rico as soon as practicable or necessary. These quarantine officers shall be vested with authority necessary to prevent the infection of vessels or their *personnel*, and all vessels, including vessels of the army transport service and merchant and coastwise vessels, leaving ports in the islands of Cuba or Porto Rico, vessels of the United States navy excepted.

The officers of the army transport service and medical officers of the army and Marine Hospital service on duty on army transports are instructed to use every precaution to prevent exposure to infection of crews while in ports in the islands of Cuba and Porto Rico.

Dr. Orlando E. Bradford, formerly a dentist in this city, who was convicted of counterfeiting three years ago and sentenced to the penitentiary for six years, died in prison a few days ago. The cause of his death was pulmonary phthisis following a pneumonia contracted early last summer. He had been a model prisoner, and, with the usual commutation, his term would have expired on January 7, 1900. He was about fifty years old and was unmarried.

Smallpox at Norfolk.—The authorities at Washington have called on the Marine Hospital service to prevent the introduction of smallpox into the city from Norfolk. Surgeon-General Wyman has accordingly stationed officers of the service there, with instructions to examine every passenger leaving the city. The compulsory vaccination order is being rigidly enforced in Norfolk, and the board of health says it has the disease well in hand. Since the beginning of the epidemic nearly seventy-five thousand people have been vaccinated.

Regulating the Sale of Poisons.—A bill has been introduced into the legislature of New York State, forbidding the sale of any poisonous drugs, a list of which is given in the bill, by any one but a duly licensed pharmacist. This will prevent the sale of poisons by unlicensed clerks and students of pharmacy. A bill has also been introduced, providing for the appointment of a State board of pharmacy of nine members, two from Erie, three from New York, and four from the State at large, to grant licenses and regulate pharmacy.

The Rochester (N. Y.) Pathological Society has determined to aid and protect such of its members as may have the misfortune to be sued for malpraxis. At a meeting of the society held January 12th, the following resolution was adopted: "If any member be confronted with a suit at law for alleged malpractice, or similar charge, it shall be his duty to notify the society. The president shall thereupon appoint a committee of three to investigate the merit of the action, to advise the member brought into litigation, and to recommend to the society such measures as they consider should be taken."

More or Less Bogus Charities. — Comptroller Coler, of this city, has been investigating the status of several societies that are known as charitable organizations and that have been receiving money from the city. As a result, a number of them are to be cut off the list. Among other abuses, he is said to have discovered that certain hospitals are taking in patients indiscriminately in order to increase the amount of money drawn from the city. These hospitals make it a custom to solicit patients, many of whom are amply able to pay for treatment at home. Inasmuch as the city pays a fixed sum for each pauper treated in these hospitals, the perversion of the term "pauper" makes it possible for such institutions to obtain money from the city to which they are not rightfully entitled.

Dr. José Lozada, one of the commissioners sent by Aguinaldo to establish a Philippine junta in Washington, is professor of medicine in the college at Manila. He is a native of that city, but received his medical education in Europe.

St. Mary's Hospital.—At the annual meeting of the staff of this hospital, held on January 16th, the following officers were elected for one year: *President*, Dr. Romeo F. Chabert; *Secretary*, Dr. Charles A. Gilchrist.

The Cumberland County (N. J.) Medical Society.—A meeting of this society was held at Bridgeton, January 10, 1899, with Dr. H. W. Elmer in the chair. Dr. E. S. Fogg read a paper on "Stimulation of the Heart." A paper on "The Serum Treatment of Tuberculosis" was read by Dr. M. K. Elmer. On December 8, 1898, the eightieth anniversary of this society was observed. The following interesting programme was given: Prayer, by Rev. S. W. Beach; address of welcome, by Dr. W. L. Newell; response, by Prof. W. E. Ashton; address, historical, by Dr. F. M. Bateman; address, "Study of Cardiac Pain," by Prof. H. A. Hare; address, "Surgery of the Hepatic Ducts," by Dr. J. B. Deaver; address, "Internal Secretions," by Dr. D. Riesman. A reception was held at the Hotel Cumberland, followed by a banquet at eight o'clock. After-dinner speeches were made by Drs. H. C. Wood, W. H. C. Smith, J. Chalmers Da Costa, E. L. B. Godfrey, Charles C. Phillips, and H. A. Hare.

Dr. Horace M. Starkey has been elected to and accepted a professorship of ophthalmology in the Chicago Eye, Ear, Nose, and Throat College.

Smallpox in the Province of Quebec.—Smallpox has appeared at Coteau de Lac and Coteau Landing, in the Province of Quebec, several families in the country about these places having one or more members ill with the disease.

Plague in Calcutta.—There have recently been a number of sporadic cases of plague in Calcutta, but it is believed the health authorities can prevent the disease becoming epidemic, radical measures having already been taken.

The British Medical Association. — At the next meeting of the British Medical Association, which will be held at Portsmouth August 1 to 4, 1899, the address in medicine will be given by Sir Richard Powell, and the address in surgery by Prof. Alexander Ogston.

The Health of Philadelphia and New York Compared.—*The Ledger*, of Philadelphia, published an article recently, comparing the vital statistics of that city for 1898 with those of New York for the same period. It says that, although the population of this city is three times that of Philadelphia, there were only thirty-two more deaths from typhoid fever here than there. In the boroughs of Manhattan and the Bronx—in old New York—with a population twice

that of Philadelphia, the deaths from typhoid fever were only three hundred and seventy-four as against six hundred and thirty-nine in the latter city. The deaths from diphtheria in Philadelphia were nine hundred and ninety-eight as against seven hundred and ninety in Manhattan and the Bronx, or fourteen hundred and sixty-one in the greater city. In order to recognize more fully the force of the comparison, it must be remembered, *The Ledger* says, "that a large portion of the people of Manhattan swarm in crowded quarters in tenements, where the conditions of life promote the spread of disease. A large proportion of the denizens of these purlieus of the city are foreigners, very many of them recent arrivals, untaught in sanitary matters. Notwithstanding the fact that the majority of our people are much more comfortably housed, the death ratio in 1898 was 19.18, against 19.70 for New York proper and 19.21 for Greater New York." *The Ledger* attributes the greater mortality in Philadelphia to its bad water and dirty streets. It will be difficult, fortunately, to foul our water-supply, but with a little patience and perseverance in the way he is going, our street-cleaning commissioner will soon make our streets as dirty again as any in the land.

Dr. William H. Daly, of Pittsburg, recently surgeon of volunteers in Porto Rico, has resigned from the army, and his honorable discharge has been ordered to take effect on January 18th.

Patroness of the Austrian Red Cross Society.—An imperial autograph letter was officially published on December 20th, according to which the widowed Crown Princess Stephanie becomes the patroness of the Austro-Hungarian Red Cross Society, succeeding the late Empress of Austria.

Scurvy in the Klondike.—Returned Klondikers bring back reports that over three hundred down-in-luck miners are living in dugouts on the outskirts of Dawson. They have probably a month's supply of pork and beans. Scurvy and typhoid fever are killing three to four daily.

Reporting Mistakes.—It is said that a London medical society has reserved a certain number of meetings in each year, which will be devoted to a recital of unfavorable cases and to a confession of errors in diagnosis and treatment fallen into by members of the society. Such meetings should be exceedingly instructive, if the members are honest in their confessions.

The Inmates of the London Workhouses. — The London *Times* of December 26th contains an interesting account of the legal poor of London, commenting on what the writer of the article terms "the able-bodied loafer." Another class is a growing one in the workhouses, the able-bodied "in-and-out." The genus is a person deserving of the least possible consideration, but he, too, is finding the workhouse more attractive than it used to be. The only difficulty the guardians have to contend with is to prevent the workhouse being made too much a place of recreation. The modern workhouse building, too—like that in Marylebone, with its pretty chapel, its fine dining-hall, its electric lighting, its low-pressure hot-water heating, its well-appointed kitchens; and like that in Whitechapel, with its bright and cheerful day-rooms for the deserving aged and infirm, where musical entertainments are given—is of a character to attract the miserable, and is far-and-away superior to many a workingman's home.

The Maryland Medical College, the newest medical college in Baltimore, which was opened last September, has had a phenomenal success, and has had more students in proportion to its age than any other medical school in Baltimore.

The Medical and Chirurgical Faculty of Maryland will have completed the hundredth year of its existence next April, and the committee on the centennial anniversary is arranging a most elaborate programme for this eventful meeting.

A Theft of Twins.—Two children were born recently to a woman in an Irish hospital, but they lived only a few days. The hospital physicians, it is said, desired a post-mortem examination on the twins, but the father objected, and gave orders to have the children put in a coffin and taken to his home for the funeral. Just before the burial the coffin was opened for some reason, and was found to be filled with shavings and other waste material.

The Woman's Hospital of Baltimore will be enlarged to meet the increasing demand of patients.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending January 21, 1899. January 14th.—Surgeon J. C. Byrnes ordered to additional duty on board the *Puritan;* Assistant Surgeon W. M. Garton detached from the *Supply* when put out of commission and ordered to the Washington navy yard; Assistant Surgeon E. M. Blackwell detached from the *Vixen* and ordered to the *Franklin.* January 16th.—Surgeon J. R. Waggener, order of January 3d, detaching from the Mare Island navy yard and ordering to Washington, D. C., amended: ordered to be examined at Washington, D. C., and then home to wait orders. January 19th.—Surgeon S. H. Griffith detached from the *Mayflower* when put out of commission and ordered home to wait orders; Passed Assistant Surgeon G. H. Barber detached from the *Glacier* when put out of commission and ordered to the Naval Academy; Passed Assistant Surgeon C. F. Stokes ordered to the naval hospital, New York; Assistant Surgeon R. C. Holcomb detached from the Naval Academy and ordered to the Washington navy yard.

The Medical Society of the State of New York—Reduced Rates.—Three sessions will be held daily, commencing at 9:15 A.M., 2:15 and 7:30 P.M. The arrangement for tickets is as follows: tickets from any point in New York State to Albany full rate, but the agent selling such tickets gives a certificate, route specified, which properly indorsed by the secretary of the society and countersigned by a railroad representative present at the meeting, entitles the owner of said

ticket to return fare at one-third the regular rate. The ticket and accompanying certificate can be obtained as early as January 28th, at the New York Central ticket office, and return tickets with proper indorsement are good for three days after the adjournment of the meeting. Time of trains leaving Grand Central Station, New York City, 12:10 and 8:30 A.M., and 3:30, 8:30 and 9:15 P.M. If enough members signify their desire to travel by the 3:30 P.M. train, Monday, January 31st, a special car will be put on for their accommodation.

GEORGE B. FOWLER, M.D., *Chairman.* JAMES F. MCKERNON, M.D., *Secretary.*

The Marine-Hospital Service and National Quarantine.—By direction of the secretary of war, the following orders of the President are published for the information and guidance of all concerned:

"EXECUTIVE MANSION,
"WASHINGTON, January 17, 1899.

"To prevent the introduction of epidemic disease, it is ordered that the provisions of the act of Congress approved February 15, 1893, entitled 'An Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service,' and all rules and regulations heretofore prescribed by the secretary of the treasury under that act are to be given full force and effect in the islands of Cuba and Porto Rico, and the following additional rules and regulations are hereby promulgated:

"The examination in ports of the islands of Cuba and Porto Rico of incoming and outgoing vessels, and the necessary surveillance over their sanitary condition as well as of cargo, passengers, crew, and of all personal effects, is vested in and will be conducted by the Marine Hospital service, and medical officers of that service will be detailed by the secretary of the treasury as quarantine officers at the ports of Havana, Matanzas, Cienfuegos, and Santiago immediately, and at other ports in the islands of Cuba and Porto Rico as soon as practicable or necessary. Quarantine officers shall have authority over vessels, their wharfage and anchorage in infected seaports, in so far as is necessary to prevent the infection of vessels or their *personnel*, and all vessels, including vessels of the army transport service and merchant and coastwise vessels, leaving ports in the islands of Cuba or Porto Rico for the United States or for other ports in the islands of Cuba or Porto Rico, vessels of the United States navy excepted. Quarantine officers will enforce necessary measures on incoming vessels through collectors of customs at ports of entry, who will not permit entry without quarantine certificates, and bill of health shall not be given to an outgoing vessel unless all quarantine regulations have been complied with. All officers of the army transport service and medical officers of the army and marine hospital service on duty on army transports will use every precaution to prevent danger of exposure to infection of crews while in ports in the islands of Cuba or Porto Rico.

"Since the quarantine service herein provided is for the protection of the islands of Cuba and Porto Rico as well as the protection of the United States against both, the expenses arising therefrom will be charged at present both against the revenues of these islands and the epidemic fund; said expenses will be divided equally against both, payments, however, to be made out of the epidemic fund and reimbursement made thereto from the revenues of the islands of Cuba and Porto Rico. WILLIAM MCKINLEY."

By command of Major-General Miles; H. C. Corbin, Adjutant-General.

Civil-Service Examination for State Hospital Positions.—Open competitive merit examinations for the following medical positions in the State hospitals will be held throughout New York State on February 4th: Medical interne, junior physician, woman physician. Candidates from both the regular and the homœopathic schools of medicine are desired. Intending competitors must file applications with the Civil-Service Commission at least five days before the date of examination. Those desiring further information and to obtain application blank may address Secretary, New York Civil-Service Commission, Albany, N. Y.

The Microbe of Vaccinia.—The London papers state that Mr. Stanley Kent, of St. Thomas' Hospital, who has been working at vaccinia since 1893, has succeeded in discovering the specific organism upon which it depends. He has further prepared pure cultures of the germs, and has used them for vaccination. The discovery, it is contended, while being of high scientific interest, is of more importance from a practical point of view, as the possibility of using pure culture for vaccination disposes of the chief argument of the antivaccinator, viz., that disease may be communicated to the children vaccinated by the use of impure lymph.

The Late Dr. Charles W. McManus.—The medical board of the Willard Parker and Riverside Hospitals, having learned with profound regret of the death, on January 5, 1899, of Dr. Charles W. McManus, late interne physician to the hospitals, the following preamble and resolutions were unanimously adopted:

"*Whereas*, It has pleased the Almighty to remove by death Dr. Charles W. McManus, interne physician to these hospitals; and

"*Whereas*, Dr. McManus has made for himself in our hospitals an enviable record for conscientious and painstaking work and unremitting zeal in the performance of his duties, and has gained the esteem and affection of his colleagues by his admirable personal qualities; therefore be it

"*Resolved*, That this board deeply regrets the cutting short of so promising a career at the very beginning of professional life; and be it

"*Resolved*, That we offer to the father of Dr. McManus our deep sympathy in the terrible loss he has sustained in the death of this his only son; furthermore be it

"*Resolved*, That a copy of these resolutions be transmitted to the board of health, the father of the deceased, the medical journals, and spread in full upon the minutes of this meeting.

"JOHN W. BRANNAN, M.D., *President;* H. W. BERG, M.D., *Secretary.*"

Obituary Notes.—DR. ALCÉE CHASTANT, of New Orleans, died on January 19th, at the age of sixty-three years. He was a graduate in medicine of the Tulane University in 1852. He served on the medical staff in the Confederate army during the Civil War.—DR. WILLIAM J. LYTLE, of Princeton, N. J., died on January 22d, at the age of seventy-six years. He was a graduate of the medical department of the University of the City of New York in the class of 1848.

Reviews and Notices.

TRANSACTIONS OF THE CONGRESS OF AMERICAN PHYSICIANS. Thirteenth Session. Volume XIII.

THIS volume of the society's proceedings contains the usual number of interesting papers and discussions.

LEÇONS DE CLINIQUE CHIRURGICALE, FAITES À L'HÔTEL DIEU (1897). Par P. DELBET, Professeur agrégé, etc. Paris: G. Steinheil. 1899.

THIS is a series of lectures by Professor Delbet upon various surgical subjects given as the material developed in his clinic. The lectures take up the most diverse cases, and are really, perhaps, more in the nature of conversations than lectures. The chapter most interesting, perhaps, to Americans is upon the subject of the treatment of appendicitis. The author is not a great believer in operations, except in a few cases (seven or eight per cent.), and argues that as he has cured (?) ninety-two per cent. of his series by medical means, operation is necessary only in the other eight per cent. In this country this reasoning would not be accepted by most surgeons.

TEXT-BOOK OF HISTOLOGY. Including the Microscopic Technic. By DR. PHILIP STÖHR, Professor of Anatomy, University of Würzburg. Translated by Dr. EMMA BILLSTEIN. Second American from Eighth German Edition. With 292 Illustrations. Philadelphia: P. Blakiston's Son & Co. 1898.

THIS edition of an already well-known students' manual requires little but favorable comment. Its other editions have made it well and favorably known, and this one only makes the work's position more secure. The book is not only a useful one for the student, but makes a very good work of reference for its subject, and is thus entitled to a place upon the shelves of the practitioner. The microscopic structure of all the structures of the body is taken up in order, and very good illustrations are used in the text. The subject of technic is sufficiently detailed for a work of this kind. The chapters upon the nervous and digestive systems are particularly full and well illustrated.

THE CHANGE OF LIFE IN WOMEN, AND THE ILLS AND AILINGS INCIDENT THERETO. By J. COMPTON BURNETT, M.D. Philadelphia: Boericke and Tafel. 1898. Pp. 185.

IN spite of the ambitious claims of the author, it is impossible to take this little book seriously; in fact his sportive style prevents. Our homœopathic friend has his own opinions and does not hesitate to express them. For example, on page 24 we note this stirring sentence: "The practice of using vaginal injections is damnable, and I damn it accordingly." Leucorrhœa is regarded as a disease *per se*, and the expressions "precancerous bleeding womb," "ulcerated womb," "cancerousness," etc., serve to indicate the writer's peculiar views. The results claimed for medicinal treatment are certainly remarkable in this age of doubt. The sceptical reader will be apt to add the comment: "The lady doth protest too much, methinks."

THE MEDICAL REGISTER AND DIRECTORY OF THE INDIAN EMPIRE. JAMES R. WALLACE, M.D., F.R.C.S.I., Editor. 1898. Second Edition. A. Reddick & Co., 12 Furnival Street, Holborn, London, E. C., England.

OUR distinguished collaborator, the editor of the "Indian Medical Record," has found time, in connection with his editorial duties, to prepare this, the second edition of the "Medical Register and Directory of the Indian Empire," and presents it in the form of a handsome octavo volume of over two hundred pages. It appears to include a most complete register of the profession in the East, and to form an exceedingly reliable guide for reference in all matters that pertain to medical education and medical examinations in India and in the British Isles.

MEDICAL AND SURGICAL REGISTER OF THE UNITED STATES AND CANADA. Fifth Revised Edition. R. L. Polk & Co., Detroit, Mich.

NEW editions of this comprehensive work appear with surprising regularity in view of the apparently enormous amount of detail necessary for its preparation. Some idea of its contents and usefulness is indicated by the following as among its various departments; A list of over one hundred and twelve thousand physicians and surgeons, arranged by States and provinces, giving post-office address, the school practised, date and college graduation; all the existing and extinct medical colleges in the United States and Canada, the various medical societies, medical colleges, hospitals, sanitariums, asylums, and other medical institutions and boards of health; a synopsis of the laws of registration and other laws relating to the profession; medical journals; list of officers of the medical departments of the United States army, navy, and marine-hospital service; roster of examining surgeons of the United States Pension Department; full particulars of all national associations and societies relating to medicine and surgery; and an index to the physicians of the United States arranged alphabetically, etc.

THE SEXUAL INSTINCT. Its Use and Dangers as Affecting Heredity and Morals. Essentials to the Welfare of the Individual and the Future of the Race. By JAMES FOSTER SCOTT, M.D., C.M. Edinburgh, late Obstetrician to the Columbia Hospital for Women, and Lying-in Asylum, Washington, D. C. New York: E. B. Treat & Co.

THIS work seems to be intended rather for the lay than the professional reader. The author's style is one of teaching rather than of preaching, and a distinction is clearly drawn between sexuality and sensuality. The matter is handled fearlessly and in a straightforward manner which must appeal to all lovers of truth. Those who have to do with the rearing of children, whether in the capacity of parent, teacher, or physician, will find much to aid and encourage them in dealing with delicate matters relating to sexual life. The author clearly appreciates the necessity for greater attention being paid to this subject, and decries the false modesty which has for ages retarded the growth and development of scientific knowledge pertaining to it. A considerable portion of the work of nearly five hundred pages has been devoted to the consideration of gonorrhœa, syphilis, and other ill results of the gratification in a faulty manner of this second in importance of all human instincts. If read in the proper spirit and its teachings followed, the book is capable of accomplishing a vast amount of good. It can be considered a properly written book for either physician or lay reader.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. PLAYFAIR, M.D., LL.D., F.R.C.P., Physician-Accoucheur to H. I. and R. H. the Duchess of Saxe-Coburg and Gotha; Emeritus Professor of Obstetric Medicine in King's College, etc. Seventh American from the Ninth English Edition. With 7 Plates and 207 Illustrations. Lea Brothers & Co. 1898. Pp. 687.

IT is always gratifying to welcome this old friend of our student days, which, as the preface states, has been before the public for twenty-two years, a rare and enviable record for a medical book. As one turns over its pages, pleasant memories of his initiation into the study of obstetrics (*not* midwifery) will be evoked, and he will recall the time when "Playfair" was the court of final appeal in all doubtful questions. *Tempora mutantur, et nos mutamur in illis.* In spite of the "very thorough revision of the text," the critical reader will still note here and there certain ancient remains which seem to have resisted the attacks of time and former critics, notably the chapters on difficult occipito-posterior positions (which has been painfully unsatisfactory to generations of students), the treatment of placenta prævia, of post-partum hemorrhage, transfusion, the obstetric management of eclampsia, etc.

It must not be inferred that we disapprove of the sound conservatism which has always marked this standard work; on the contrary, it is a most commendable feature. But we regret that many recent methods of treatment are either omitted, or are damned with faint praise. The teaching of the medical student is now eminently practical. He has learned to ask himself at the bedside, not what the fathers have taught and practised, but what is the best course to be pursued in the present case, in the light of modern science. Authors of text-books have not been slow to adapt themselves to these changed conditions, and to eliminate much of the useless matter that has cumbered their pages in the past. We shall always retain a warm regard for Dr. Playfair's book, but we cannot close our eyes to the fact that the new edition is still a little old-fashioned.

Society Reports.

THE PRACTITIONERS' SOCIETY.

One Hundred and Forty-Third Regular Meeting, Held on Friday, December 2, 1898.

DR. W. GILMAN THOMPSON, PRESIDENT, IN THE CHAIR.

A Rare Case of Extreme Excursion of the Scapulæ (Almost Complete Dislocation), Caused by Progressive Muscular Atrophy.—Presented by DR. V. P. GIBNEY, on behalf of Dr. Tranchida. A male (Italian), twenty-three years of age, son of healthy parents, in whom no trace of paralysis could be found, was apprenticed at hard work in a macaroni factory at the age of ten. He was healthy, able-bodied, and fully equal to the work required, until he was seventeen. He was obliged to spend from sixteen to twenty hours a day in a hot, damp atmosphere, and the character of the work was peculiar, in that it exacted of the muscles of his shoulders and the erector-spinæ muscles almost constant strain. Between the seventeenth and eighteenth years he began to experience a little weakness, and thought of giving up his work and enlisting in the army, but was refused by the surgeons, who declared him unfit for military duty, because of a slight luxation of the scapulæ. Prior to immigration, some two years ago, he was treated in the Palermo City Hospital, electrically, but as the case proved very tedious he was finally discharged without result. He recently came under the care of Dr. Tranchida. Examination showed good bony development, but a peculiar appearance of the shoulders; they hung like those of a quadruped—a calf, for instance. The upper extremities, when brought out horizontally with the body, were equal in length to that of the body. As they hung to his side, the tips of the fingers were only about five and one-half inches above the patellæ. The bony prominence of the shoulders themselves were exaggerated by reason of the muscular atrophy. The normal depressions above and below the clavicles were obliterated, and the pectoral muscles were very much atrophied. His respiration was chiefly abdominal. On a posterior view, without any effort at correcting the deformity, the lower angles of the scapulæ projected almost directly backward, while the bones themselves made the sides of the chest walls typically "angel-winged." If he attempted to move the arms, the scapulæ themselves took a still greater excursion anteriorly. The angle of the right scapula was on a higher plane than that of the left. There was lordosis, yet not extreme. Comparison of the scapulæ showed the anterior angle of the right on a line with the fifth rib instead of the seventh, and distant fifteen inches, while the anterior angle of the left scapula was on a line with the seventh rib and was sixteen inches from the anal fissure. The distance between the angles was six inches, while the right was three and one-half inches from the spinal column. The patient could, with much effort, bring the scapulæ into normal position, but in doing so the left shoulder became more prominent than the right. When he folded the arms across the chest the scapular deformity became greatly exaggerated, and the muscles not subjected to atrophy stood out in bold relief. The muscles of the right hand were beginning to show marked atrophic signs, especially in the thenar eminence; the skin was bluish, the grasp was very weak, and the general expression of the hand was greatly changed. By a careful study of the shoulder and the muscles controlling this joint, one could readily understand the excursions which the scapulæ and the shoulders took, by reason of the loss of power in certain muscles—as, for instance, the rhomboid, trapezius, serratus magna, and the pectorals chiefly. Electrical reactions showed the following: To a strong faradic current there was a little reaction in the trapezius; in the extensor muscles of the right side there was a medium reaction; in the rhomboid a quick reaction; in the other muscles and branches to the galvanic current there was a normal reaction.

Quite recently the patient began to show a little weakness in the lower extremities. It could be seen, therefore, that the atrophy was progressive. It was fair to assume that the excessive use of the muscles involved, in an atmosphere that was far from healthy, would possibly explain the development of the disease, and account likewise for the extraordinary deformity which was here presented. In connection with the above history, Dr. Gibney showed a number of radiographs of the case.

DR. JOSEPH D. BRYANT said that some years ago he had had under his observation an elderly man with marked extrusion of both scapulæ. In that case the deformity was due, substantially, to impairment of the serrati muscles due to progressive muscular atrophy.

DR. E. G. JANEWAY said he thought the case shown by Dr. Gibney was one of progressive muscular atrophy.

Metatarsalgia: Its Treatment by Specially Constructed Boots.—This paper was read by DR. V. P. GIBNEY. It will appear in a future issue.

DR. ROBERT ABBE said he could recall only one striking instance of metatarsalgia in which he had been called upon to operate. The patient was a lady who suffered from a most aggravated form of this trouble. She had seen Drs. Morton and Pepper, of Philadelphia, and they had advised removal of the joint. Dr. Abbe amputated the toe completely, going well back on the metatarsal bone and removing it. The relief was absolute and permanent, and after the operation she did not find it necessary to wear a specially made shoe. In that case the pain was often so severe that the patient would hardly be able to walk another step, and the neuralgia even extended well up on the thigh. Dr. Abbe said that, in an operation of this kind, removal of the joint with the distal third did not weaken the usefulness of the foot, although it produced slight deformity. By operative interference we avoided the necessity of any shoe or other device. In some cases the pain persisted if the head of the bone only was removed, and the speaker said this had led him to believe that there was a pinching or bruising of the nerve under the ball of the toe.

DR. ROBERT F. WEIR said he had operated for this condition six times. In five he simply resorted to excision of the head of the metatarsal bone; in one he removed the toe, together with the head of the bone. In all of the cases the operation gave immediate and permanent relief. Dr. Weir said that in many other cases of metatarsalgia coming under his care he had been able to give relief by a variety of contrivances, making compression pads, etc.

DR. WILLIAM T. BULL said he had never operated for the relief of metatarsalgia, his practice having been to refer these patients to somebody who had the facilities for constructing proper shoes. The pain was usually relieved in this way. Dr. Gibney's paper on the subject tended to confirm his opinion that this affection could generally be relieved without the necessity of surgical interference. Although the diagnosis could usually be made without much difficulty, Dr. Bull said that he had recently seen a well-marked case which had been diagnosticated by a surgeon of many years' standing as a case of rupture of an extensor tendon, producing an incurable lesion.

DR. JOSEPH D. BRYANT said that, in the few cases of metatarsalgia which had come under his care, he had

been able to relieve the pain by the use of properly constructed shoes, and without resorting to an operation.

Remarks on Re-Establishing Surgically the Interrupted Portal Circulation in Cirrhosis of the Liver.—This was the title of a paper read by DR. ROBERT F. WEIR.

DR. BRYANT said that while he could hardly discuss this paper, as the subject brought up was a comparatively novel one, he could see many obstacles to the feasibility of the operation described by Dr. Weir. One of the most potent objections was that cirrhotic changes in the liver were frequently associated with similar changes in other organs. The speaker said that ascites due to cirrhosis of the liver sometimes disappeared spontaneously or after tapping; how frequently this occurred he did not know.

DR. E. G. JANEWAY said that in one case of ascites due to cirrhosis of the liver he had seen the fluid disappear permanently after the patient had been tapped sixty-five times. In a few instances he had seen the ascites disappear when the autopsy subsequently proved that the case was one of cirrhosis of the liver.

DR. ANDREW H. SMITH said that he had seen one case, with marked abdominal distention, in which one tapping gave relief for six years. The ascites then recurred, but disappeared under simple treatment with potassium iodide. This was twenty years ago, and the patient was still alive and well.

DR. CHARLES MCBURNEY said that he had no personal experience in the performance of this operation, and he would feel very loath to advocate it. It did not appeal to him as a desirable procedure, and the results of it thus far were not encouraging. The cases cited by Drs. Janeway and Smith showed that in some cases of cirrhosis of the liver the ascites was permanently relieved by simple tapping; remarkable recoveries from tuberculous peritonitis had also followed simple incision. Such cases were suggestive, and tended to cast doubt on the theory that the disappearance of abdominal dropsy, in cases of cirrhosis of the liver after operation which produced adhesions between the liver and diaphragm, was dependent upon the establishment of a new anastomotic circulation.

DR. BEVERLEY ROBINSON said that in one case of cirrhosis of the liver coming under his observation the patient apparently recovered after repeated tappings. After the woman's death, which was due to another cause, the liver was found to be cirrhotic. The speaker said that some years ago permanent drainage was recommended in these cases.

DR. ROBERT ABBE said that he thought the subject brought up by Dr. Weir suggested a very interesting field of experimentation, which in time might develop a useful and rational operation. The ease and rapidity with which the peritoneum became vascularized were well known, and if, through this medium, we could afford a ready means of escape of the portal circulation into the parietal circulation, it would be a capital procedure to relieve the ascites in cirrhosis, which was presumably due to venous stagnation. If the liver was badly damaged, however, no permanent benefit could be looked for. The operation was certainly worthy of further experimentation.

DR. WEIR, in closing, said that he thought the operation he had described was worthy of a trial in apparently hopeless cases of liver cirrhosis, in which the abdomen rapidly refilled after tapping, and in which the large quantity of the fluid was producing fatal exhaustion. Cases like those cited by Drs. Janeway and Smith, in which permanent recovery followed tapping, were certainly very rare, and were probably brought about either by formation of adhesions or by development of natural venous anastomoses. Dr. Weir said that in cases of cirrhosis of the liver with bleeding from varicose veins in the œsophagus or stomach, ascites was usually absent.

A Case of Fatal Œsophageal Hemorrhage.—This was reported by DR. E. G. JANEWAY. The patient was a man, fifty years old, who, while apparently in fair health, had several severe attack of hæmatemesis, and also passed blood from the bowels. It was supposed that he had an ulcer of the stomach. Death occurred from exhaustion and sepsis at the end of two weeks, and at the autopsy varicose veins as large as a man's finger were found in the œsophagus, extending four inches above the cardiac orifice of the stomach. An opening in one of these veins, large enough to admit a No. 10 sound, was found, and it contained a septic clot. The stomach was entirely normal; there was no cirrhosis of the liver.

Dr. Janeway said there were twelve cases of this kind on record at the time of this autopsy, twelve years ago. These varicosities of the œsophageal veins were generally considered due to cirrhosis.

DR. JOSEPH D. BRYANT reported the case of a man, twenty-one years old, who, while bathing at the seashore last September, stepped on a piece of glass, cutting his foot quite severely. The wound healed promptly, but four weeks later he felt a pricking sensation at the ball of the great toe, which gradually grew more severe. An *x*-ray photograph was taken of the foot, which revealed the presence there of a small foreign body; this was removed, and proved to be a bit of glass.

DR. ANDREW H. SMITH said that when the use of oxygen was indicated and there were at the same time restlessness and insomnia, he had found the addition of a little chloroform to the oxygen beneficial. The chloroform was placed in the wash-bottle, so that a small amount was inhaled with the oxygen. It had a very soothing effect, and the results were more satisfactory than from the use of oxygen alone.

Therapeutic Hints.

Burns.—

℞ Aristol ..... 1 part.
Sterilized olive oil ..... 2 parts.
Vaseline ..... 8 "

M. S. Use as an ointment. Powdered aristol is dusted around the edges of the burn after the ointment is applied.

—WALTON, of Ghent.

Subinvolution.—

℞ Potassii bromidi ..... ʒ ss.
Extr. ergot fld. (Squibb's) ..... ʒ iss.
Aq. cinnamom ..... ʒ iss.

M. S. A teaspoonful to be taken in a wineglass of ice-water four times a day.

—A. W. MAYNARD.

Sore Nipples.—

℞ Olive oil,
Lanolin,
Cosmolin ..... āā ʒ ss.
Boric acid ..... gr. x.

M. S. Smear nipples gently; cover with antiseptic gauze.

—DAVIS.

Fissures of the Hands.—

℞ Menthol ..... 1 gm.
Salol ..... 2 gm.
Ol. oliv ..... 10 gm.
Lanolin ..... 30 gm.

M. S. Apply morning and night.

—COMBY.

Uræmia.—The headache and sleeplessness occurring in uræmic patients can generally be removed by the hypodermic injection of morphine. I have not given this treatment in uræmic convulsions or coma, but I have largely used it in many cases of uræmia

with other troubles, and am sure that morphia may be given to such patients with every prospect of benefit and no risk of harm.—SIDNEY RINGER.

A Diuretic in the Cardiac Hydrops of Children.—

℞ Uropherini salicyl 5
Vanillin 0.001
Mucil. acaciæ,
Syr. simplicis ..... āā 15
Aquæ font 120
M. S. A teaspoonful three or four times daily.

—TH. ESCHERICH.

Gouty Rheumatism.—

℞ Sodii salicylat ..... 30 gm.
Sodii nitrat.,
Potassii iodidi ..... āā 20 gm.
Colchici oxymel ..... 100 gm.
Roborant. bardanæ (Fr. Cod.) ..... 300 gm.
M. S. Dessertspoonful morning and evening in half a glass of alkaline water. Continue for forty days.

—M. G. BACCELLI, *Gazette Hebdomad., October 2, 1898.*

Bronchial Catarrh of Measles.—

℞ Liq. potass. citrat ..... ℥ iss.
Tinct. opii camph ..... ℥ iij.
Syr. ipecac ..... ʒ i.
Syr. acaciæ ..... ℥ ss.
Aquæ ..... q. s. ad ℥ iij.
M. S. A dessertspoonful every two hours for a child of five years.

—STEVENS.

Diarrhœa.—I have used this—my favorite prescription—in diarrhœa for several years, and find it almost a specific, especially so in summer complaint of children.

℞ Paregoric ..... ℥ ij.
Ext. witch-hazel ..... ℥ i.
Carbolic acid ..... ʒ i.
Fld. ext. kino ..... ʒ ij.
Jamaica ginger ..... ʒ ij.
Precipitated chalk ..... ℥ i.
Simple syrup to make ..... ℥ viij.

Mix thoroughly and always shake bottle well before using. For an adult a teaspoonful, repeated at intervals of three hours, until desired effects result. Dose for children in proportion to age.—T. B. GREENLEY.

Sciatica.—There are two groups: 1st, those of sudden onset; 2d, those of slow development. In the first, if patient can rest in bed, forbid his rising; apply *loco dolenti:*

℞ Spt. terebinth.,
Ol. gelsemii ..... āā 5 gm.
Ceræ albæ ..... 2 gm.
Ung. simplicis ..... 40 gm.

At night introduce a morphine suppository. Wring out the corresponding leg of a pair of drawers in water at 18° C., which is immediately drawn on over the affected limb and covered with sheets so as to keep up an atmosphere charged with moisture. This may be renewed during the night. After a few days apply day and night. In group 2 massage is employed, but never in group 1. Electricity is of occasional benefit. Avoid, after cure, all exaggerated fatigue; bicycle, horseback riding, mountain climbing.—HIRSCHKORN, *Centralblatt f. d. ges. Therap.*

Tuberculosis.—Until we have more light to guide us, until we are more fully convinced of the utility of the serum treatment of tuberculosis, we should continue to take advantage of climatic treatment, which has been fully tried and seldom found wanting.—F. E. WAXHAM.

Fasting in Acute Disease.—Man and animals are rendered more resistant to the action of bacteria and their toxins by abstaining from food within certain definite limits. Even milk when not properly digested undergoes such changes, due to fermentation and putrefaction, that the resistance to bacterial and toxin influence on the part of the tissues and their secretions is lessened. In pneumonia particularly, much benefit may be derived from fasting conjoined with gastro-intestinal disinfection.—DOMINICIS, *Wiener med. Presse*, No. 18, 1898.

The Treatment of Heart Disease by Saline Baths and Resisted Movements — Schott Method. — Dr. Charles Lyman Greene (*Journal of the American Medical Association*, October 15, 1898) writes as follows: Relative value of baths and movements: The effect of baths is more permanent than is that of the movements, but both should be used, the movements in the morning and the baths at night.

Cases best adapted to treatment: It is admirably adapted to cases of incompensation of moderate severity where rest is not to be had, and to those severer cases in which rest and cardiac stimulants have proven useless or reached the limit of effect. The particular class of cases best adapted to treatment are the mitral cases, particularly those of regurgitation, even if very advanced, and all cases of slight incompensation, in which marked arteriosclerosis and myocarditis are not present. In exophthalmic goitre, cases of functional irregularity, of neurasthenia, in all cases of anæmia, and in chronic rheumatism it is very useful.

Cases in which it has proven of little use: In the writer's hands aortic cases, whether stenosis or regurgitation, have not as a whole yielded good results. No harm has been done, and many have improved, but the writer is not satisfied that the treatment is here of any decided value, and believes that simple rest and the resisted movements are much to be preferred.

Cases in which it is contraindicated: These are aneurism, marked arteriosclerosis, chronic myocarditis, and chronic Bright's disease; yet, while baths are in these cases distinctly dangerous and harmful, the movements may be decidedly beneficial.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

NEW YEAR—HONORS TO THE PROFESSION—THE MEDICAL COUNCIL—DR. GLOVER'S ADDRESS—THE ORGANISM OF VACCINIA—THE PRINCE'S FUND—POST MORTEMS FOR CORONERS—A QUACK'S DEATH CERTIFICATE—AN OPTICAL COLLEGE OF PHILADELPHIA—APPOINTMENTS.

LONDON, January 6, 1899.

WITH the new year come retrospects, reviews of the last year's progress, and other notes of things previously noted or omitted. With the new year, too, comes a list of honors conferred, according to custom, by the Queen, and the profession looks to this occasion for recognition. This year Sir Henry Thompson receives a baronetcy, Dr. Weber a knighthoood, and Sir C. Cameron, of Dublin, a C.B. Dr. O'Farrell, inspector of lunatic asylums in Ireland, gets a knighthood; and Companionship of Indian Orders is conferred on the following official doctors: Colonels Warburton, Sinclair, McKay, and Major Browning. There are also appointments of doctors and nurses to the Order of St. John of Jerusalem. A C.M.G. falls to Dr. T. E. Macpherson, of Uganda.

The General Medical Council has had its folly exposed in the police court. A man was charged with personating Dr. E. G. Nugent, who had left England, and of whose diplomas he had obtained possession. Dr. Bateman, secretary of the Defence Union, en-

tered the witness-box and told how as long ago as the summer of 1895 he had warned the council not to register a person under the name of E. G. Nugent. This warning was unheeded, registration was effected by the personator, and the council stands to-day condemned for its carelessness and incompetence. This is the council which delights in secret proceedings, and obstructs its own members in doing their duty, and endeavors to hide from them official papers. Professor Horsley is more than justified; he is avenged.

Dr. J. G. Glover has followed Mr. Horsley's example and issued an address to his constituents. Dr. Glover is the senior direct representative on the council, a man of great experience in most of the questions brought before it, and a consistent if not enthusiastic advocate of such reforms as commend themselves to his somewhat judicial mind. He starts with the remark that the "profession is much greater than the council, and the council is only great as it reflects and represents all that is best in the profession." I am afraid this truism will lead not a few to say that the reflection is so feeble and the representation so imperfect that very little greatness remains. Discussing the representation, he naturally leans to an increased number of the direct representatives, though he is evidently aware that the indirect method of reforming the individual bodies first would be equally effectual. Among the things which the council has done for the profession, he says it "has started fairly on a course for securing a fit preliminary education." He admits it "has been late and long" in doing so, and well he may—considering it has taken a whole generation to "start fairly" on this course. The lax state of death registration, the penal clauses of the act, and the projected midwives' bill are commented upon in the address, and Dr. Glover, in his concluding paragraph, says that he is "not hopeless of considerable reforms."

Mr. Stanley Kent, M.A. Oxon., has been working for some time upon the nature and cultivation of the virus of vaccinia. He gave some account of his experiments in *The Lancet* of May 21st last, and further particulars in the same journal for December 17th. He found an organism in the lymph which he describes as the diplobacillus vacciniæ, which seems to deserve to be placed upon a different footing from those hitherto isolated from vaccine lymph. He has succeeded in obtaining pure cultures of his diplobacillus, with which he has inoculated animals and so produced vesicles which experts could not distinguish from those of ordinary vaccination, and these animals were rendered immune to subsequent vaccination with active lymph. Sections through the vesicles produced by his diplobacillus cultures contained the organism in large numbers, exhibiting the same morphological characters, staining reactions, and distribution in the tissues as the organisms originally found in the vesicles of typical vaccinia.

The awards of the Prince of Wales' hospital fund have given rise to a good deal of surprise and some dissatisfaction. Two hospitals capture about one-third of the proceeds, viz., the London and Guy's. No one has a word to say against them, but their share seems large, and of course the largeness diminishes the awards of all the others. The distribution committee explain that twelve hospitals are omitted because they are adequately aided by the Saturday and Sunday funds. Sir H. Burdett is being held responsible in the general opinion for too much influence in the distribution, and his pet institutions are certainly well to the front. The West London Hospital gets £500, on condition of abolishing overcrowding. It is a disgrace to the managers that this overcrowding was permitted while a new wing of seventy-five beds had been built, but was not open for want of funds. Clearly the managers rushed into building, expecting it to serve as an advertisement—a plan too often adopted, but which surely ought not to be encouraged. It seems too anomalous that a homœopathic hospital should be benefited, while many of the best special institutions are left out in the cold. I am told, however, that some of these made no applications, as they were dissatisfied with the Sunday fund and saw the Prince's was being worked by the same party.

The danger of gross carelessness or reckless inaccuracy in performing or reporting on post-mortems was lately exemplified in the coroner's court. A medical man testified that he had made a post-mortem, and that the cause of death was cerebral. A further examination was required, and it was then shown that the calvarium had not been removed, and the coroner committed the first practitioner for trial on a charge of perjury. He got off when brought before the magistrate, as this worthy chose to regard the case as one of "doctors differing." The coroner was present to support his action, and was treated rather ungraciously by the magistrate, so that there was quite a little dispute in public between these two functionaries. Mr. Thomas Bond, the official expert, has written to *The Times*, supporting the coroner and giving some surprising reports of cases in which post-mortems have been incompletely and carelessly performed. This is the most important point in the little scandal. If a practitioner does not feel competent to perform a post-mortem and to be cross-examined in court on his conclusions, he ought not to undertake it.

In the course of a recent prosecution of a quack, it transpired that he had "gone one better" than his fellow-impostors, and had his own death certificates printed. This barefaced impudence did not satisfy the magistrates that he had been guilty of illegal practice. It takes a good deal to convince our Justice Shallows, and we sadly need some other form of proceeding. The local registrar actually accepted these irregular certificates of cause of death. If the registrar-general does not dismiss him, he ought himself to be removed from his office. If every local registrar is permitted thus to shield impostors from the necessity of an inquest, what security has the public in registration and what is the value of the registrar-general's statistics?

Do you know anything of the "Philadelphia Optical College," which examines *in absentia* and grants the degree of "Doctor of Refraction"? At least a Yorkshire chemist announces that he has obtained such a diploma, testifying that he is "entitled to the highest honors the college can bestow." He survives, however, the weight thus laid upon him. I wonder whether this is an instance of the proverbial Yorkshire sharpness or a skit on the Spectacle-makers' Company, which has lately enrolled over two hundred fellows.

Among honorary memberships given by the St. Petersburg Academy of Medicine to commemorate its centenary are those of Sir W. Turner, Sir W. McCormac, Sir W. Stokes, Mr. Macewen, Lord Rayleigh, and Drs. Thompson and Brunton.

Sir John Reid succeeds Sir W. Jenner as physician-in-ordinary to the Prince of Wales.

Mr. P. Furnivall has been elected assistant surgeon to the London Hospital, and Dr. T. W. Eden assistant obstetric physician to Charing Cross Hospital.

McClintock's Rule.—A valuable suggestion to bear in mind is that known as McClintock's rule—namely, that a pulse of one hundred or more beats per minute after child-birth indicates an impending post-partum hemorrhage; such a condition being present, the physician should under no circumstance leave the patient's side until the normal pulse rate has been attained.—W. A. Newman Dorland.

THE ORIGINAL WORK OF ASELLIUS.

To the Editor of the Medical Record.

Sir: In the announcement in the last number of the Medical Record, "that a very rare and valuable book had just been presented to the library of the Academy by Lothar Voss, one of its honorary fellows," there appear two errors: It is stated that the lacteal (lymph) vessels were discovered by Asellius on July 23, 1623. The vessels were discovered by Asellius on July 23, 1622. I take this from my work on the "Physiology of Man," in five volumes, and I must have consulted at the time the original work of Asellius, the second edition, published in 1628, which I then had in my library. As I do not now possess the original work, I have verified the date from Sprengel's "History of Medicine."

It is also stated that "the work has been considered almost extinct. There was one copy in the University of Leipsic, and a defective copy in the library of the University of Breslau. The book just given to the Academy was one of the two copies now known to be in existence, and was one of the first edition. The surgeon-general's library, Washington, D. C., contained a copy from the inferior third edition of 1640."

Consulting the catalogue of the library of the surgeon-general's office, first series, I find the edition of 1640. In the second series of the catalogue, I find the original edition of 1627, with colored plates. In 1883, I sold at auction nearly all of my old books; and among them was the second edition (1628) of Asellius. I think that this copy was bought by Prof. John G. Curtis, of the College of Physicians and Surgeons. The plates in this edition were not colored. I reproduced one of the plates in the first edition of my "Text-Book of Human Physiology."

The original work of Asellius (1627) is one of the rarest of the anatomical classics and a most valuable addition to the library of the Academy of Medicine. Its existence, however, in Washington is another evidence of the great skill and care that have been exercised in the formation of the magnificent library of the surgeon-general's office. I have written this to correct an error in the date of an important discovery which followed soon after the discovery of the circulation of the blood, and which is particularly interesting, as it is one of the very few discoveries in anatomy and physiology which probably were accidental.

Austin Flint.

IMMUNITY.

To the Editor of the Medical Record.

Sir: What confers immunity generally seems as yet a thing quite unknown. But it seems to me nothing more than being constantly at the "top of one's condition." Experiments on animals go to show that whatever lessens the vitality or lowers the general strength or vigor, whatever depresses the system generally, whether from physical or mental cause, in the same degree lessens the general resistance, and the resistance thus lessened renders man vulnerable or susceptible to whatever he is exposed to. The resistance may be lowered by many things—overwork, fatigue, loss of sleep, disappointment, unsatisfied ambition, grief; in short, by hardship of any sort, whether it affect the body or the mind, by anything which puts a man out of harmony with his environment.

When we consider the habits of the average man, both in the conduct of life and his thinking as well, it is very apparent that, with the best intentions, he is almost constantly doing something to lessen his resistance, not appreciating how much it affects his general condition or his health. These facts are of much practical importance to the physician especially, whose duty often calls him to subject himself to risk. Before exposing himself he should be sure he is in the best condition of both body and mind. To come in contact with contagious disease after a night of fatigue or a bout of dissipation, after any hardship in which the strength has been reduced, or while suffering from any depressing emotion (as grief, nostalgia, etc.), is to take the greatest risk. It is thus seen how important it is for man to take care of himself, to observe carefully the laws of health, to keep the body and mind in the best possible condition all the time, especially if liable to exposure to disease of any sort. A body thus fortified is in the best state of resistance and wards off disease, or if disease does actually gain access it is enabled the easier to throw it off.

S. A. Russell, M.D.

Poughkeepsie, N. Y., January 10, 1899.

THE ALCOHOL TEST FOR ALBUMIN.

To the Editor of the Medical Record.

Sir: I have read with great interest in to-day's issue of the Medical Record the paper of Dr. Ludlow on "A Fallacious Test for Albumin, etc." His conclusions are undoubtedly correct, and the so-called alcohol test should be blotted out, as a dangerous fallacy, with no value whatever, because of liability to mislead in the majority of cases.

Malcolm McLean, M.D.

New York, January 7, 1899.

HAWAII FROM A HEALTH POINT OF VIEW.

To the Editor of the Medical Record.

Sir: I am very sorry to learn, from your issue of December 17th, that Dr. Prince A. Morrow is aggrieved at the personal remarks I made in a communication published by you on December 3d, on the subject of "Hawaii from a Health Point of View." It was farthest from my intention to offend, but having done so, I take this means of offering him my sincere apology.

A careful reading of your editorial of October 15th and of my letter of December 3d will reveal the object of my writing the latter—namely, to correct as far as possible the manifestly false and damaging impressions made by your editorial. Inasmuch as this was based mainly upon extracts from Dr. Morrow's writings, it would be more just for him to hold you, rather than me, responsible for misrepresenting him. I am glad that Dr. Morrow never intended such inferences to be drawn from his paper as you have done, and that in the main we agree upon the facts, past and present, of things medical in Hawaii. As to the future, that alone can decide which one of us is right in his estimate of the amount of leprosy manifest and latent among the Hawaiians.

I have been a careful observer of the situation for a number of years, and am satisfied, in spite "of the never-ending procession of lepers to Molokai," that the health authorities are slowly but surely approaching the end of their deplorable task. I have come to this conclusion for the following reasons: First, for the past six years the agents of the board of health have been unremitting in their endeavor to apprehend the lepers, and while pursuing this consistent course the number consigned to the settlement annually has been reduced more than fifty per cent. Second, the vast majority of cases now brought before the examining board are in the earliest stages of the disease, a great contrast in this respect to the condition of most of the cases in times past. This change has been very marked during the last two years, and I consider it

the most hopeful indication that the efforts of the board of health are being rewarded. Third, there is not the amount of opposition from the Hawaiians to segregation, nor the amount of concealment of cases by relatives and friends that formerly existed. Ever since the board of health adopted the sound policy of visiting the settlement semi-annually, of listening to complaints and grievances, and keeping in touch with the inhabitants, there has been a gradual change of sentiment toward the settlement in the minds of the Hawaiians. It is no unusual thing to have Hawaiians present themselves to the examining board and try to be declared lepers.

With a knowledge of these facts, I am still of the opinion that "Hawaii is freeing herself of leprosy with gratifying results" and "with a thoroughness which hardly needs any assistance from the United States."

Thanking Dr. Morrow for his testimony in behalf of the Hawaiian board of health, I am

Yours respectfully,

F. R. DAY, M.D.

HONOLULU, H. I., December 30, 1898.

LEPROSY IN HAWAII.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the concluding paragraph of your editorial on "Leprosy and its Treatment," which appears in to-day's issue, you state: "There is much divergence of opinion as to the prevalence of leprosy in the Sandwich Islands. Those on the spot, and who consequently can speak with authority, state that the number of lepers has been greatly exaggerated and that segregation has been thoroughly enforced during the past six years, with the result that there has been a decrease of over fifty per cent. of lepers sent to Molokai during that time."

As there has been so much conflicting testimony upon this point, I send you the statistics of the leper settlement since its establishment, which have been carefully compiled from the reports of the Hawaiian board of health:

Year.	Admissions.	Deaths.	Discharged or Unaccounted for.	Number on Books December 31st.
1866	141	26	10	105
1867	70	25	7	143
1868	115	28	2	228
1869	126	59	11	284
1870	57	58	4	279
1871	183	51	9	402
1872	105	64	4	439
1873	487	156	21	749
1874	91	161	8	671
1875	212	163	14	706
1876	96	122	3	677
1877	163	129	1	710
1878	239	147	..	802
1879	125	209	1	717
1880	51	152	10	606
1881	232	132	..	706
1882	71	121	6	649
1883	301	150	15	785
1884	108	168	8	717
1885	103	142	26	655
1886	43	100	8	590
1887	220	108	4	698
1888	579	212	28	1,035
1889	308	149	7	1,187
1890	202	158	18	1,213
1891	143	212	2	1,142
1892	109	137	19	1,095
1893	211	151	..	1,155
1894	128	155	3	1,124
1895	106	128	15	1,087
1896	146	116	2	1,115
1897	124	139	..	1,100

These statistics embrace a period of thirty-two years, from the establishment of the leper settlement of Molokai to January 1, 1898, and may be accepted as absolutely authentic. Unfortunately they do not confirm the statement quoted "of those on the spot and who can consequently speak with authority."

The total number of lepers consigned to the settlement in this period of thirty-two years was 5,394; in the first sixteen years the number was 2,492, an average of 155; in the last sixteen years, 2,902, an average of 181; within the last six years, which you take as a basis of comparison, the number was 824, an average of 137.

It will be seen that the number of consignments varies from year to year within wide limits, depending, doubtless, upon the greater or less activity of successive boards of health in rounding up and corralling the lepers at large. Thus in the three years, 1884–85–86, the number sent to the settlement was only 254, while in the following three years, 1887–88–89, the number of admissions was 1,107.

While fully sharing your hope "that the regulations for isolating lepers will be so stringently adhered to that soon it will be impossible to find one at large," I am nevertheless persuaded that its realization will be long deferred. PRINCE A. MORROW, M.D.

January 14, 1899.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 21, 1899:

	Cases.	Deaths.
Tuberculosis	189	176
Typhoid fever	14	4
Scarlet fever	162	17
Measles	159	10
Diphtheria	180	26
Laryngeal diphtheria (croup)	12	9
Cerebro-spinal meningitis	0	5
Chicken-pox	35	0

The Pharmacy Law in New Zealand.—According to the latest advices from New Zealand the pharmacy bill had passed through the Legislative Council and had been read a second time in the Lower House. The premier had further promised that the bill would be brought finally before the House as soon as one or two policy measures had been disposed of, so that there now appears every prospect of its becoming a law this session.—*English Pharmaceutical Journal.*

Change of Management of "Saturday Review."—There has recently taken place a change in editors of the *Saturday Review*, so well known during the last few months in America through its persistent advocacy of the Spanish cause. It is said that the real reason of the retirement of its late editor, Mr. Frank Harris, is due to a peculiarly sharp and uncalled-for attack on the verdict given in the Harold Frederic Christian science case. Mr. Harris, who wrote the article himself, incidentally made an onslaught on the medical profession. In the London *Times*, however, ill health is given as the cause of Mr. Harris' retirement from his editorial duties.

Danger in Tin Cans.—Open a can of peaches, apricots, cherries, or other fruits—for all fruit is acidulous—let it stand for some time, and the fruit acids and the tin are ready to do their work of poisoning. A chemical knowledge that tells just how the danger-

ous compound is created is unnecessary to an avoidance of the peril. The rule to follow is never to make lemonade or other acidulated drinks in a tin bucket nor to allow them to stand in a vessel of tin; and, in the case of canned fruits or fish, immediately upon opening the can to turn the contents out upon an earthenware plate or into a dish that is made of earthenware or glass. Fruits in hermetically sealed cans, if properly prepared, generate no poison. As soon as opened the action of the acid with the aid of the atmosphere begins, and in a short time the result is a deadly poison.—*Sanitary Record.*

Evils of Substitution.—Speaking of asking for bread and getting a stone, a man rushed into the drug store the other day and asked for hot drops, and what do you suppose he got? Cold cream.

Dr. Otto Voges, assistant in the Berlin Institute for Infectious Diseases, has been called to Buenos Ayres to accept the position of professor of hygiene and director of the state bacteriological laboratory.

Beer as Food.—The *Quarterly Journal of Inebriety*, quoting from the *Popular Science News*, New York, says: "A saloon-keeper in England advertised his beer as liquid bread. A member of the English Parliament bought a quart and paid a chemist $15 to examine it. Two per cent.—about a thimbleful—was really food; five per cent. was alcohol; and the remaining ninety-three per cent. water. He was arrested under the food act."

Thomas Dover, Physician and Buccaneer.—As Sir Thomas Brown remarks in "The Hydriotaphia:" "The iniquity of oblivion blindly scattereth her poppy and deals with the memory of man without distinction to merit of perpetuity." Thus it happens that Thomas Dover the doctor has drifted into our modern life on a powder label (to which way of entering the company of posterity, though sanctified by Mithridates, many would prefer oblivion even to continuous immortality on a powder so potent and palatable as the Pulv. Ipecac. Co.); while Thomas Dover, president of the council of the *Duke* and *Duchess*—privateers of the ancient and honorable city of Bristol—discoverer of Alexander Selkirk (the original Robinson Crusoe), in spite of more enduring claims to our gratitude, has been forgotten.

The Working of the New Vaccination Act in England.—The vaccination act passed by Parliament last season has brought about curious results. The conscientious objector to vaccination, who can absolve himself from the operation by going before a magistrate and swearing to his scruples, has lately blocked many courts. There has been something like a competition between the judges as to which could swear off the greatest number of objectors in a given time, and some learned gentlemen made remarkable records. The latest phase of the question is similar to a strike of the public vaccinators, who complain that, owing to the new act, their occupation is practically gone. They have demanded an increase in fees from the public guardians, to make up the deficiencies in their incomes, but they have not been very successful so far.

Penholder in Brain.—A commercial traveller was admitted to the London Hospital in January, 1888. Until two weeks before admission he was in good health. He came to the hospital complaining of pain in the head and drowsiness. Soon afterward he died, with symptoms stated to be apoplectic. Post mortem an abscess was found at the base of the brain, the size of a turkey egg, and evidently not of recent formation. Inside the abscess was an ordinary school penholder and nib. It is stated to have been embedded in the bone, and evidently to have been a long time in its position. No trace of injury to the corresponding eye or nostril could be found. The widow had never heard her husband allude to any injury of the kind, and it is quite unknown how or when it was inflicted.—*Medical Press and Circular*, 1888, vol. i., p. 70.

Bogus Medicines that Cure.—An English lay journal says: "A curious proof of the influence of imagination is the little trick so often practised by doctors on their patients. In some diseases medicine is not only useless, but actually injurious. Yet when a man is paying money for medical attendance he expects to see some sign that he is getting value in the shape of bottles and pill-boxes. The doctor in that case has no option but to deceive. In typhoid fever, for instance, no known drug is of any use. The microbe must be left to tire himself out. But to please his patient the knowing doctor always prescribes a bottle of colored water. It is called a 'placebo.' In other cases it is usual to give bread-pills. There are many extremely nervous people to whom any kind of medicine would do harm. So the doctor gives them a couple of good-sized bread-pills and says, 'These will give you a sound night's rest,' or, 'These will remove your headache.' And the remarkable thing is that they do. In fact, with bread-pills the medical man can produce quite a variety of effects."

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

TWENTIETH CENTURY PRACTICE. Vol. xviii. Infectious Diseases and Malignant Neoplasms. By various authors. Edited by Dr. Thomas L. Stedman. Royal 8vo, 721 pages. Illustrated. William Wood & Company, New York.

NEW YORK CHARITIES DIRECTORY. 8vo, 744 pages. Ninth edition. Charity Organization Society, New York. Price, $1.

PRACTICE OF OBSTETRICS. Edited by C. Jewett. Royal 8vo, 768 pages. Illustrated. Lea Brothers & Company, Philadelphia.

DISEASES OF THE EYE. By Dr. G. E. de Schweinitz. 8vo, 696 pages. Illustrated. Third edition. W. B. Saunders, Philadelphia. Price, cloth, $4; half morocco, $5, net.

THE CRYSTALLINE LENS SYSTEM. By Dr. L. Stricker, Cincinnati, Ohio. Royal 8vo, 599 pages.

THE PORCELAIN PAINTER'S SON. By Dr. S. A. Jones. 12mo, 126 pages. Boericke & Tafel, Philadelphia. Price, cloth, $1, net.

THE PSYCHIC LIFE OF MICRO-ORGANISMS. By Alfred Binet. Translated by T. McCormack. 8vo, 120 pages. The Open Court Publishing Company, Chicago. Price, 75 cents.

MECHANO-THERAPY. By Dr. A. V. Grafstrom. 8vo, 139 pages. Illustrated. W. B. Saunders, Philadelphia. Price, $1, net.

ANATOMY, PHYSIOLOGY, AND HYGIENE. By Dr. E. Franklin Smith. 8vo, 198 pages. Illustrated. William R. Jenkins, New York.

A MANUAL OF BACTERIOLOGY. By Dr. H. U. Williams. 8vo, 263 pages. Illustrated. P. Blakiston's Son & Company, Philadelphia. Price, $1.50.

DISEASES OF CHILDREN. By Dr. J. M. Taylor and Dr. W. H. Wells. 8vo, 743 pages. Illustrated. P. Blakiston's Son & Company, Philadelphia. Price, $4.

MANUAL OF PHYSIOLOGY. By Dr. G. N. Stewart. 8vo, 848 pages. Illustrated. Third edition. W. B. Saunders, Philadelphia.

FORMULAIRE DES MÉDICAMENTS NOUVEAUX POUR 1898. Par H. Bocquillon-Limousin. 12mo, 332 pages. J. B. Baillière et Fils, Paris.

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Original Articles.

ON RE-ESTABLISHING SURGICALLY THE INTERRUPTED PORTAL CIRCULATION IN CIRRHOSIS OF THE LIVER.[1]

BY ROBERT F. WEIR, M.D.,

PROFESSOR OF SURGERY AT THE COLLEGE OF PHYSICIANS AND SURGEONS, COLUMBIA UNIVERSITY, AND SURGEON TO THE NEW YORK HOSPITAL.

IN the *British Medical Journal* of September 19, 1896, there appeared a communication from Dr. Drummond and Mr. Rutherford Morison, of Newcastle-on-Tyne, which at that time attracted my attention to a marked degree. It was headed, "A Case of Ascites due to Cirrhosis of the Liver Cured by Operation," and the operation consisted in simply bringing about adhesions between the omentum and the parietal peritoneum as well as between the upper surface of the right lobe of the liver and the diaphragm. There were two cases presented by these reporters, both of which had been operated on in this manner by Mr. Morison, who had, after opening the abdomen between the umbilicus and the pubis, evacuated the entire fluid, dried the abdominal cavity carefully with sponges, and then scrubbed more vigorously, also with a sponge, the parietal peritoneum. The peritoneal covering of the liver and of the spleen, and the portions of the parietal peritoneum opposed to them, were especially scrubbed. Finally the omentum was fastened by sutures across the anterior abdominal wall, and then the wound was closed, save at one place, where a glass tube was introduced into the pouch of Douglas, for drainage. For the purpose of retaining the parietal in contact with the visceral peritoneum, long, broad bands of adhesive plaster were circularly and firmly applied from the epigastrium down to the drainage tube.

In one of the reported cases, no improvement followed, and the patient died nineteen months later, having required tapping sixty-nine times after the operation. In the second case, though the operation had been done upon a rapidly failing patient, œdema of the legs being present, and four tappings having been necessary in three months, it was a brilliant success. The tube was kept in three weeks for drainage. She was exhibited at the meeting of the British Medical Association eight months later, being then apparently in perfect health.

From the comments made in the article, I judged that the operation was not only a novel but an original one; and I was so much impressed by it that I asked my medical colleagues at the New York Hospital to have a trial made of this method of treatment in such a case, when the usual means were evidently of no avail. Moreover, to meet the exigencies of any case that might be afforded me, and stimulated by the demonstrations of Murphy of Chicago that divided arteries might be safely sewed together, and likewise guided by the experience I had personally gathered, in sundry mishaps in my own surgical work, that large veins—even the vena cava[2]—might be, when cut into, sutured without subsequent risk of thrombosis, I had planned this year a series of experiments on animals, to determine if some venous anastomosis could not be effected between the vena porta and the inferior vena cava, or other veins of a lesser size and depth, having in view principally the epigastric vein. But some further reading showed me that in the first direction this question of venous anastomosis had already been worked out, and adversely to its employment. I found that Eck[1] had made in 1877 a series of such anastomoses in animals between the vena cava and portal vein, with a very disastrous result. Of the eight animals thus operated on seven died within a week. The eighth one lived two and one-half months, and then ran away and was lost to science.

Hahn[2] repeated these experiments in 1892 with an unexpected outcome. He employed about sixty dogs, some forty of which died from wound complications. He learned, first, that the wound in the vein must be at least one and a half inches long to avoid thrombosis; and, more important, he discovered in the animals that survived the operation for a length of time, that they nearly all passed through a stage of excitement, and that, even though they recovered from this, animal food developed a nervous irritation that often terminated fatally. Some showed convulsions, followed by coma. The explanation given for such phenomena was, that the venous intestinal blood acted poisonously on the general system, when introduced as freely as a direct anastomosis between the vena cava and porta would permit. While thus occupied on the subject, an article came to my notice by Dr. Thomas Lens,[3] a surgeon in Holland, who published in May, 1892, a case of his own in which for a cirrhotic liver with ascites, he had opened the abdomen to the right of the median line near the umbilicus, and after evacuation of the dropsical fluid he had sewed the lower edge of the omentum to the edge of the wound. The patient recovered from the operation, but the ascites returned, and paracentesis for its relief became necessary five times before his death, six months after the operation. The autopsy showed firm bands of adhesion of the omentum to the abdominal wall, which, with the adjacent abdominal wall, was filled with moderate-sized veins. Lens furthermore alludes to two other cases similarly operated on in Holland by Van der Meule in 1889, with an immediately fatal issue from shock, and another case in 1891 by Schelky, in which death came on at the fourteenth day from a peritonitis set up by the wound being infected by the patient's tearing off the dressings in an attack of delirium tremens (?).

In this article credit for the suggestion of the treatment is given to Talma, of Utrecht, who has very recently published,[4] at considerable length, his views on the subject and given a case successfully treated

[1] Read at a meeting of the Practitioners' Society, held December 2, 1898.

[2] Weir: "Personal Experience in Renal Surgery." Medical News, February 5, 1898.

[1] Journal f. Kriegsmedicin, vol. cxxxi., 1897.

[2] Hahn, Massen, Lenke, and Pawlow: "Die Eck'sche Fistel zwischen der unteren Holvene und der Pfortader," etc. Arch. f. experiment. Path. u. Pharmak., vol. xxxii., 1893, pp. 161–210.

[3] Weekblad, Nederlandsch. Tijdschr. v. Geneeskunde, May, 1892.

[4] Talma, S.: "Chirurgische Oeffnung neuer Seitenbahnen f. das Blut der Vena Porta." Berl. klin. Wochenschr., September 19, 1898.

by operation. Talma, under the taking title of the "Surgical Opening of a New Side-Track for the Blood of the Vena Porta," points out the difficulties of accurately detecting a condition of atrophic cirrhosed liver, and states that such a condition is always associated with an enlarged spleen. He also clearly in Lens' article indicates, when such does occur, the various ways in which one may expect enlargements of the collateral venous circulation; these are also given in Morison's report, and are, in truth, largely taken from Sappley's Anatomy. They are these: One set of veins running in the folds of the hepatic ligaments connects the portal trunk with the phrenic veins and azygos major. Another set runs in the round ligament and connects with the epigastric veins in the abdominal wall, and also with the intercostal and crural veins. Another connection is between the coronary veins through the œsophageal plexus[1] with both azygos veins, and again through the inferior mesenteric by means of the middle and inferior hemorrhoidal plexuses with the internal iliac veins. That these are insufficient the ascites proves; moreover encouragement for the employment of surgical help is obtained in the fact that after repeated tappings occasional cures result, presumably by aid of the resulting adhesions from the punctures, though Saundby[2] suggests that time is thus afforded for a better collateral circulation. Talma's case was of more than usual interest; it occurred in a lad of nine years, in whom was present a mixture of nephrotic lesions and a liver and spleen enlargement with ascites and anasarca. With the improvement of the anasarca and renal troubles, the ascites persisted. For its relief the boy underwent three operations, at the end of which the ascites stopped, the liver and spleen diminished in size, and an apparent cure resulted. The first laparotomy consisted in merely an exploratory incision, followed by gaping of the wound for five days, with prolapse of the omentum, a part of which was cut off, the rest replaced, and the wound reunited. Six weeks later, in which time four paracenteses were made, a second laparotomy was done, and the omentum stitched in the wound. No further recurrence of ascites took place, but the enlargement of the spleen, which reached to the middle of Poupart's ligament, continued, and a third laparotomy was accomplished, by which the lower end of the spleen was tucked in between the skin and peritoneum to facilitate adhesions and venous intercommunications. One year later the patient was seen in good health. The urine was normal; the liver was yet enlarged, though smaller; the spleen was still two inches below the line of the ribs, though over one inch higher than nine months previously. Thick, large veins were recognized through the skin in the region of the spleen, running toward the crural vein. The case was considered as a severe acute hemorrhagic Bright's kidney with an hepatic complication, which ended in an atrophying cirrhosis with its usual obstruction of the portal vein.

My own case comes now in order. It is as follows: Fritz I——, aged thirty-nine, was admitted to the medical division of the New York Hospital, October 29, 1898, with the history of marked alcoholism for several years past, and of being a wine-taster by profession in earlier life. For nearly two years he had noticed his belly to grow gradually larger. On March, 1898, he became jaundiced and remained so for three weeks. He was first tapped in August, 1898, ten litres of fluid being drawn. One week later he was tapped again, fourteen litres being drawn; and one week later he entered this hospital, where he remained four weeks, being tapped in that time every week. Since his departure from the hospital to his re-entrance he has been tapped six times. He has lost twenty-five pounds in flesh, being weighed each time after the removal of the ascitic fluid. His appetite is good. He is, however, weak. The urine was amber, clear, scanty, with no visible deposit, and a few faintly granular casts, acid; specific gravity, 1.016. There were no albumin, no sugar, no bile pigments, no bile salts. The abdomen was much distended, with a distinct fluid wave. The heart was normal. There was liver dulness on the nipple line in the fifth space, which ran three and one-half inches below the ribs. The spleen was about twice its normal size. There was no anasarca. Diagnosis: hypertrophic cirrhosis of the liver and portal obstruction. As the frequency of the tapping augured a further failure of the patient's already failing strength, Dr. S. W. Lambert, the attending physician, considered favorably a surgical effort to improve the obstructive lesion, and accordingly transferred him, October 31st, to the second surgical division of the hospital, under my care. On November 4th, under an anæsthesia of nitrous oxide gas supplemented by ether, I undertook the following operation for establishing a new venous connection between the liver and omentum and the walls of the abdomen: A four-inch vertical incision was made on the right side of the upper third of the rectus muscle; its sheath was opened and the muscle was strongly pulled to the left, and the posterior sheath was then with the peritoneum divided. Several quarts of ascitic fluid escaped (it being now five days since the last tapping), and the abdomen was thoroughly emptied by liberal use of large sterilized gauze pads used as sponges. The enlarged liver with its thickened capsule extended some four inches below the rib. The spleen, also double in size, was recognized to be held by some adhesions. The omentum, though quite small, was thicker than usual and filled with unusually distended veins. The intestines were everywhere of a deep purplish-red hue. The antero-superior surface of the right lobe of the liver, the corresponding diaphragmatic part of the peritoneum, and the parietal peritoneum adjoining the wound were freely scraped with the sharp point of a steel hatpin; and then, after arresting the oozing of blood thus produced, the omentum was stitched on each side of the wound by six or eight catgut sutures, and the wound was finally closed by buried layer sutures. Before, however, this was done, a small opening, one inch long, was made above the pubis to admit a double perforated glass drainage tube to the space behind the bladder, to which was subsequently attached a Cathcart's[1] permanent siphon attachment. Compression of the abdominal wall was effected by broad overlapping strips of sticking-plaster passing transversely, and extending from the ensiform cartilage to the site of the drainage tube, sterile dressings having been first applied to the united wound and around the tube opening. The patient was under an anæsthetic sixty minutes, receiving by Ormsby's inhaler four and one-half ounces of ether, and one-twenty-fourth grain of strychnine sulphate hypodermically. He was returned to the ward in good condition. The patient did fairly well for three days. On the fourth day his pulse rose, and he complained of much pain in the lower abdomen. It was feared that this came from the glass drainage tube, which with its continuous siphon action drained efficiently. This was drawn out, and a rubber catheter inserted, without relief. Nor did the removal of the constricting plaster improve matters. He became somnolent, with decreasing urine; pulse, 104–120; temperature, 99° and never exceeding 100° F.; and sank without

[1] When this occurs there is often hæmatemesis from rupture of the œsophageal varices, and in such cases, because of the marked anastomosis this indicates, ascites is not so apt to occur.

[2] Saundby: "Varieties of Hepatic Cirrhosis." British Medical Journal, December 27, 1890.

[1] Br. Med. Jour., Oct. 19, 1895.

vomiting or much distention, and on the fifth day after the operation he died.

The autopsy showed that quite an extensive peritonitis prevailed, most intense in the pelvis. This probably became infected through the drainage tube, although this was carefully discharged into an antiseptic solution. In the operative area there was less of the infective inflammation, though over the scratched areas there were, as hoped for, generally fine, firm, fresh adhesions. Amid them, holding the liver fast to the diaphragm, was a small amount of effused blood. The kidneys were smaller than normal and their capsules were adherent. Their surfaces were nodular and their calyces thin.

The right lobe of the liver was nearly normal in size; the left lobe was much enlarged. The liver capsule was greatly thickened. The fibrin patches over the left lobe contained many micrococci in chains, and scolices of the echinococcus. The liver contained a large amount of nodular fibrous tissue, and the remaining parenchyma appeared fatty. In the superior portion of the right lobe, and pushing the diaphragm upward, was a cyst about nine centimetres in diameter, containing a colorless fluid, in which floated numerous white flocculi that on examination showed to be echinococcic scolices. The other organs were normal.

The presence of these scolices, so deep in the peritoneum as to suggest their existence prior to the operation, may have predisposed to the peritonitis; or, as the colon bacillus was largely found in the effused lymph, the possibility of some of the scratches made by me allowing the bacillus to escape from the liver is, as Adami has lately indicated, to be taken into consideration as speculative causes of the peritonitis.

This *résumé* of the cases in which Talma's suggestion to relieve a cirrhotic liver has been carried out, embraces with my own case too few to make any deduction from their consideration. Of these seven cases, two recovered; two recovered from the operative interference, but were not benefited apparently by the operation; and three died. Of these latter, one died from shock, and two from infection through the drainage wound.

Knowing that it was infrequent to see a peritonitis follow a paracentesis, or even from an incision to relieve an ascites, I had in common with others believed that the soaked peritoneum would kindly tolerate handling and a permanent opening. I fancy that in this latter deduction a mistake may be made, and I should incline hereafter to run the lesser risk of the reaccumulating fluid interfering with or breaking down the formed adhesions, rather than the greater one of drainage-tube infection, however carefully carried out. If any reaccumulation took place, a fresh tapping might be made. Furthermore, of necessity, in the early stage of any surgical measure such as this, one must and should operate only on those patients who are regarded as hopeless of cure by other measures. Then, however, the chances of success are necessarily at a minimum. It is only when the procedure is demonstrated as a proper one that it can justifiably be used at an earlier stage or at a time when operative interference can be better borne. Finally, it must be remembered that the intent of the operation is only to give to the obstructed portal vein an additional relief, slight though it may be, that nature's efforts in the way of collateral venous circulation fail to afford, and that Eck's and Hahn's experiments point strongly to the need of this assistance being brought about gradually, so as to use the intervening capillary circulation as an assimilator, and thus avoid an overwhelming toxæmia.

Edinburgh has conferred the degree of LL.D. on Dr. Henry Bowditch, of the Harvard Medical School.

METATARSALGIA; ITS TREATMENT BY SPECIALLY CONSTRUCTED BOOTS.

By V. P. GIBNEY, M.D.,
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METATARSALGIA has become so well known in the past few years that I must begin with an apology for taking up time in a discussion of a subject which has been so prominently before the profession and which really seems to be wellnigh exhausted.

An honored member of the society, finding himself unable to prepare a paper in his turn, appealed to me for an exchange, so that after a little consideration I accepted, and concluded that the Practitioners' Society could be induced to contribute a little to further discussion, especially as the attendants are men qualified to look at the subject from every point of view.

The neurologist is often called upon to treat neuralgia of the toes, and I am persuaded that he fails to relieve the larger portion of those who come under his observation and is compelled to refer a certain number to the surgeon for operation. The surgeon himself is prepared to treat the more severe grades, but is unwilling to subject to operation a patient who can be relieved by shoes or mechanical appliances.

For the past ten years it has been my good fortune to prescribe for a large number of cases of neuralgia of the metatarsus, and I use the term "good fortune" because I have been enabled to afford relief promptly in the majority, and finally in the remaining number. I, perhaps, am unfortunate in not having met with more severe types, marked by nerve changes, the result of neuritis, and by the distressing and agonizing pains which depend upon pressure or inflammation of a nerve. It is true that many of my patients have given a history of prolonged suffering and have described quite graphically the severe character of the pain, but I have not recorded their own words, nor have I asked for a written account of their symptoms, and hence my own description is probably not so full in detail as the subject demands. The expressions used by many are suggestive of terrific suffering, and I need only refer to papers by Dr. Thomas S. K. Morton in the *Annals of Surgery*, 1893, and by Mr. Robert Jones in the *Liverpool Medico-Chirurgical Journal* for January of 1897, in which painfully interesting accounts are given by the patients themselves. These surgeons have very properly obtained from their patients quite elaborate personal reports, and in some instances the victims were members of our own profession.

Before quoting from these papers, or even presenting notes from my own records, it would be well to define the term metatarsalgia. It is known generally as "Morton's toe," after Dr. Thomas G. Morton, of Philadelphia, who is credited with the first really valuable contribution. His paper was published in the *American Journal of the Medical Sciences* in 1876. Velpeau and Weir Mitchell described cases prior to the publication of Dr. Morton's paper. The term itself means nothing more than a neuralgia of the metatarsus. This neuralgia has been attributed to pressure upon the external branches of the plantar nerve, sometimes the internal branches, and the pressure is induced, according to Morton's theory, by a pinching of the nerve between the head of the fifth metatarsal and the neck and shaft of the fourth metatarsal. Other theories attribute the pressure to a giving way of the transverse arch and thickening of the ligaments and fibrous structures underlying the distal ends of the metatarsus. Quite elaborate dissertations have been published advocating the prominence of one or the other theory, while Dr. Whitman, in an article published in the MEDICAL RECORD for August 6, 1898, attempts to reconcile these theories by some apt illustrations.

The etiology in many cases is not easily established.

Writers describe three forms or grades: Plantar neuralgia of the first degree, second degree, and third degree. The first includes the simpler forms, dependent often upon a certain twist of the foot, and the pains are present only during this act. The neuralgia of the second degree depends upon an injury clearly established. That of the third degree seems to have no direct exciting cause, but is found in persons of a distinctly neurotic temperament, given at times to hysterical manifestations, or in confirmed neurasthenics. The predisposing cause is thought by many to be faulty shoes, permitting a laxity of the plantar ligament and obliteration of the transverse arch. As an example of the simpler form—namely, the first degree—the writer has to confess himself a victim. For the past six months he has suffered occasionally a distressing, burning pain in the ball of the fourth toe in walking on uneven ground, or sometimes upon a hard sidewalk. Only recently, while standing on a well-carpeted floor in the sanitary, the pain has been induced, but was relieved promptly by sitting down.

I have omitted to mention the rôles that rheumatism and gout are supposed to play in the etiology, and even in the persistence of the neuralgia, in spite of ordinarily efficient treatment. All authors recognize this factor, while some give to it more prominence than others. Many of my own cases fully substantiate the views by Morton, while a certain number (the smaller) would seem to disprove it. Judging from the results of the operations of the two Mortons, the preponderance of evidence would seem to be in their favor. Whether the nerve is removed, whether the bone against which the nerve is pressed is removed, or whether relief is afforded by a shoe, which restores and maintains the arch, the fact remains that the branches of the plantar nerves are involved, whichever theory as to etiology and pathology we accept.

The anatomical relationship of the bones is of interest, as well as the distribution of the nerves. For instance, the distal end of the fifth metatarsal is from three-eighths to one-half an inch, sometimes more, posterior to the distal end of the fourth metatarsal; furthermore, the fourth and fifth metatarsals are much more lax in their attachments and can be rolled one above or below the other with very slight effort. The first, second, and third are more securely held in position, and it is a clinical fact that the internal branches of the nerves are seldom implicated.

Quite recently Dr. Packard referred to my care a patient in whom the second toe and the metatarsophalangeal articulations were involved. This case was that of a girl about fourteen years of age, who had always worn broad shoes with very slight, if any, heels. She could feel the arch giving way and the pain shooting into the end of the toe as she bore her weight upon the ball of the foot. On examination it was found that tapping the end of the toe induced sharp pain; pressure over the articulation was painful, while if a little traction was made the toe was not at all sensitive; by pressing also under the distal end of the second metatarsal the pain was relieved; it simply required, then, a boot which would support this bone at its distal end to give relief. I mention this case because of its rarity, since I have seen only one or two in quite a large number coming under my observation.

It is undoubtedly true that many of the milder forms recover spontaneously, because it is a matter of common report among patients who come under treatment, that friends have suffered and have finally obtained relief without medical or surgical interference. One of my patients, a lady forty years of age, who came under treatment April 26, 1897, and who gave an elaborate history of her own suffering, extending over a period of six years, said that her father had been similarly affected when a young man, but that he had seemed to outgrow it.

As an illustration of the third or more severe type, I may mention the following: A lady thirty-eight years of age reported to me on November 2, 1896, claiming to have been a sufferer from neuralgia of the anterior part of the foot for nine years. She knew of no cause, and presented the usual symptoms, such as burning pain "like coals of fire" at the end of the fourth toe, induced apparently by the heat of a warm room. She found it necessary often to remove the shoe, no matter where she was. There was no breaking down of the longitudinal arch, but the transverse arch was flattened just a little. The pain would extend up the other side of the leg, even to the thigh, as far as the hip. Pressure over the bottom of her foot and crowding of the bones together from side to side would induce the pain. The first pair of shoes I ordered gave only partial relief; the second pair gave decided relief, and on March 29, 1897, she reported that she had uninterrupted relief since she had been wearing the shoes. From that time to the present I have seen her only occasionally, and then purely socially, but I have learned both from herself and the shoemaker that she is practically cured. She doesn't require such a carefully made shoe, and for this reason I feel that the term cure can be employed.

A lady who came under my care on June 3, 1895, referred by Dr. Herman Biggs, presented a most painful neuralgia at the base of the third and fourth toes. She had always been free from any lameness or deformity, and even from this neuralgia, prior to August, 1894, when, after wearing shoes during the summer that were much too large and too broad for her, she experienced one morning a sharp pain at the base of the third toe, coming on without any warning and like burning with a hot iron, very severe. The pain spread out under the third and fourth toes and about the joints, but did not extend up the leg. It was, however, unbearable. This occurred while the shoe was on, and on removing the shoe the pain instantly ceased, to recur again about ten days later, this time also under the same conditions. It has happened about thirty or forty times since that time, at no stated intervals, and always when wearing her shoe. The pain is always relieved by removing the shoe. It is simply impossible to wear it for the next twenty-four hours. She found relief by wearing a rubber band two inches in width across the proximal end of the metatarsus, and does not dare even to get up in the night without applying this bandage. She was fitted with shoes, but it was necessary to have a kind of sandal or stocking made, which she could wear at night in case she was obliged to get out of bed. The relief she experienced from such a procedure made her an unwilling listener to any suggestions about operation. Up to the present time, from all accounts, she is still obliged to wear this tight-fitting stocking, which has been made to lace up the dorsum of the foot and which still gives relief. It has occurred to me that she would get prompt relief by excision of the head of the fourth metatarsal.

Many of the cases reported by Jones and Morton are much more severe. Take, for instance, the statement of a patient on whom Mr. Jones operated: "The first complaint I had to make of my foot was in January, 1893, when on walking, for instance, a sort of cramp of my instep occurred, which, on continuing to walk, increased up to my knee, and in some instances to my hip. Sometimes, however, I did not feel it, but it was very seldom. The pain described continued until I was able to walk less and less. The warning always came in a sort of pain in the ball of the foot as if walking on a hot marble; then I became so lame and it was so painful that I was obliged to stand still

wherever I was and hold my foot off the ground until the pain subsided. The early part of this year, 1895, it became so much worse that I had to remove my shoe or hop to some cab, as there was no chance of getting the shoe on because of swelling, and I was unable, as before, to press the foot across the instep to get the toe back in what seemed the proper place. Often I heard it click back, and then the pain passed off for a time, but lately this did not act. Hours passed, and I was in pain with it. It was operated upon, and now I can walk with perfect ease and have never since experienced that feeling of a small bone out of place. I can in no way account for the origin of the affection, and have never hurt the foot in any way to my knowledge."

In fifteen cases operated upon by Mr. Jones, where the distal end of the metatarsal was excised, a cure promptly followed. In one a cure followed after an excision for hallux valgus. In another the removal of a fibroma resulted in cure. Dr. Thomas S. K. Morton reports equally brilliant results.

I am not familiar with any published records of cases, except Erskine Mason's, subjected to operation in this city, but in June of the present year a lady twenty years of age consulted me on account of a metatarsalgia, which had persisted after removal of the distal ends of the fourth and fifth metatarsals. The operation had been done five weeks prior to this date, and the healing was prompt. In addition to the persistence of the neuralgia, there was much inflammation about the parts, and it was fully three months before a shoe could be worn. By November 1st she was much relieved of the neuralgia, as well as the infiltration. The shoes had been worn about a fortnight. A few days since she wrote me that she could walk long distances and was entirely relieved. The shoemaker tells me that he has fitted one or two patients, after operation, with the same kind of shoes employed in my own practice.

The operative procedure is described by Mr. Jones as follows: "After the part has been carefully asepticized an incision should be made a little over an inch in length, starting above the metatarso-phalangeal joint and extending over the middle line of the toe. The extensor tendon is divided, the capsule opened, and the head of the metatarsal dissected out by a blunt instrument. The head is removed with fine bone nippers, and the flexor tendon below is divided. The wound is then stitched, and as a rule no vessels need securing. The after-treatment consists in keeping the patient in bed for about ten days with the feet elevated. Massage should then be commenced, and the patient, with a bar under the foot, allowed to walk. There is really nothing to hinder complete recovery in from five to six weeks, when boots which I have earlier described should be prescribed." The boot he prescribes is one wherein the inner aspect of the heel is increased, where thick soles are employed with elevated insteps and plenty of room around the heads of the metatarsals. He likewise makes use of a bar of iron, as was practised by the late Hugh Owen Thomas, across the sole of the shoe, posterior to the distal ends of the metatarsals. This piece of iron is from one-eighth to one-fourth of an inch in thickness, and is rendered a little thicker by a bit of sole-leather.

I have digressed a little to present the operative side of the question without any prejudice, but inasmuch as I have yet to encounter a case which does not yield to properly constructed shoes, I am unwilling to recommend the operation if a properly constructed shoe is necessary to make the relief permanent. I take it, however, that the gentlemen who have operated so successfully do not find it necessary to continue the orthopedic shoe for longer than a few months, or they would have dwelt more in detail upon the best operative procedures. The presumption, therefore, is that any shoe, after a little while, will be perfectly satisfactory.

In analyzing some fifty-seven cases that have been under observation for several years, I find that eighteen were cured and thirty-nine relieved. By the term cured is meant that the prescribed shoe is no longer necessary; by the term relieved, that these patients are still wearing the shoe, or at least a modification.

A lady who at first got prompt relief, and who subsequently relapsed, reported to me a few days ago that she rarely suffered any pain, and that she was not wearing the shoe I had prescribed. At the time I first saw her she was thirty years of age, and this was in April, 1890. She objected, as many do, to the thickish sole, and because the shoemaker would not give her the kind of shoe she wanted, she sought relief elsewhere. In looking over my notes on the case, I find such expressions as the following: Under date of March 19, 1891, this quotation: "The last pair of shoes were entirely comfortable and satisfactory." July, 1895, "The shoes have been perfectly satisfactory up to about a year ago." He made them for nearly three years so that they relieved her, but for the last year she has not been able to wear a single pair with the same satisfaction as during the three years mentioned. She still has some trouble with the shoes, and has sometimes to take them off when she is out. The other evening she had to take them off in the theatre and go home in her stocking-feet. She had a little flat-foot at this time, and I felt convinced that the springs were not heavy enough; that the heel was too high. In talking with the shoemaker about her case, he insisted that the lady in question was a victim to thin soles, and that it was impossible to adjust the springs in the shank of a shoe unless the soles are moderately thick.

In March, 1898, a lady about twenty-two years of age sought relief at my hands after a period of suffering extending over four months. I gave her a prescription for a boot to be made by her own shoemaker. At first they gave relief, but after about ten days the pain returned. She was fitted with a new pair, but failed to get relief. Finally I gave her an order to the shoemaker who does most of my work, requesting him to give the matter his personal attention. The relief was prompt, but after ten days or two weeks the pain returned. On one or two occasions I strapped the inner border of the plantar region with adhesive strips, and the strapping gave her relief so long as she wore it. I saw her a few days ago and asked her whether the relief was at all marked. She declared that it was, and that this was due to the last pair of boots, made about two months ago. I found, in her case, that she must have a very high arch, and I am satisfied that the relief will be permanent.

I have purposely selected illustrations which were not at all stereotyped and which have presented certain difficulties. I am sure that a recital of a series of cases would convince any one that relief can be afforded if the shoemaker will follow directions.

It is not an uncommon thing to have patients call for a prescription, and where I can get the prescription properly filled I have no hesitation in giving a good prognosis. The chief difficulty, however, is in the unwillingness of the foreman of a shop to conform to any directions that run counter to his own ideas of a properly constructed boot. The shoe question has become an important one in the practice of orthopedic surgery. I am glad to say that firms both in Boston and this city have come to recognize the importance of a reform in the construction of shoes. It is necessary to get the arch of the foot into proper shape if it is broken down; it is still more important to maintain the correct position by moulding the sole

of the shoe so that it will have the outline of the sole of the foot. The principle underlying the boot for metatarsalgia is a simple one. The heel, arch of the foot, and even the ball must all be considered in the building of a boot. The "upper" must fit well over the instep and compress in an even manner the proximal ends of the metatarsals. There must be no pressure against the distal ends, and yet the width must not be such as to permit expansion of this portion of the foot. It is a good plan to have the insoles lightly convex across the metatarso-phalangeal region, in order to preserve the transverse arch. It is possible to get pressure at any given point if the shoemaker be properly instructed. It is not enough to order a pair of boots and have them delivered to the patient, but the one who orders should see that they are made according to instructions. It is not difficult to make changes in the sole of the shoe, even if it be necessary to reconstruct the entire lower portion. If the longitudinal arch is at all weak, then the shank of the shoe should extend down to a point just back of the metatarso-phalangeal articulation. Such springs are not thick, but they are partially tempered and can be easily shaped to fit the foot. It goes without saying that the sole must be thick enough to prevent the end of the spring cutting through into the foot or projecting through into the under portion of the sole. It must also be borne in mind that the first or second pair of shoes may not always fit perfectly. The last must be constructed, and alterations must be made upon the last until the desired effect is produced.

NERVOUS DYSPEPSIA.[1]

By GRACE PECKHAM MURRAY, M.D.,
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More than any other organ in the body the stomach has felt the force of the modern methods of investigation. It has been searched by means of the electric lights. It has been made transparent by the *x*-rays. Its contents can be brought to view by cleverly contrived gastric buckets, which can be swallowed and then withdrawn; and now and then some accident causes a fistulous opening, through which the digestive processes can be viewed. The stomach in its glandular and chemical action is ever engaging the attention of the medical investigator. Its processes are imitated in test tubes, and all the triumphant methods of modern medical science are brought to bear upon it. With palpation, succussion, and inflation of the organ with fluids and gases, its geography is no longer an unexplored Africa, but a discovered continent. In this condition of knowledge, the nervous aspect of stomach troubles, which ten or fifteen years ago held such prominence, sinks out of sight, and, instead of thinking with Dr. Leven that the stomach troubles which were not of nervous origin were scarcely worth mentioning, many agree with Hayem, who says that the dyspepsia called nervous is only a peculiar reaction in certain digestive gastric troubles, which predisposes to the nervous manifestations. The participation of the nervous system in the morbid picture is secondary and consecutive. It is produced when the earth is prepared for it. Contrast this with the expressions of Dr. Leven, and you have the extremes of the views held by the profession in regard to the nervous origin of stomach troubles. "The brain and the solar plexus," says Leven, "are riveted together. The regular play of the two is one of the fundamental conditions of health. If one of the two—the brain or the plexus—is excited, it immediately transmits its excitement to the second centre, and consecutively to the whole system. The brain overtaxed by trouble, shock, or mental exertion—the plexus is irritated and dyspepsia results. The stomach overtaxed by rich and indigestible food acts upon the brain, and headache and vertigo and diminution of intellectual faculties are the result."

The reason of the falling into the background of the nervous aspect of dyspepsia is attributable to the advances made in the knowledge of the chemistry of the gastric fluids, the action of the glandular and muscular structure, while unhappily the knowledge of the nervous mechanism in the stomach itself remains stationary. The gross anatomy of the nerve supply is well known, but the termination in the glands themselves is still a matter of conjecture. Some authorities say that it has never been demonstrated that the nerve filaments enter the parenchyma of the gland; moreover, that their presence is not necessary to account for the processes that take place—that the secretion and the absorption are carried on by purely chemical and mechanical means. Others say that they are not always demonstrable in man, but that their influence is questionable. It is here that the clinician helps out the physiologist. The psychical influence on the digestion is most striking. It has been proved that its secretions can be made to flow by suggestion, its action stimulated, and the act of vomiting be produced at will. After a careful survey one is compelled nevertheless to agree with Ewald, who, after naming the processes of the stomach as secretion, absorption, and motion, says: "It is an unpleasant fact that we know very little about the trio."

It is not necessary to go into a lengthening argument in this controversy of the origin and cause of dyspepsia, whether it is solely of nervous origin or whether the stomach itself is the point of departure. Without doubt both theories are true. Since 1879, when Leube wrote his oft-quoted article, "Ueber nervöse Dyspepsie," in which he spoke of an army suffering from nervous dyspepsia, the writers have continually striven to lessen the number of cases which should be placed in this category, so that there is danger of passing over the disorders of the digestion which are attributable to nervous disturbances. And with our admirable methods of investigations and the prominence given to local appearances and chemical considerations, we are apt to overlook the cases of nervous origin, mistaking symptoms for causes.

That nervous dyspepsia should be one of the most common troubles of the day is not surprising, since nervous action is characteristic of the times, and is the force which tells not only in the pursuit of the means of subsistence, but in the struggle for undying fame. It is no longer the man of brawn and muscle who wins in the great fight for pre-eminence and worldly advantage, but the man of intellect, of mental force. It is not surprising that in the great struggle many are found who fall short of the requisite nerve power, and that as a result there come disturbances of the stomach, connected as it is so intimately with the cerebrum by the vagus and the great solar plexus, which anatomists have called the "brain of the stomach."

Setting aside the vast array of stomach disorders which come from organic troubles, from gastritis due to the ingestion of irritating foods and liquids, the disturbances arising from dilatation, ulceration, from cancer and germ infection, there remains a great amount of dyspepsia due to disturbance of nerve action. How sudden and far-reaching these effects may be, every one knows from experience. Let some shock or great grief fall upon one, let some anxiety overshadow, let some strain overtax, and the stomach is the first to let the condition of exhaustion of nerve force be known. At once there is loss of appetite.

[1] Paper read before the New York State Medical Society, February 1, 1899.

Not only does distaste for food exist, but there is absolute nausea, which may go on to vomiting. Exhaustion of nervous force from any cause whatever almost invariably results in disturbance of the action of the stomach. The digestion of the food is more bound up with the psychical action of the brain than we are accustomed to realize. It is not only the food taken from without that brings its machinery into action, but the odor of the food starts the secretion; the sight of it, the thought of it, will make the mouth water and the stomach itself to pour forth its secretions. The passage of food down the œsophagus, although it may not reach the stomach, causes the gastric juice to flow. This has been shown by the experiment of Richter, who fed a dog, and the food which was swallowed passed out of an opening which had been made in the œsophagus above a ligature. Food was also thrust into an opening in the œsophagus below the ligature, and passed into the stomach. In both instances the gland action of the stomach was the same. Leube cites the case of a youth who could vomit at will, and he would always bring up about the same amount of gastric fluids, the secretion of which had been brought about by his own volition.

Since one must eat to live, it would seem that the provision has been made to perfect the machinery and to make it do its work in every possible way, even when there is no stomach at all. It is well recognized that the nervous action of the stomach is threefold: First, the vasomotor control of the blood supply; secondly, the adjustment of the motions of peristaltic action; and lastly and most important of all, the action of the nerves on the glandular structure, thereby increasing or diminishing the secretion as well as changing their chemical composition. Let the nervous force requisite to carry on the processes of digestion be interfered with, and the stomach will get out of order. It is not so common for the vascular action to be interfered with so that a congestion and acute gastritis result. Such a condition is apt to be secondary instead of primary. The peristaltic action with accompanying nausea and vomiting is more frequently disturbed, but the effects of nervous dyspepsia are most often manifest by the disturbance of the action of the glands in their processes of secretion and absorption, although some writers maintain that the gland secretion is controlled by vasomotor nerves, and this may be so in part; but, reasoning from analogy and from clinical experiences, I believe that the nerves supply the glands and act upon them directly, and that some day, by the perfection of microscopical appliances and new methods of staining, these nerve endings will be demonstrated, and that the obscurity which now exists will be cleared away. If, therefore, it is at present only a hypothesis that the control of the glands is due to the direct action of the nerves ending in the parenchyma of the glands, it is the opinion held by many able investigators.

The reflex nervous disturbances of the stomach form a most interesting group, which have not been worked out in all their bearings; the ocular reflexes, the uterine reflexes, the kidney reflexes are conditions which are symptoms of other diseases, and are not germane to the subject under consideration. By nervous dyspepsia is meant that dyspepsia which is brought about by a lack of nerve force, which prevents the proper functioning of the organ. Brain exhaustion reacts almost at once upon the stomach. Brain-workers are very subject to dyspepsia. I have had a number of cases among literary women, the only cause of whose dyspepsia was the exhaustion of nervous energy. I have given to these cases the name of literary dyspepsia. The position taken while writing cramps the stomach often and interferes with its action. The greatest promoter of nervous dyspepsia is business worry and anxiety. Anxiety of any kind, grief, and trouble will quickly bring on the condition.

The effects of nervous dyspepsia are varied. It acts on the secretions of the glands differently, changing the quality of the gastric juice. In some cases there is oversecretion; in others the acidity of the gastric juice is increased; in still other cases the peptic glands do not secrete enough to destroy the bacteria of fermentation and prevent decomposition. In the latter cases the patients are troubled greatly with eructations of gas, which is one of the most pronounced symptoms of nervous dyspepsia. Another symptom more intimately associated with nervous than other kinds of dyspepsias is vertigo, which may be due to the autoinfection occurring from the decomposition of food or its arrested digestion. These are the symptoms which oftenest accompany the disturbances of the stomach arising from uterine inflammations, though not those which accompany pregnancy. Anorexia, often nausea, and more rarely vomiting are the other symptoms of nervous dyspepsia.

The treatment of nervous dyspepsia varies of course with the symptoms. The nerve sedatives are of benefit, notably bromide of sodium. When it has not a beneficial effect, anæmia is present. It can be associated with the bitter tonics. Nux vomica is the best of these, acting generally better than strychnine, and should be given in the liquid form, as the action of the bitter on the tongue stimulates the secretions. Carminatives should be used when there is much gas —the tincture of capsicum, or cardamom, or Jamaica ginger, or peppermint. These are very useful in cases where there are sinking sensations and feelings of exhaustion. When there is overacidity, the alkalines are demanded. Bicarbonate of sodium is the most generally useful. It can be combined with bismuth, which helps the irritability and hyperæsthesia which is often present. It is also good when intestinal indigestion occurs with the gastric indigestion. Some cases are improved by the acids, especially those accompanied with oxaluria and disturbances of the liver. They do not yield as satisfactory results as one would be led to suppose from the benefit derived from them in cases of pure neurasthenia. The results from pepsin are not often satisfactory; the wine or essence will sometimes prove of benefit, but I have thought the result due more to the alcohol used in the preparation than to the pepsin itself.

The diet should be simple and easily digested. In these cases, though, it often happens that foods one would not suppose could be digested are the ones that agree the best. In fact, it might be an aphorism that every stomach maketh its own digestion, and recently it has been proven that such is a scientific fact—that the secretions of the glands become adapted to the work in hand, and are such as will best take care of the food that the individual is in the habit of eating.

In many cases of long standing, especially when there is a pouring out of the gastric juice, coating the stomach with thick and tenacious mucus, lavage or washing out of the stomach is very good.

I have found electricity, too, very helpful. Where there has been inaction the faradic current acts the best. In other cases the constant current should be used. I do not think it is necessary to apply the current directly to the walls of the stomach by introducing the electrodes into the stomach itself.

The Langham, 661 Fifth Avenue.

In Pernicious Anæmia and Pseudo-Leukæmia inject liquor potassæ arsenitis in aq. laurocerasi. Or, since considerable local irritation and pain may be occasioned, it is better to use arseniate of sodium in water.—Vinay.

THREE MONTHS' EXPERIENCE IN CAMP THOMAS.[1]

BY J. HERBERT CLAIBORNE, JR., M.D.,

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MR. PRESIDENT AND GENTLEMEN:

I think myself happy because I am permitted to appear before you to-night to give you the recital of my experience as one of the army of volunteers in our recent war with Spain.

I have no story of battle and blood to unfold before you; I desire to state in as simple a manner as I can my experience as an officer at Camp Thomas during the three months of the past summer when the arrow flew by night and the destruction wasted at noonday. For I belong to that great majority who marched away from their homes under fluttering banners with hopes high that some chance might be granted them to serve the country in a signal capacity and win some of the glory which would play around our flag. I am not even able to give you my impressions as surgeon, for I went in the capacity of line officer and so remained.

On May 2, 1898, the Twelfth Regiment of Infantry, New York Volunteers, marched out of the armory in column of fours. I shall never forget the sight of the tear-stained faces of the crowd of mothers, sweethearts, and wives as the companies filed out of the iron doors into the street. Happy was that man who had no tears shed over him, and unhappy he who could look upon such a scene unmoved.

We marched down Fifth Avenue to the dock at West 21st Street where we embarked. We disembarked at Roa Hook about sundown after a trip up the river which was marked by the discomfort of excessive cold. Many of the men in each company were without overcoats, and many were without uniforms at all or were only partly uniformed. I myself had no overcoat, and I can testify to the great discomfort I experienced until a brother officer generously loaned me his cape. Having landed at Roa Hook we marched to the parade-ground of Camp Townsend, which was the grounds of the regular encampment of the National Guard of the State. The Ninth New York had possession of the tents and ground next the parade-ground, and we with the Eighth New York had to occupy the ground in the vicinity of the battery toward the mountain. Our tents were pitched; the officers' tents had wooden floors, but the men's had none. The condition of the clouds gave a foretaste of what was coming. Promptly at nightfall a cold drizzling rain set in. We arrived at the camp on the second day of May. We remained there a little more than two weeks. During that time it rained almost incessantly —a cold, driving, penetrating rain that reduced the streets of the camp to a quagmire. At times it came on to rain in torrents, and then the streets would run water over the shoe-tops. There were no ditches dug when we first arrived, so that the rain caught us unprepared. We set about digging ditches, but the drainage was imperfect and the men's tents became almost uninhabitable. For a number of nights they had to sleep on the ground, those that had ponchos sleeping on them, those that had none doing the best they could. After a while straw was supplied, and then they made fairly good beds for themselves. But when it rained the straw got damp, and though a great deal of dry straw was furnished there were many occasions when the men went to bed wet, slept wet, and got up wet. It was a lamentable picture to see some of them going about the streets in weather that went to one's marrow when properly clad, without an overcoat and without a change of shoes. Owing to a want of space we had to drill in the low grounds immediately contiguous to the camp, and it was a rare thing that one did not sink over the shoe-soles in the wet turf.

There were three regiments quartered at Camp Townsend, and they were all fed at the large mess used for that purpose in the National Guard. The regiments took "turn about" at entering first, so that each got fair play. Yet there was considerable kicking on the part of the men as to the quality and quantity of the food. The service was bad, but what could one expect of negroes who were under a constant fire of New York slang and expletive? I myself was an enlisted man in the National Guard for five years, and I made three encampments at Peekskill, and I wish to say right here I would rather have my rations served me raw and cook them myself than eat in that caravansary of slapdash and grease. I have never had a piece of beef there that could be properly masticated, and I have never known a well day while I ate that food. As soon as a regiment is quartered there the men commence to have diarrhœa. It is attributed by them to jalap put in the soup and coffee; I do not believe this, but attribute it chiefly to the tough meat and the haste with which the food is taken. The health of the camp during our stay was remarkably good. There was no pneumonia, a little rheumatism, but a fair number of coughs and colds among officers and men. Diarrhœa was the leading complaint. During all this period the surgeons were examining the men relative to their fitness for entering the United States volunteer service. An astonishing number of cases of epilepsy were discovered among the applicants, notwithstanding the fact that questions concerning this disease were asked each and every man who came before the surgeons. Lying about this disease seems to be a symptom of it. A man would fall in a fit in the company street, a crowd would gather, the surgeon would be called, and the usual picture would be seen of a man biting his tongue, with face flushed, pupils dilated, eyes rolled upward, stertorous breathing, and tetanic spasms. The hospital corps would carry him off to the hospital tent, and one more aspirant to military fame would be eliminated. I counted as many as four such cases in one day. I believe that exposure and excitement superinduced these attacks, and when they once commenced I believe suggestion had something to do with their continuance. The influence of suggestion in crowds is very potent. It was fortunate for the service, for we were soon to undergo such a change in climatic conditions that we would have had these unfortunates on our hands. After we had recruited up to the then limit per company, an order came directing the surgeons to make a special examination of the feet and eyesight. This delayed us a few days, and but for this we would have had the honor of being the first volunteer regiment to set out. We would have been ahead of the Seventy-first, and would probably have seen Santiago.

On the morning of the 17th of May our tents fell at the last note of "The General"; the regiment was formed and marched away with fluttering colors. The sun came out at last to bid us God-speed.

And now, gentlemen, a word about the management of affairs at Camp Townsend and antecedent to our going there. A committee of investigation is at present sitting in Washington to find out the cause of mismanagement during the war and to lay the blame in the proper place. We were "fired" out of our armory with unbecoming haste and in a condition of total unpreparedness for camp life at Peekskill. The men were improperly clad and uniformed. For two

[1] Read before the Medical Society of the County of New York, January 24, 1899.

weeks preceding our departure officers were constantly on the floor of the armory instructing the men in the manual and marching. The men lived at their homes and came regularly enough for drills. All we taught the men at Peekskill that we didn't teach them in the armory was guard duty. If we had waited till they were properly clothed and shod, it would have been better for the health, morale, and soldierly appearance of the regiment. There was no occasion for all this haste. The enemy was not at our doors; the authorities at Washington had not at that time even contemplated an invasion of Cuba. The tents of the men in the Eighth and Twelfth regiments had no wooden floors as stated. The Ninth had them because they occupied the regular site of the State regiments during the annual tour of duty. Floors should have been put in the tents of the two regiments mentioned, and ditches and latrines should have been dug before they arrived. I do not believe that any reasonable excuse can be offered for this neglect. One million dollars was appropriated for such things by our legislature, so that there was no lack of funds. The men bore the discomfort with great fortitude, and it is to their credit that they did. But I fail to find any room for credit for those who were responsible for this state of affairs.

While there was no serious sickness in camp during our stay, I firmly believe that the exposure the men were subjected to there was a factor in the subsequent physical demoralization which overtook us at Camp Thomas. It is all very well for veterans of 1861–65 to talk about the hardships that were endured then, and to laugh at the complaints of the soldiers in this ephemeral war; our men stood their deprivations, their discomforts, and illness as American soldiers have and always will, but there is no reason why everything should not have been done to make them comfortable, when it lay in the power of the authorities to do so. Comfort conduces to health, and, until fighting commences in an army, the health of the men is the most important thing.

For my own part, properly clad as I was, I do not remember but one or two days during our stay when I was warm and comfortable. I know other officers who stated the same thing. If this was true with us, how much more so was it true with the enlisted men!

We took boat at Roa Hook and proceeded down the river to Jersey City. The whole regiment, officers' horses and all, were jammed into one boat, and it was so crowded that the men had to be divided with care in order to keep the boat from careening. At Jersey City the battalion adjutants landed first to buy liquid coffee for the three battalions. Just here, gentlemen, is a complication in transporting troops. The men must have something to drink, and water, particularly when it is changed frequently, is not good for them—at least, so it was decided in our case. Coffee had to be bought, and the Government furnishes funds to that purpose. I had command of the commissary of the Third Battalion, and, as my battalion was the last to leave, I had the misfortune to be compelled to hold the section for twenty minutes over time at the point of the bayonet. I hope the worthy train-master and engineer have forgiven this instance of the power of the military over a corporate body. I have no apology to make; I had my orders to purchase coffee for my battalion. I fulfilled my orders.

Our journey to the South was practically uneventful; one or two men fell from the train and were badly injured, but none was killed. Several were left behind owing to disobedience of orders in purchasing liquor at stations. But the muster was fairly near to the original when we disembarked at Rossville, Tenn., at dusk on the 19th of May. Rossville is a small hamlet within a stone's throw of the Georgia line. Here we bivouacked. I never bivouacked before with a regiment, and it was an interesting experience, but not a comfortable one. After confusion which seemed almost hopeless, the battalions were finally quartered according to orders, and the men set about getting supper. The majority of the soldiers simply spread their blankets and ponchos and were soon asleep. Men and officers as a rule slept on the ground. For my part, I made my bed on a pile of tents on the railroad platform, and lay the better part of the night looking into the sky at the line of mountains stretching away into the South. In front Missionary Ridge looked up, cutting off the horizon; at my back Lookout rose a seemingly impregnable fortress; to my right the regiment slept by the camp-fires, and it only needed a vision of two armies grappling in the sky to finish Détaille's famous painting.

At this point we lost the first man by death. Having been drinking freely for two weeks, he was taken with delirium tremens during the night, and despite the aid of one of our surgeons he died about daylight. I was unable to see any impression that this sad incident made on the morale of the men. In congregation man is naturally a selfish animal, and the sorrows of others throw no shadows over him.

We broke camp about six o'clock after a drenching shower and marched away to our camp at Chickamauga Park. The rain soon cleared away and the sun came out in remarkable contrast to the weather we had just left. The men were in heavy marching order with rifle, canteen, haversack, overcoat, poncho, and that abomination of the soldier, the Miriam pack. The sweat soon commenced to pour from their faces, and before we had marched two miles they commenced to fall out from exhaustion and fatigue. The road was lined with them for eight miles. They came in as best they could, on wagons or as stragglers. No efforts on the part of the officers could induce one to get up when once he fell. They were exhausted by the contrast between the climate of the North and that of the South. After entering the Park we marched straight to the fork of the road where the Brotherton House stands, and not being able to find any one to tell us where to go, we lay down in the woods skirting these roads. After the long march the men and officers were looking for water, which could not be found, and considerable discomfort resulted. While riding about during our wait there, I found a good many officers of other commands who were looking for some one to tell them where they were to be located. The utmost confusion seemed to prevail. While waiting here I saw a sight that was a typical evidence of the haste with which this war was conducted. Down the road from Lytle came a cloud of dust. Soon there emerged from it a column of soldiers which bore more resemblance to Coxey's army than anything I had ever seen or heard of—the Twenty-first Kansas, which was afterward brigaded with us. At its head rode a lady without side-saddle—the wife of an officer. She stayed with the regiment during its entire service, and bore all the discomforts of camp life like a soldier. About one-third of this regiment was partially equipped; no soldier was properly equipped to all appearances. Some had blouses and some had trousers; many wore frock-coats of a faded hue, derby hats with the crowns gone, and some had no coats at all. Many had their belongings in red bandanna handkerchiefs swung over their shoulders on crooked sticks. A more motley gathering I have never seen. But the regiment attained a high degree of efficiency before it was mustered out. The pomp and circumstance of war were already gone for me!

After two or three hours of waiting, General Bates came along and conducted us to our camping-ground. This was in a thickset wood on a hillside, which was covered with underbrush and innumerable stones and

ledges of rock. A more unfavorable or improper site for a camp I can't imagine. On our right was the Eighth Massachusetts, and on our left the aforesaid tattered Twenty-first Kansas. The Alexander road ran parallel to the camp. In the rear was a hill that had been the scene of a hot artillery fight, as was attested by two cannons and a placard dedicated to Lieutenant Turner, C. S. A.

There was only one spring in the vicinity, and that was across the road in a field about one hundred yards away. It was a small spring, and was used by the Eighth Massachusetts, ourselves, and I believe also by the One Hundred and Fifty-eighth Indiana, who were three hundred yards away. Those who had fallen by the way had kept the surgeons busy all day, and just before we made camp one of our officers went down in a dead faint and had to be transported on a litter. All turned up, however, in fairly good condition by nightfall. Here we were dumped in the woods without any water. The men had to eat and drink, but there was no water. To make the story of this matter short, our men had to use muddy water dipped up from the spring, and surface-water from several aborted wells which we attempted to dig. This continued for some time. On first arriving there was a mild epidemic of sore throat. It affected the entire fauces; the soft palate, pillars, and pharynx would be deeply, bluishly congested and sore, and deglutition was very painful. Both men and officers were affected. There was, however, no exudate visible. This passed, and diarrhœa set in, varied by dysentery. Some of the men were quite ill, and several officers were laid up for a week or more.

And now for the most important point in a camp: We had no picks or shovels, and so we could not dig latrines. Of course the men commenced to soil the ground contiguous to the Twenty-first Kansas and in our rear. This continued for a week or ten days, when finally, picks and shovels having been secured from I don't know where, I was set to dig to the first latrine. I continued to dig this latrine far into the night, by the "struggling moonbeam's misty light and the lantern dimly burning." The picture suggested another similar scene famous in English history. The ground was so filled with rocks and shale that it was often impossible to dig any further than three feet. I think it safe to say that three feet was about the limit of the majority of latrines dug by the men for themselves. The officers' latrines could be dug in soft ground and so were made deeper. The men's sinks were in rear of the camp, and in my opinion were too near the streets and kitchens. But for obvious reasons it is unwise to put the sinks too far away in a community where diarrhœa is an ever-present disease. In the mean time the surface had been soiled, but this was policed as well as possible. The men would persist in soiling on the ground, notwithstanding stringent orders and punishment for the offence. No fever to speak of had yet made its appearance among us. For three weeks or a month no rain fell, and men and animals suffered much from dust and a want of good water. Diarrhœa continued to lead. Finally rain commenced to fall and the dews became heavy. Soon after the appearance of rain the fever commenced to be general. It rained in torrents and the rain overflowed everything. The men's tents were ditched, but the character of the ground we were on was of such a kind that the floors of the tents could not be kept dry. The sinks overflowed, or, when new, were filled to the brim with rain. From this time on there was a very decided and disagreeable odor in the neighborhood of the sinks, which never was dissipated, but rather grew worse. We could not draw lime for a long while from the quartermaster's department, and had to buy it for ourselves. But it was inefficient as a deodorizer and disinfectant. In fact, there was no remedy for the state of things except to move camp and fill up the sinks. I consider this matter of sinks the most important hygienic thing in the care of a regiment.

During the latter part of July and during August the cases of fever commenced to multiply and three or four deaths occurred in the regiment. The Eighth Massachusetts bore the palm for sickness and death, while the Twenty-first Kansas lost an officer or two. The street of my company was located on a hill, and the ground sloped away from it on either side. Company M, next to mine, and my own company had more fever cases than any other company at this period. Draining of these two streets was practically impossible, owing to the character of the ground. The sinks of the neighboring companies were constantly being overflowed by rain, and the rear of my company street had a very offensive odor. Lime was used in abundance, but it had no effect. The sink of my own company was eight feet deep and had an excellent covering to it. It was dug by my predecessor in command. The other companies had no covering to theirs, and none was so deep. It is worthy of remark that in Company H, of four men who slept in one tent, two died of typhoid and the other two contracted it, but recovered after prolonged illness.

In one night four men fell ill of fever in my street. The cases were kept for a while in the regimental hospital, and when they developed serious symptoms were transferred to the division hospital. This place became very much congested, and matters assumed a serious aspect. By orders from headquarters everyone in the regiment was vaccinated. This entailed some sickness, and many cases of abscess developed. I do not know whether the virus was bad or not, but it was Government virus. I myself had a very bad arm and numerous abscesses, which I attribute to the impure virus. I saw a case of tinea versicolor that covered the entire back, breast, and abdomen of an enlisted man. I had never seen it so widespread. It yielded quickly to hyposulphite of soda. There were three cases of supernumerary mammary gland in the regiment. Two were in enlisted men and the other was in an officer. There were also three cases of a lateral incisor tooth jammed between the upper middle incisors. Two of these cases also occurred in enlisted men and the other in an officer. I also had a case of angina pectoris in my company. It ended in recovery after a week's rest and treatment. There was, of course, the usual large number of venereal cases that occur in an army. These diseases, however, bore but little importance as factors in rendering the men unfit for service. The matter of policing gave us a great deal of trouble. It was a hard thing properly to police a camp situated as ours was. After we had been there a week, the stones that lay on the ground, or that could be dug up, were taken and piled about the trees, but the roughness of the ground made it impossible to give the camp a clean and neat appearance. And when it rained the problem became more serious still. Our refuse was dumped on the edge of the parade-ground and was burnt when it got dry enough. The swill was emptied in a creek, which ran around the parade-ground. Water from this creek was never used for cooking or drinking, and so I think that this had no influence on the sickness in the regiment.

A great deal has been written about the horrors of the division-hospital system. I was a constant visitor at the hospital as much for the purpose of making observations as for looking after my men, and I can safely say that as a physician the manner of conducting the third division hospital of the First army corps did not please me. As a soldier my military sense was outraged. I believe the division system the best for regiments in continuous camp, but it

requires executive ability and a soldierly training to conduct such a hospital well. It also requires good nurses and good doctors. Of all these requirements I found one, good doctors. They were efficient, willing, kindly disposed, and devoted. The nurses were men, forsooth, detailed from the companies of the various regiments in the division. Imagine if you please a great oaf, with ponderous hands and a thick skull, trying to minister to a man hanging to life by a thread. It was outrageous that such things should exist when there were hundreds of young women all over the country who would have been glad and willing to offer their services to the country and humanity. But the dictum went out from Washington in the beginning that no women would be allowed in the field—hence these tears. Now I hope I am a good soldier and respectful to authority, but I consider this one of the worst mistakes of the war. The fault I understand lies at the door of the surgeon-general. I speak seriously and scientifically when I say that I regard the ministration of a woman about a sick-bed a therapeutic measure of great importance. Her quick powers of perception, her natural gentleness, and her native sympathy enable her to assist the surgeon in a way that a man can never learn. After the horse was gone the surgeon-general was quite willing to lock the stable-door. The Leiter hospital and the Sternberg hospital were opened, and women, ladies, ministered to the poor fellows, and sunshine and health followed in their wake. The third division hospital was a paradise to another division hospital. I was told by a surgeon who was detailed from his regiment to that other hospital, that at one time he had three hundred patients under his control. I ask you, gentlemen, can a man care for that many sick and give them proper care? I believe the conduct of the medical department during the war was due to executive incompetence in high places. The surgeons knew how to treat fever, and did it as far as they could, like true physicians. But a doctor is not naturally a soldier. It would be better if all army surgeons had a military training before entering the army. Nothing can be more disgusting to a man with military instincts than to observe the total lack of military bearing, dress, and manners in the *personnel* of the hospitals of the volunteer army.

As stated, we had to get our water at first from the spring opposite our camp. Soon a pipe-line was run in the rear of our camp, near to the Eighth Massachusetts, but at least three-quarters of a mile from us. Our commanding officer requested of General Brooke, the then corps commander, that we might be permitted to tap it and bring a pipe to our regiment. This he declined, giving reasons that no one could understand. The pipe-line brought water that at its best was always a trifle muddy and warm, for the pipe ran along the surface of the ground. This water, however, I always believed was sweet. At any rate, bacteriological investigation failed to find the microbe of typhoid either in it or in the water of Crayfish spring. We finally had to haul our drinking and cooking water several miles from this spring in barrels, and this we continued to do till we left. The men, therefore, and the officers likewise had scant bathing facilities at first. Toward the end of our stay at this site an artesian well was driven across the road on the border of the parade-ground. The water from it was clear and cool, but it gave the men diarrhœa and so was condemned. It was afterward used solely for watering the mules. What effect it had on the mules deponent sayeth not.

We were fortunately free of mosquitoes, but what we lacked in mosquitoes we made up in flies. I verily believe that the headquarters of the Prince of Flies, Beelzebub himself, was near by. No sooner would the food be set on the table than it would be covered by every known variety of fly in the neighborhood—from the small house-fly to his more aggressive and foul congener, the bluebottle. This was the sorest trial of camp life at Chickamauga.

And now a word as to the drills.

As soon as the regiment had pitched tents and found its correct position in space, we set to work drilling it under orders from division headquarters. It is safe to say that the men were under arms five hours a day. The morning drill at 6:30 or 7 lasted two and one-half hours. This was company work. In the afternoon from 3:30 or 4 till 5 or 5:30 battalion or regimental or extended order. Evening parade was at 6:30. The sun in the mornings was intensely hot, and the men and officers would return to the tents with underclothes wringing wet. In the afternoon it was no better. Evening parade on a hot day is a tiresome and trying function, and to stand at attention for twenty minutes is no easy matter for fresh men in hot weather. The men were drilled until they became stale, hopelessly stale, and I surely believe that this was another important factor in the great sick rate at Chickamauga.

The surgeon can only make suggestions to his commanding officer, and if he does not care to heed them the surgeon can do no more. Our commanding officer would omit the drill whenever the weather gave excuse, but his jurisdiction in this matter was limited. The surgeon ought to have sole jurisdiction over the health of the command he is attached to. He surely is more fitted to judge such matters than the commanding officer. Let Washington bite upon that nut.

On August 12th we moved our camp to Brockfield, about three-quarters of a mile in our rear. This was an ideal site for a camp. Without going into particulars, allow me to say that this is my opinion. The site was laid out scientifically by Lieut. F. L. V. Hoppin, a distinguished architect of this city, and I had the pleasure of keeping two hundred and fifty men at work for two days, draining, cutting the streets, and digging latrines and kitchen sinks. In the future I shall have respect for a good section boss. He has no easy job.

We were ordered to dig sinks for the kitchen slops, and this was done by digging pits, about six feet square, fifty feet from the end of the company streets. The soil was tough and clayey, and so the desired object was not attained. The slops from those kitchens are still there, I imagine, and mother earth has not yet disinfected them. We were likewise ordered from division headquarters to dispose of our refuse and trash in a crematory. After many contradictory orders we finally settled down to burning everything in the way of camp and kitchen trash except the liquid slops. A crematory of stones was constructed about a hundred yards from the camp. It was done by laying wrought-iron bars side by side like a gridiron, from wall to wall of a chamber made of flat stones. For a while it seemed to be quite effective, but presently the iron bars warped and the refuse fell through and snubbed the fire. I think this method the best way of getting rid of refuse, but cast-iron bars should be used, and the rocks should be cemented. I do not think the crematory was a success. I openly stated this, but my opinion did not meet with approval.

A great deal has been said about the appointment by the President of a Philadelphia veterinary surgeon as commanding medical officer of the First army corps. What was needed in the commanding medical officer of the First army corps was executive ability rather than medical knowledge. I have reason to believe that the medical department of our corps was badly managed, but I think it was due to a lack of executive ability and not to a lack of medical knowledge. He has been accused also of establishing the division-hospital system. The division-hospital sys-

tem was established in other camps. I certainly cannot indorse the appointment of a veterinary surgeon as chief medical officer of a corps, but there is no reason *per se* why such a surgeon might not be possessed of great executive ability. A regular army surgeon, it seems to me, ought to have had the post.

On July 25th, Colonel Huidekoper was relieved and Lieut.-Col. John Van R. Hoff succeeded him. Matters in the medical department grew better after this.

Many sensational stories have been published about the food at Camp Thomas. For the first week or two the men suffered some inconvenience and annoyance by short rations, and there was considerable complaint among them, but as soon as the commissary department at Lytle got into working order, this condition of affairs was remedied. The officers had to eat salt meat for two weeks, and I can testify that I carried an eczematous right arm for a month, due, I believe, to this diet. As soon as the canteen became established, the company had a fund which was used by the captain to buy the men such things for food as he deemed proper. The company officers would inspect the food and often ate with the men. I can testify that there were many times when the food was as good as any man could wish. There was no approach to starvation in Camp Thomas, and I do not believe that any man lost his life there through the quantity or quality of the food.

We had many orders from division headquarters about the boiling of the water for drinking and cooking purposes. Water was boiled sometimes and sometimes it was not. The boiling of water takes the oxygen out of it and leaves it flat and tasteless. For my part I would rather take my chances at the bacillus of typhoid in sweet, oxygenated water than drink the flat, insipid stuff that comes from the camp kettle. After removal to the second camp we always filtered the drinking-water and were supposed to have boiled it. If I were surgeon of a corps I would suggest that all drinking-water be filtered but not boiled. I do not believe that the drinking-water at Camp Thomas had the influence on the development of typhoid which has been attributed to it. A great deal was written about the beauty and fitness of the Park for a military camp. Some parts of the Park were certainly pretty, but I cannot admit that it was a good place for a large military camp owing to the scantiness of water. There was but one good-sized stream in it, and that was Chickamauga creek. The water of this stream was muddy the whole time we were encamped there, and was not even good for bathing purposes. A good water-supply is a very important point in the selection of a site for a camp.

I have heard that the Indians considered the valley unhealthy, and that there was a saying among them, that he who slept there slept with death. This saying arose from the character of the mists which hung over it in the rainy season. I do not remember any morning after the rain set in that I did not find my clothing wet from the heavy dew and mist. My fatigue-coat was always wet at Camp Thomas, but that was due to perspiration as well as the mists.

Typhoid was as frequent and fatal at other camps farther north as it was at Camp Thomas, so that I do not believe that there was any factor at Camp Thomas that was peculiarly conducive to the catching of the microbe of this fever. The men had only two changes of underclothes, and it is safe to say that there were few hours in the day when they had on dry underclothes. It is a depressing thing to wear damp clothes, and I certainly believe that this was a decided factor in the unhealthiness of the camp. This unfortunate fact was due to excessive drilling.

I should like to say a word about the red-tape involved in the getting of furloughs. Before General Order No. 114, A. G. A., August 9, 1898, came from Washington arranging the giving of furloughs to the sick from division hospitals, the amount of official nonsense necessary to send a sick man home was disheartening. The hospital authorities were confused by frequent change of orders from Washington, and came in for a large element of blame that was in reality unjust. As soon as a sick man could walk he was sent to his regiment, and there he lounged and complained till his furlough came. I had two convalescents in my street for two weeks. This was true also of other companies and other regiments. Finally by the General Order it was arranged to send convalescents home from the hospital direct, and when they happened to be in the regiment it was made clear to the surgeons how it was to be done. But the nonsense and error that preceded this final solution were due to the infernal system of red-tape that ties up every transaction in the army, excludes the necessity of ratiocination, and will finally, if continued, reduce army officers to unintellectual machines.

As to the matter of clothing, we had great difficulty in drawing clothes for the men, even after we had been in camp for six weeks. There was one company that was in a wretched condition as to clothes; three or four of the men had no hats at all for six weeks. Their hair was blanched to a dirty brown. They would go about bareheaded or with the lining of the haversack on their heads, looking for all the world like French cooks. Finally, when the quartermaster at Lytle opened his heart, or commenced to attend to his business, the clothes were drawn, and some were good and others bad. The blue trousers were made of anything but stern stuff. They would rip and tear with great ease. I have known several pairs to last only two weeks and then become uninhabitable. I have heard that they were furnished by a near relative of a Republican administration.

I have seen no statistics as to the number of cases of typhoid, but they were frequent and many bore the genuine stamp; but many were called typhoid which in my opinion were nothing more or less than typho-malarial fever—malarial fever with typhoid tendency. I maintain that there is such a disease. Our regiment lost at least twenty-four men all told. Reports to the adjutant-general, September 30, 1898, show that 345 men were killed and died of wounds, and 2,485 died of disease in an army with a mean strength of 275,000. In view of the fact that there were 275,000 men in the whole army, we are confronted by the astounding fact that about one per cent. was lost from all causes up to September 30, 1898. That is a remarkably small loss of life.

On the 12th of August we moved camp to Brockfield. As I have stated, this was an ideal site for camp, and men and officers were satisfied. But the order came to move the entire division to Kentucky, and so on August 24th we marched to Rossville, where we embarked for Lexington. Prior to our marching the surgeon received orders to send home on thirty days' furlough all men who were unable from any cause to march to the station, eight or ten miles away. A number of men were compelled to go who had but slight indisposition and could have been easily retained, but the orders were imperative, and whereas men who a few weeks before could not walk for weakness were refused furloughs, it now came about that all who were even slightly indisposed were compelled to take thirty-day furloughs. The object was to enter Lexington with a clean bill of health. There are many things that produce a sense of weariness in the army, and they are mainly due to orders. The men continued to fall sick at Lexington for a month, and the third division hospital there was crowded to its

limits. But at the end of the month the health of the entire army was improved, and so my interest waned.

From observations made in general throughout the Park I cite the following causes as factors in the unhealth and demoralization of the troops in Camp Thomas:

1. Undue haste in bringing the regiments into the Park.
2. Unpreparedness of the regiments in uniform and equipage.
3. Choice of poor locations.
4. Dearth of good water for drinking, cooking, and bathing purposes.
5. The prevalence of great quantities of flies, which carried contagion from the latrines to the food—the most potent cause of all.
6. The crowding of regiments in too close proximity to one another.
7. The shallowness of the sinks, owing to the character of the soil.
8. The sudden change of climatic conditions different from those to which the regiments as a whole were accustomed.
9. The change of manner of life from indoor to open air.
10. The natural ignorance of the laws of health on the part of officers and men.
11. Excessive drilling under the Southern sun.
12. Ennui due to over-drilling and the lack of excitement.
13. Homesickness.
14. Insufficiency of medical supplies—the least important cause.
15. Keeping of the camps too long on one site.
16. Total inefficiency of the division-hospital system as conducted in the Park.

And now, gentlemen, a great deal of unpleasant comment has been made upon the volunteer officers. Comparisons have been instituted between them and the regulars. I am not going to take up the cudgels in favor of every volunteer officer of the army. Many of them had no business with shoulder-straps, many of them had no business in the army at all; the hands of many were better fitted for pruning-hooks than sword-handles; many were utterly ignorant (I speak advisedly) of military etiquette and forms—but they all offered their services, such as they were, and their lives to the country. For that they should be honored. But there were many regiments with a *personnel* of volunteer officers which could vie with any regular force in intelligence and adaptability for the service. Of such men, I say it with pride, was my regiment composed. I was surprised to find that many regular army officers did not know all the intricacies of the red tape of their respective departments. I often asked for information and was unable to get it. Other volunteer officers will give the same testimony. But we were willing and serious, and learned as well as we could in the time we had at our disposal. It sometimes takes four years at West Point and many years of service in the field to make a poor regular. It is not surprising that a good volunteer officer cannot be made in six months.

Three volunteer regiments saw service in the only battle fought in this war on this side of the world. The authorities at Washington had no idea of giving them the first place, nor would it have been just. An army of over two hundred thousand men of as gallant fellows as ever shouldered a musket or drew a sword sweated for four months under the Southern sun under all the tension of expectation and the demoralization of disappointment, only to see the war, for them, come to an inglorious end. As a thinking man, I leave the service reflecting that war consists in expectation, weary waiting, bookkeeping, diarrhœa, and disappointment.

Nevertheless, gentlemen, it is a pleasing reflection that there are at least two hundred thousand men in this country who cannot be held back by the tender ties of affection nor the pleasures of profit, who are unwilling that other men should take their places, when the country calls, and who are willing to take the flag and place it where the sun shall never set upon its folds. For my part I do not fear the shadow of the wing of the eagle of Imperialism: I rather rejoice in our expansion, and, though my part was small, I am right glad that I can exclaim with the Roman poet "*Quorum pars fui.*"

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Progress of Medical Science.

Pathology of Diphtherial Paralysis.—Dr. Frederick E. Batten (*British Medical Journal*, November 19, 1898) concludes an interesting article on this subject as follows: "It is probable that the dominant lesion in diphtherial paralysis is a parenchymatous degeneration of the myelin sheath of the nerves, and that this degeneration affects both motor and sensory fibres alike."

Rabies.—During the past year it has seemed to be established beyond the possibility of doubt, by Memmo in Italy, according to the *Centralblatt für Bakt.* (part 1, vol. xx., 1898), that the microbe described by Spinelli and Rivolta, and recently found in the spinal cord by Sanfelice, who used a special stain, is the specific cause of hydrophobia. Inoculation in lower animals from cultures has fulfilled all the needful data on which to base a claim of this kind.

Subcutaneous Hemorrhage. — Suggillation, suffusion, or petechiæ may occur in (1) severe cases of infectious diseases, such as hemorrhagic measles, scarlet fever, smallpox, and typhus fever; (2) acute articular rheumatism (peliosis, purpura rheumatica); (3) severe blood diseases (anæmia, leukæmia); (4) diseases of the liver (acute yellow atrophy, rarely cirrhosis); (5) in scorbutic morbus maculosus Werlhofii. — Klemperer.

Grippe During Pregnancy.—Drs. Bar and Boullé (*l'Obstétrique*, No. 3, 1898), basing their report on fifty observations, find that, while the pulmonary organs are affected in most cases, the nervous system or the gastro-intestinal tract may suffer. Most pregnant women affected make good recovery, some go on to have pneumonia. Labor does not seem to be materially influenced by the intercurrent affection, and hemorrhage is rarely severe. Serious complications may be encountered in the puerperal state, and mixed infections are apt to give trouble.

Hysteria in Childhood.—Dr. Herman B. Sheffield (*New York Medical Journal*, September 24, 1898) says the symptomatology of hysteria is characteristic for its changeability and multiplicity. In the United States it is observed, as a rule, in the following order of frequency: (*a*) Spasmodic affections (convulsions, spasm of the laryngeal muscles—croup—contractures, catalepsy); (*b*) sensory symptoms (painful sensations, anæsthesia, blindness, contracture of visual field, hemianopsia, deafness); (*c*) motor disturbances (paralysis of the extremities, paralysis of the laryngeal muscle—aphonia); (*d*) visceral and vasomotor disturbances (affections of the alimentary canal, dyspnœa, tachypnœa, hyperpyrexia).

Wind as a Factor in Spreading Infection.—The water-closets in use on the railway trains are, for the

most part, open shutes down which the excreta are projected to the railway track. Many people with ambulatory typhoid, and patients in various stages of the disease *en route* to hospitals or home, use these closets, and thus typhoid stools are spread along the railway, ready for distribution by the wind all over the neighboring country. The same thing might happen were cholera ever to obtain a footing on this continent; but apart from the specific danger in such diseases the method is unhygienic and offensive. It should not be difficult to attach a box below the chute and adopt some modification of the earth closet, the excreta being removed and buried at provisional points along the line.—DR. R. S. THORNTON, *Manitoba and West Canada Lancet*, October, 1898.

A Symptom Anticipating the Effect of Chloroform Anæsthesia.—Dr. Lehman (*Allg. med. Central-Zeitung*, 86, 1898) says that by means of his sign one can tell at the beginning of narcosis whether the anæsthesia will be an easy or a difficult one. In patients in whom the anæsthesia will be difficult, the eyelids remain open or half open from the beginning; if the lids are closed by the anæsthetizer, they at once reopen entirely or to half that extent. On the other hand, those patients who stand the chloroform well—in other words, those in whom anæsthesia is easy—will keep their eyes closed from the very beginning. Without attempting to enter into any explanation of this sign, Lehmann is so convinced of its value and efficacy, that in the presence of open eyelids during the beginning of chloroform anæsthesia, he at once prepares any necessary instruments before proceeding to the operation.

Observations of Nine Cases of Ulcerative Endocarditis.—Herzog, of Berlin (*Wiener klinische Rundschau*, December 11, 1898), says that most of the cases showed nothing in particular. One instance was complicated with malaria. All cases ended fatally. In most instances the spleen was enlarged, and at the same time soft and mushy. Recent emboli and old infarcts were numerous. The kidneys presented a picture of cloudy swelling and partial fatty degeneration. In three patients a chronic parenchymatous nephritis was found. In one case an acute hemorrhagic nephritis developed. Apart from this, the kidneys presented numerous small emboli, infarcts, and abscesses. The entire skin surface showed scattered petechiæ. The joints showed purulent effusions. Two cases were complicated with a typical hemiplegia, the result of a cerebral degeneration and softening.

Melanoplakia of the Mucous Membrane of the Mouth.—Schultze, of Bonn (*Wiener klinische Rundschau*, December 11, 1898), makes the following statements: The melanoplakia of the mucous membrane of the mouth is found in certain chronic diseases, and particularly in carcinoma of the stomach, as well as in Addison's disease. Lever, Parkes, and Harley found pigment spots in the mucous membrane of the mouth and dark pigmentation of the skin in cirrhosis of the liver. Schultze has observed two instances of hepatic disease in which abnormal pigmentation of the oral mucous membrane occurred. In the first instance these spots were a blackish-brown. The diagnosis in this case could not be established with certainty, and oscillated between cirrhosis of the liver and chronic peritonitis. Symptoms of Addison's disease were entirely wanting. As a basis for the diagnosis of Addison's disease we must consider a bronze coloration of the skin and certain mucous membranes, especially that of the mouth and conjunctiva, in the absence of any other cause (icterus, eczema, arsenic melanosis) for the discoloration. If tuberculosis exists, then the probability of a suprarenal affection is very great. Nevertheless, instances of clinical Addison's disease occur in which absolutely no microscopical changes are found in the adrenals.

Cardiac Syphilis.—Dr. I. Adler, after a number of clinical and histological observations, gives in the *New York Medical Journal* (October 22, 1898) his impressions. There seem to be no distinctive diagnostic features in syphilitic heart as distinguished from other heart disease, but he thinks it possible at times, by careful attention to history and physical examination, to make this diagnosis. Reviewing, he says, all the anatomical and clinical considerations, the necessity becomes apparent of methodically considering syphilis as an etiological factor in heart disease. It may not happen very often that an absolutely positive diagnosis of heart syphilis can be established, but in every case in which the etiology is not absolutely clear, and in which syphilis cannot with reasonable certainty be excluded, the iodides and mercurial preparations should be accorded the same privileges as the digitalis and strophanthus, strychnine, and nitroglycerin. If carefully administered they cannot do any more harm than these latter, and may do immeasurably more good.

Natural Labor.—Labor at the ninth calendar month in a woman free from organic and functional diseases of the heart, lungs, kidneys, brain, and other internal organs, and from all fever diseases, and when there is no impediment in the maternal passages of either soft or hard nature to the descent of the child; when there is only one child in the womb; when the vertex of the child presents alone in either the first or the second occipito-anterior position; when labor is complete within twelve hours from its commencement; when a living child is born; when neither instrumental nor manual operations have been required; when the afterbirth comes away without the use of manual operation within twenty minutes after the birth of the child; when there is no laceration of any portion of the parturient structures; when the mother does not die within thirty-one days after confinement; and when there is no puerperal fever.—DR. ROBERT R. RENTOUL, of Liverpool.

Febrile Bilious Hæmoglobinuria.—Dr. Konstantinow (*Russki Archiv. Patologie*, 1898, Bd. 5, H. 3) draws the following conclusions: (1) The views of Tomaselli and his followers, who look upon the febrile bilious hæmoglobinuria as a quinine intoxication, are worthy of the fullest consideration. (2) Exposure to cold or cooling of the body, as an etiological factor, is at its best very doubtful. (3) Whatever opinion one may have as to the cause of this affection, so much has been clinically demonstrated, that the disease runs a better and more favorable course without quinine and that in the presence of hæmoglobinuria quinine is strongly contraindicated. (4) In those patients in whom the blood serum was examined during the period of hæmoglobinuria, no hæmoglobinæmia was found. (5) The jaundice which occurs during the course of this disease is probably due to urobilin; biliary pigments could not be demonstrated in the urine. (6) In the blood of these patients we occasionally see hyaline crystalloid bodies, with a pigment spot in the centre and gas-bubbles at the poles. (7) The existing nephritis in this disease has a consecutive character, in that it is secondary to the hæmoglobinuria thrombosis of the uriniferous tubules. (8) In ordering a prophylactic course of quinine medication, one must keep in mind the possibility of an existing hæmoglobinuria diathesis. Especial care is to be taken in the administration of quinine during the cold months. (9) In order to corroborate the theory that febrile bilious hæmoglobinuria is due to chronic quinine poisoning, experimental examinations are desirable.

Mode of Ascertaining the Relations of the Cerebral Convolutions to the Scalp Surface.—The head being shaved, find in the mesial line of the skull, between glabella G and the external occipital protuberances O, the following points: 1. The mid-point M. 2. The ¾ point T. 3. The ⅞ point S. Find also the external angular process E, and the root of the zygoma P, immediately above and in front of the external auditory meatus. Having found these five points, join E P, P S, and E T; bisect E P and P S at N and R, bisect also A B at C, and draw C D parallel to A M. The pentagon A C, B R, P N corresponds to the temporo-sphenoidal lobe, with the exception of its apex, which is a little in front of N. M D C A corresponds to the Rolandic area containing the fissure of Rolando, the ascending frontal and the ascending parietal convolutions. A is over the anterior branch of the middle meningeal artery, and the bifurcation of the Sylvian fissure. A C follows its horizontal limb. The lateral sinus at its highest point touches the line P S at R. M A = the precentral sulcus, and if it be trisected at K and L these points will correspond to the origin of the superior and inferior frontal sulci. The supramarginal convolution lies in the triangle H B C, the angular gyrus is at B.—Dr. Henry O'Neill, *British Medical Journal*, November 19, 1898.

Hemorrhage from the Bowel. — The passage of blood per rectum has been noticed as occurring in enteric fever, in ulcer of the stomach, and in dysentery; it may, of course, happen with any considerable breach of surface, but simple oozing without obvious rupture may also lead to considerable hemorrhages. The way in which the blood is passed may give a clew as to the point whence it comes. In bleeding from gastric or duodenal ulcers the blood is considerably altered by the secretions, and forms a black, tarry, semiliquid, or treacly mass (melæna); in hemorrhage from typhoid ulcers the blood is equally unmixed with fæces, but brighter red and more fluid than in the former case, from the action of the alkaline contents; the blood in dysentery is in streaks or small clots, mixed up with mucus or pus or thin fecal matter, though from time to time small quantities of pure blood may be passed. Large quantities of blood may be lost from piles or from an ulcer of the rectum. Here the bleeding is generally caused by the act of defecation, the blood either streaking one side of the solid fecal mass or coming more or less pure in drops or streams after the motion is evacuated. In scorbutic, purpuric, and hemorrhagic conditions (scurvy, purpura hemorrhagica, acute yellow atrophy of the liver, malignant variola), blood comes from the rectum more or less mixed with fæces or pure, according to the part of the intestine yielding it or the freedom with which it escapes.—Frederick Taylor, M.D., F.R.C.P.

Epileptic Insanity.—Dr. Frederick Peterson (Philadelphia *Medical Journal*, December 24, 1898) says: "The question of trephining must naturally come up in certain cases of epileptic psychoses in which trauma to the head is evidently the cause of the epilepsy and psychic degeneration. The following points are to be taken into consideration as a guide in this matter: (1) In the small number of cases having injury to the head as a cause, the epileptic habit is so strong and the changes in the brain are usually so old and deep-seated that an operation, as a rule, does not cure and only seldom permanently diminishes the frequency of the attacks; (2) of miscellaneous traumatic cases in which a surgical procedure seems justifiable and is undertaken, a cure of the epilepsy may be reasonably expected in perhaps four of every one hundred cases operated upon; (3) the removal of a cicatrix from the cortex supposed to be the epileptogenic nidus will naturally be followed by the formation of a new cicatrix in the surgical wound—the creation, therefore, of a new epileptogenic centre; (4) the more recent the injury the greater will be the promise of lasting benefit; (5) in cases of traumatic epilepsy, with marked epileptic psychoses (recurrent attacks of rage, fury, violence, destructiveness, etc.), trephining would be justifiable as a possible means of diminishing the severity, danger, and frequency of the maniacal attacks, even though the epilepsy itself or the psychic degeneration might not be improved.

Indications for Hysterectomy.—The question arises, what should be considered an absolute indication for removal of the entire uterus? 1. Any woman who has a living child in utero, at term or nearly so, in whom the pelvic diameters are too small for the delivery of a living child per vias naturales. 2. When the child in utero is dead and an infection of the organ has taken place. 3. In cicatricial contraction of the vagina to such an extent as to prevent delivery through the normal route. 4. When a neoplasm is present in the collum uteri, preventing the passage of a living child, and the enucleation of such neoplasm is not feasible at the time of the Cæsarean section with safety to the mother. 5. In such cases of rupture of the uterus in which an abdominal section is indicated and suture of the uterine wound is unsafe. 6. In some cases of hemorrhage from atony of the uterus subsequent to Cæsarean section, as in a case reported by Clivio, in which he had completed the uterine suture, and, although no blood oozed from the stitch-holes, the hemorrhage per vaginam was so terrific that he found it necessary to change the ordinary Cæsarean section to a Porro operation. This author collected sixteen cases of similar character. Perhaps an intrauterine gauze tamponade or steam vaporization may answer in some such cases. In cases of advanced cancer of the cervix, however, the Porro operation should receive the preference over total extirpation or the modified Cæsarean section.—H. J. Boldt.

Growth of Bacteria in the Intestines.—The earlier statements as to the contents being alkaline were based solely on the reaction of the various intestinal juices, and not upon practical examination of the contents themselves. The reason that the reaction remains acid is to be ascribed to the presence of the acid-forming micro-organisms. One of the functions of the free hydrochloric acid in the stomach is to destroy or inhibit the bacteria taken in with the food. The secretion is antiseptic. Many of the organisms, however, are only inhibited; their growth is delayed, not destroyed, and whenever the contents are rendered less acid they are again enabled to grow. In addition, the small intestine is not divided from the large by any structure which can prevent organisms indigenous to the large intestine from reaching the contents of the small. In health the organisms which flourish in the small intestine are mainly those which produce acids by their fermentative action. The chief acids formed by them are acetic acid and lactic acid. The moment the chyme has been sufficiently neutralized by the alkaline secretions of the intestinal glands the bacteria present are able to flourish in it. In fact, there is a kind of paradox involved. The more alkali secreted by the intestinal glands the better the organisms are able to flourish and the greater is the amount of acid produced by them.—A. Lockhart Gillespie, "The Natural History of Digestion," page 197.

Therapeutic Experiments with Large Doses of Creosote in Pulmonary Tuberculosis. — Savoire (*Wiener klinische Rundschau*, January 1, 1899) draws the following conclusions: (1) The poisonous effect

of creosote is very slight. (2) The administration of creosote in daily doses of eight to ten grams—in one instance, in fact, fifteen grams—even though continued for several months, was not productive of any disturbance of the gastro-intestinal, circulatory, or secretory apparatus. (3) This creosote therapy results in an increase of appetite and a gain in weight; in a remission of the cough, diminution of night sweats, lowering of temperature, decrease of expectoration, disappearance of the bacilli in many instances, and continued hindrance to the progress of, not a cure of, the disease. (4) Creosote has no effect upon the development and growth of the tubercle bacillus. Even in a thirty-per-cent. creosote bouillon, it retains its virulence and productive power. (5) The poisonous quality of the extract of a tubercle-bacillus culture is very materially diminished if the use of that extract—the bacilli having been separated—is preceded by creosote. It appears that creosote has a chemical effect upon the bacillary toxins. (6) The favorable effect of creosote in pulmonary tuberculosis appears traceable to: (*a*) a bactericidal effect of creosote against the bacilli which are associated with the tubercle bacillus—to wit, streptococci, pneumobacilli, etc.; (*b*) stimulation of the metabolism which increases and strengthens phagocytosis; (*c*) a chemical effect of the phenol group which leads to a neutralization of the toxins. The chemical action of creosote increases with the quantity. (7) Creosote is to be used only in non-cachectic tuberculous patients (first and second stages). It may be administered—(*a*) as a subcutaneous injection of creosote in olive oil, 1 to 15. Myrtol or eucalyptol may be added to the solution; (*b*) as a continuous inhalation, with six to ten grams of a thirty-three-per-cent. alcoholic mixture; (*c*) by mouth, during meals, either in oily solutions or in milk as an emulsion, in increasing doses, beginning with forty drops and reaching three hundred drops.

A New Method of Abdominal Hysterectomy.—Dr. Elmer G. Myers (*Cleveland Medical Gazette*, November, 1898) describes this new method as follows: The abdomen is opened in the usual manner, the incision being extended perhaps a little lower than is usually required. The incision should be large enough to admit freely the fundus of the uterus when drawn into the wound. The fundus is grasped by a strong volsella forceps and strong traction is made by an assistant; with small blunt scissors curved on the flat, two curved incisions are made extending almost entirely across the fundus, one anterior to and the other posterior to the grasp of the volsella. These incisions should be carefully carried through the peritoneum and cellular tissues down to the solid uterine structure. By blunt dissection and occasional snips of the scissors, the peritoneum, cellular tissues with blood-vessels can be readily and quickly reflected, anteriorly, posteriorly, and laterally. The attachment of the round ligament and Fallopian tubes must be severed with the scissors. At about this point in the operation by applying at equal distance apart four or more medium-sized clamps to the reflected flaps, and by grasping them one after the other, the field of operation is always in view and the work much facilitated. The dissection is continued in like manner down to the cervix, which can either be removed or allowed to remain, according to the preference of the operator. Personally I prefer to remove it. If at this time traction is made on the four forceps and the volsella, the flaps will form a funnel with the uterine mass in the centre and the cervix plugging up the bottom. When the cervix is to be removed, dissection is simply continued, and the same is severed with the scissors at the junction of the cervical canal and the vaginal mucous membrane, and the mass is entirely free. This inverts the cervical portion of the vagina, and instead of shortening, greatly lengthens it. In this operation, by keeping very close to the uterine mass, all blood-vessels of any size are avoided, and the only blood contended with is moderate oozing. Thus far the work has been practically extra-peritoneal, the flaps serving to protect the omentum and bowels. If the ovaries and tubes are diseased, they may now be easily removed; otherwise they are allowed to remain, and the operation is finished as follows: With a large needle, in holder, threaded with a long silk or catgut suture the flaps are transfixed a number of times, to reduce the mass into the form of plaits; by this continuous suture the flaps form a bridge over the floor of the pelvis, which is perfectly smooth, lessening the chances of vaginal hernia, or prolapse. The abdomen is closed in the usual way.

Movable Kidney versus Distended Gall-Bladder.—Movable kidney has many points of resemblance to a distended gall-bladder. These points are summarized by Morris as follows: "1. One may be felt in the loin or in the right hypochondrium. 2. Either tumor may be capable of being pushed back into the loin or over to the left of the median line. 3. In both cases the tumor is more or less firm, elastic, and smooth—either being tender or not at all so. 4. In either case it may be round or oval or shaped like an egg, a pear, an orange, or a sausage. 5. Each may present a smooth, firm, and rounded projection in its surface—in the case of the kidney due to a cyst beneath the front of the capsule; in the case of the gall-bladder in a pouch in its anterior wall. 6. Both may have either a resonant or a dull note on percussion in front. 7. Both may give rise to various dyspeptic symptoms—nausea, flatulence, and constipation. 8. Either may give rise to paroxysmal attacks of severe colic, the maximum intensity of which is referred to the situation below the ribs on the right side of the abdomen. In enlarged gall-bladder these attacks are due to the sudden impaction of the gall-stone in the cystic duct; in movable kidney, to kinking or rotation of the ureter or the renal vessels. 9. Either may give rise to jaundice, gastric and intestinal catarrh. 10. With either there may be considerable displacement of the colon and small intestine, or adhesions and matting together of the intestines and omentum in front of the intestines may occur. 11. In neither case does the condition of the urine help us, as there may be albumin with distended gall-bladder or bile in case of movable kidney."

These statements are rather discouraging, and yet a careful investigation will usually lead us to a correct conclusion. The following points will help us: 1. The gall-bladder, if enlarged, is inclined to grow in the direction of the umbilicus, and on careful palpation it can be traced to its connection with the liver. Tracing it up to the liver and holding two fingers of the left hand on this point, move the lower end of the tumor with the right. The point at the junction with the liver is a fixed point, while the rest of the tumor moves as a pendulum. 2. On deep inspiration the tumor moves downward with the liver and rises with expiration. 3. Jaundice, either attending or following paroxysmal attacks of pain, is very strong evidence of gall-stones. 4. While the sudden diminution of the size of the tumor may occur in either case, we may consider it positive evidence that the tumor is a kidney if the decrease in size is attended with a sudden and copious flow of urine, or that it is a gall-bladder if the stool, previously clay-colored, suddenly shows an excess of bile. 5. A gall-bladder filled with calculi is much harder than a movable kidney. It is more tender, and in rare instances a grating of the stones can be felt by palpation.— DR. J. W. MACDONALD, "A Clinical Text-book of Surgical Diagnosis and Treatment," page 301.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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"EMBALMED" BEEF AS AN ARMY RATION.

THE recent developments concerning the furnishing of "embalmed" beef as an army ration adds another scandal to the management of our army during the late war. In some respects it is a repetition of the old story of fraud in the food supply of all armies when hastily put in the field, when speculation in big contracts is rife and when jobbers in the shape of huge trusts practically control the output. It is, in fact, one of the penalties of going to war without calculating the ultimate and inevitable results which, for want of preparations for emergencies, may befall the poor soldier at the extreme end of the line. The only fortunate thing is the fact that the struggle was short, and that the sufferings of the poor men for want of proper care in medicines and food were proportionately curtailed. From the quartermaster's standpoint the meat problem was one which was most to be considered, inasmuch as such food had to be shipped to long distances, purchased in job lots, and kept fresh in a warm climate. While it must be readily admitted that there were many difficulties in the way of solving these questions, the transportation of beef on the hoof, which would have fulfilled all necessary conditions, was for some unknown reason not attempted. Refrigeration, which would have been excellent in its way, was impracticable for the reason that, when the frozen product was unpacked and transported to distant points of the field, decomposition would set in with remarkable rapidity. Canned goods, which appeared to be the only ones for proper preservation, were so imperfectly prepared that when unpacked they were found in most instances to be far advanced in rottenness.

Worse than all, however, was the unwarrantable experiment of adding chemicals in the shape of boracic and salicylic acids to prevent decomposition. The overwhelming testimony of such as used the "embalmed" beef is to the effect that it was offensive to sight, smell, and taste, was to the last degree unappetizing and unwholesome, and that in very many instances it produced much of the digestive troubles which so largely prevailed among the soldiers.

This latter state of affairs can be easily explained by the ingestion of the toxins of decomposing animal food on the one hand, and the constant admixture of chemical products with the food in question on the other. As there is no proof to show that boracic and salicylic acids are absolute preservatives, it is fair to presume that the "embalmed" beef was not only more or less decomposed but was artificially "doctored" besides. Thus the two conditions were combined to make the men sick.

Aside from the reprehensible practice of adding chemicals of any kind to food, there is a positive danger in so doing, in slowly poisoning the unsuspecting victim. Theoretically we may assume that either of the acids mentioned may not be used in sufficient quantities in any given case to produce immediately deleterious effects, but practically we must conclude that their continued use must be necessarily fraught with harm in interfering with digestion, in arresting proper nutriment, in complicating secretion, and eventually in irritating the entire intestinal tract. Boracic and salicylic acids are no component parts of the system, and are neither needed nor tolerated as distinct food requisites. Besides we know that under certain circumstances they are distinctly poisonous in their actions. Deaths have occurred from overdoses of both these drugs, and why should not smaller quantities, long continued, have a like effect? The contractors are willing, however, to inflict these risks on the mere reports of some analytical chemists who are seemingly paid in advance for favorable opinions regarding the actual healthfulness of these abominable adulterations. The chemist, expert as he may be in processes of analysis, is not a proper judge of the physiological action of drugs. The clinician is the only one who can determine such points. It is the difference between theory and practice in the forming of the proper conclusions. Doubtless when the reports are made by the surgeons who have had charge of the victimized men, it can be more properly determined what real harm this "embalmed" beef has occasioned. In any event a proper public sentiment will be created against the general principle of adulteration, by facts which will be brought out in the impending investigation. Morally and scientifically any form of food adulteration is always wrong, and the sooner the guilty jobbers can learn this, the better.

SANITATION OF PUBLIC LIBRARIES.

IN the MEDICAL RECORD of a few weeks ago the question of the imperfect condition of hygiene existing in many places of amusement and in some churches was briefly considered. The shortcomings of theatres in this respect has long been notorious, and has latterly been made a theme of discussion on both sides of the Atlantic. But there is yet another class of institution, more continually in use, and almost as largely frequented as theatres or churches, to which in many instances attention might with justice be drawn for precisely identical reasons. We refer to public libraries. Libraries are probably, in the opinion of the majority of thinking persons, a necessity in a more emphatic sense of the word than theatres, and even if it were asserted that they may be classed on the same plane as churches in their power of doing good, no

vehement exception would be taken to the statement. The controllers of these institutions—founded and maintained by State, municipal, or private munificence for the elevation and instruction of the well-to-do and poor alike—should therefore be doubly careful to make sure that their visitors, in the endeavor to improve the mind, should be exposed to as little risk as possible of injury to health. Further than this, many of the free libraries are pre-eminently the poor man's resort and the home of refuge from the inclemency of the weather of those unfortunate waifs and strays who, such a haven lacking, would be compelled to walk the streets. The fact is well known that many of the large libraries here and in other countries, while to our eyes seeming architecturally perfect, are in reality sadly deficient in all matters pertaining to proper sanitation. A Chicago journal—according to the *American Architect and Building News*—referring some time ago to the large public library in that city, said: "Because of the heat in the building due to poor ventilation, visitors at the public library are few in these days. The library board is trying to devise means to ventilate the building." Doubtless a similar state of things prevails in numerous other cities. However, our few criticisms will be reserved for the libraries of New York City—indeed, for those two which have the largest number of visitors, the Astor and Cooper Union reading-room. The Astor is certainly defective as to ventilation, and it is also whispered that its sanitary arrangements are not all that could be desired. Its only means of ventilation is by windows, a manifestly primitive system. But in the reading-room at Cooper Union the arrangements for the health and comfort of its visitors are infinitely worse. Here in the winter are gathered together a company filling the room from eight in the morning till ten at night, mainly composed of the very poor. The proximity of these occupants naturally produces much animal heat, and the problem to be solved is rather one of cooling than of warming the air. The system needed is one that maintains an equable temperature all the time, and not, as is commonly the case, which provides a healthy atmosphere at the beginning of the day, but gradually fails to maintain this satisfactory standard. Assuredly, merely opening the windows will produce no such result. In a room in which are congregated for a period of fourteen hours at a stretch persons in many of whom cleanliness is not a strong feature, it would seem that the methods of sanitation in vogue should be the best obtainable under the circumstances. There are, however, few buildings provided with sufficient means of ventilation. Probably the increased cost is the reason for this, but surely in the construction of public buildings of a rich city the health of its inhabitants should be one of the chief objects striven for. Most of the catarrhs, sore throats, and other forms of colds are contracted from the want of proper ventilation. It is possible to catch as bad a cold in a close, ill-ventilated room as in a cold, draughty one. Pure air is the surest preventive of cold, as of many other diseases. That there is in New York no library building commensurate in size and suitable in location to the needs of the citizens and worthy of the wealth and culture of the second largest and richest city of the world, must be regarded as a public misfortune. In the course of time, doubtless, this reproach will be removed, but it may be observed that in the plans selected for the new library building no mention is made as to the arrangements provided for heating, ventilation, and sanitation generally. Nevertheless, there should be small cause for fear that the lessons taught by the experience gained in the designing of buildings for a similar purpose will in this instance not be forgotten.

THE PHYSICAL BASIS OF THOUGHT.

It is beyond controversy that the basis of the phenomenon which we call thought depends upon the activities of certain cells or groups of cells more or less correlated. The most typical of these cells are situated in the cerebral cortex, and their vitality and functionating power are maintained by the circulation of normal blood in a normal way through the capillaries of the cortex. Physiologically we judge a cell by what it does or by what it produces. For example, if we take a liver cell, we know that one of its functions is to produce bile, and we know that alterations in the quality or quantity of the blood circulating in the liver cause changes in the physiological activities of such a hepatic cell. Thought is a manifestation of the combined and co-ordinated action of certain groups of cortical nerve cells, and the more complex the thought, or the more varied its manifestations, the greater will be the number of cortical cells required for its development. We must, however, recognize the fact that the fundamental source of activity is the cell in the cortex, and that this activity is normal as long as the cell gets its proper nutriment—proper as to amount and chemical ingredients. When we seek, in the case of the hepatic cell, an explanation of why it secretes, we at once think of the blood as the means of supplying the proper substances to keep the cell in normal condition, and in the case of the brain cell there is no reason that we should not consider the matter in the same way. Because the product of certain cells in the brain happens to be psychical and intangible, we need not look for a metaphysical cause or necessarily metaphysical qualities in the cell. Memory, reason, and will are only very complex manifestations by large numbers of these brain cells, and these brain cells are kept functionating normally by the normal chemical or physio-chemical condition of the blood, not by any spiritual endowment of the cells. It is an undoubted fact that many animals—the anthropoid apes, for example—have cortical cells much like those in man, and that they exhibit the same kinds of activities as are seen in man, but to an enormously less degree, or, as we often say, of a much lower order. Man is very ready to claim for himself psychical qualities which transcend anything seen in the highest apes, and, of course, justifiedly, but he should not forget that the difference is only one of degree. All the enormously extensive and complex mental activities of civilized man are built up from

foundations which are wonderfully like those manifestations of instinct and reasoning power which the anthropoid apes exhibit, as far as we are able to judge by observations still incomplete; and, unless we are willing to admit that in the gorilla, for instance, there are evidences of a certain amount of "spiritual" life, we would better not claim too strenuously that our own cortical activities depend upon anything but the action of nerve cells whose function is maintained merely by the physio-chemical quality of the blood supplying them with nourishment. If we admit that the basis of thought is physical or physio-chemical, depending upon the circulation, we must also see that the growth, development, and reproduction of these same cortical cells depend upon the same factor; and if the inquiring mind goes a little further, it is pretty apt to get into a discussion in which one side will intrench itself behind the bulwark of "I believe." The study of dreams, delirium, various forms of mania, and hypnotic phenomena certainly substantiates the view that mental activities rest upon a physical or a physio-chemical basis; but a protracted discussion of such a subject soon causes attempts to define terms like "mind" and "soul," and then there is disagreement. The more positively a man defines one of these terms, the less deeply he has probably thought upon the subject.

News of the Week.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending January 28, 1899. January 20th.—Medical Inspector D. Dickinson detached from the *Philadelphia* and from duty as fleet surgeon of the Pacific station. January 21st.—Assistant Surgeon G. F. Freeman detached from the *Arethusa* and ordered to temporary duty on the *Vermont*. January 24th.—Surgeon H. G. Beyer detached from the *Amphitrite* and ordered to the *Wabash*, January 7th; Surgeon J. M. Edgar detached from the *Cincinnati* and ordered to the *Richmond;* Assistant Surgeon R. K. McClanahan detached from the *Southery*, when put out of commission, and ordered to the *Richmond;* Surgeon H. L. Law, retired, detached from the *Wabash* and ordered home; Assistant Surgeon J. G. Field, retired, detached from the *Richmond* and ordered home. January 25th.—Assistant Surgeon Edward G. Parker, appointed January 10, 1899; Passed Assistant Surgeon L. L. von Wedekind detached from the Naval Academy and ordered to the Asiatic station *via* the *Solace;* Assistant Surgeon G. N. Angeny detached from the naval hospital, Chelsea, Mass., and ordered to the *Indiana;* Assistant Surgeon R. C. Holcomb, order of January 19th, detaching from the Naval Academy and ordering to the Washington navy yard, revoked; Assistant Surgeon H. A. Dunn detached from the *Cincinnati*, when put out of commission, and ordered to the naval hospital, Chelsea, Mass.; Surgeon J. W. Ross, retired, ordered to report to the war department for duty in connection with one of the hospitals to be established at Havana, Cuba. January 26th.—Medical Director C. J. Cleborne detached from duty in charge of the naval hospital, Norfolk, Va., and ordered to the naval hospital, Philadelphia, Pa.; Medical Inspector N. M. Ferebee ordered to the naval hospital, Norfolk, Va.; Surgeon D. N. Bertolette detached from the *Vermont* and ordered to duty as member of the medical examining board, Washington, D. C.; Surgeon L. W. Curtis ordered to the *Vermont;* Medical Director G. H. Cooke, retired, detached from naval hospital, Philadelphia, Pa., and ordered home; Medical Director D. McMurtrie, retired, detached from duty as president of the medical examining board, Washington, D. C., and ordered home.

The Health of the Pope.—The newspaper correspondents in Rome are kept busy now cabling conflicting reports of the health of the Pope. Dr. Lapponi, the Pope's physician, is reported, however, as saying that the constitution of his Holiness is the strongest he has ever known, and predicts that the Pope will live to see the twentieth century.

The Pulmonary Circulation in Its Bearing upon the Phenomena of Pneumonia.—Dr. Andrew H. Smith, of this city, in various discussions on the symptoms of pneumonia, has stated that "the lung differs from all other structures in having two separate circulations—the nutritive, supplied by the left side of the heart through the bronchial arteries; and the functional, supplied by the right side of the heart through the pulmonary artery. This double circulation underlies all the phenomena of pneumonia, and must be recognized in any definition of the disease, as without it the disease itself could not exist."

The Toner Library Destroyed.—A fire in Johnstown, Pa., on January 25th, burned up the library of the late Dr. J. M. Toner, of Washington. It contained more than seven thousand volumes of medical and other scientific works, including many first editions and old works of the eighteenth century. It contained portraits of two hundred and fifty of the leading scientific authorities, some of them rare; also a file of the records of Congress from the first session to 1890, and one of the chairs used in the House of the First Congress.

Banquet in Honor of Surgeon-General George M. Sternberg.—The Savannah Medical Society gave a banquet at the De Soto on Wednesday night, January 4th, in honor of Dr. George M. Sternberg, surgeon-general of the United States army. The dining-room was handsomely decorated and the menu was a perfect one. Besides General Sternberg, the guests of the society were Major Arthur, of the hospital ship *Missouri*, Captain McHarg, Captain Munson, and Major Pilcher. The members of the Medical Society present were Drs. J. Lawton Hiers, J. W. Daniel, W. E. Fitch, M. X. Corbin, Ralston Lattimore, and St. J. B. Graham. Dr. Hiers presided at the head of the table. Dr. Graham formally welcomed and introduced General Sternberg, who responded to the toast, "The

Medical Department of the United States Army." General Sternberg was followed by Major Pilcher, Major Arthur, and Captains McHarg and Munson.—*Georgia Journal of Medicine and Surgery.*

A Government Investigation of Alcohol. — An amendment to the agricultural department appropriation bill, which is pending in the senate, provides for an additional appropriation of $5,000, "to enable the secretary of agriculture to investigate and report upon the physiological action and nutritive values of alcohol and alcoholic beverages."

The King of Sweden Dying with Bright's Disease.—It is announced that King Oscar of Sweden is suffering from Bright's disease in a particularly acute form, and has been obliged to hand over the reins of government to his eldest son, the Crown Prince Gustavus. King Oscar, it is feared, will never be able to undertake again the duties of reigning.

The Protection of Our Troops in the Tropics.—Lieut.-Col. R. M. O'Reilly, the surgeon sent recently to Jamaica to study the methods employed there for the protection of the British troops from disease and the deleterious effects of the climate, has made a report to Surgeon-General Sternberg, embodying the following recommendations: 1. The troops for service in Cuba should, as far as possible, be recruited in the Southern States, and a large proportion of these troops should be colored, with white officers. They should be thoroughly protected against smallpox before embarking for the island. 2. They should be sent there very shortly after the close of the rainy season, say at some time in November. 3. They should be quartered in barracks, the dormitories of which are raised above the ground, the ground underneath which is cemented, and most liberal ventilation afforded. All underbrush within practicable distance should be removed. The earth-closet system should be used in preference to cesspools, and the excreta removed by contract. The kitchens should be detached and protected against infection. Mosquito bars should be furnished. Abundant water-supply should be provided, and all drinking-water should be filtered or boiled. Each man should be allowed a minimum of seventy-five feet superficial and six hundred cubic feet of air space. Bathing facilities should be provided, and their use made compulsory. Drainage should be carefully provided for. Amusements, games, and athletic sports should be provided for the men. 4. Clothing. Although there are objections to the khakie, the testimony is generally favorable to its use, and it is therefore recommended, but the blue flannel shirts and light flannel drawers should always be worn. Light cork helmets, made so as to shade the back of the neck, should be issued. Waterproof overcoats should be provided in limited numbers for use of the necessary guard and orderlies during the rainy season. The other articles of our clothing fulfil the requirements. 5. No improvement on the present ration can be suggested. If it errs at all, it errs on the side of too great liberality. Post troops should be saved from all exposure at night and in the early morning, and no one should be called on for any duty at night or early in the morning without being given at least a cup of coffee. 6. Rigid discipline should be enforced, communication with the towns should be reduced to a minimum, and every means used to impress upon officers and men the fact that indulgence in spirituous liquors and excesses of any kind are exceptionally dangerous.

The Ameer of Afghanistan, Abdurrahman, is reported to be in a very bad state of health, and it is believed that his death may take place at any time.

Sterilized Milk at the Infants' Hospital. — The department of public charities publishes the following comparative statistics of the cases of illness at the Infants' Hospital on Randall's Island, for the years 1897 and 1898: Number treated in 1898, 1,284; in 1897, 1,179; number of deaths in 1898, 255; in 1897. 254; percentage of deaths in 1898, 19.86; in 1897. 44.44. In a letter to Mr. Nathan Straus, the superintendent of the hospital attributes the lessened mortality to the use of sterilized milk prepared in the sterilizing plant erected in the hospital through the liberality of Mr. Straus.

Antivivisection Tales.—The annual meeting of the American Antivivisection Society was held in Philadelphia last week, and the usual batch of misstatements was served up for the delectation of all the old ladies and cranks present. One of the speakers, a physician, made the incredible assertion that he had personally witnessed the inoculation of forty patients at the Vienna General Hospital with the germs of syphilis, for the purpose of studying the initial lesion. He said the patients were from the peasantry. The speaker was flatly contradicted by other medical men who had studied medicine in Vienna, and who denied that such a thing could occur there or in any other medical school or hospital.

An Isolation Hospital in Orange, N. J.—The plans for a proposed isolation hospital for the treatment of contagious diseases were adopted at a recent meeting of the joint committee of the Oranges, which for a year past has been in charge of the scheme. The committee is made up of representatives of Orange, East Orange, West Orange, and South Orange. It is the intention to have the hospital a general one for each of these communities, service to be free to those who are unable to pay for it and who have not the proper means for isolation at their homes. There will be private rooms also, and each patient may be treated by his own family physician. The plans call for a two-story building, accommodating twenty-two patients in the wards and eight in private rooms. The estimated cost of the hospital is $15,000, and a suitable site has already been selected.

Protecting against Yellow Fever.— The Marine Hospital service, which will have charge of quarantine in Cuba and Porto Rico, will provide for the fumigation and disinfection of vessels when leaving the ports of these islands, instead of disinfecting them on their arrival in this country. Dr. Carter said that there is

a barge and a good deal of machinery at Santiago de Cuba, and a plant will be constructed there. A contract has been given for a big plant at Havana. This plant will arrive in Havana, according to contract, on March 1st. The plant spoken of is one of the largest ever constructed, and is most modern and complete.

A Petition against Dr. Zertucha.—All the surgeons of the Cuban army have presented a petition to the general assembly, praying that Dr. Maximo Zertucha, who is believed to have led General Maceo to the ambush where he was killed, shall be forbidden to practise his profession in Cuba. They say that if he is permitted to practise medicine on the island, they will resign.

The Kansas City Academy of Medicine.—The annual election of officers of the Kansas City Academy of Medicine was held on January 7, 1899, which resulted as follows: *President*, Dr. Hal Foster; *Vice-President*, Dr. J. W. Kyger; *Censor*, Dr. J. H. Austin; *Secretary*, Dr. R. J. Brown; *Treasurer*, Dr. C. Lester Hall. The annual banquet will be held on February 7th. Dr. J. M. Mathews, of Louisville, Ky., president of the American Medical Association, will be the guest of honor. The banquet committee consists of Drs. A. H. Cordier, R. J. Brown, and J. H. Austin.

The Bertillon System in Havana.—An order has been published in Havana, providing that on and after February 1st the Bertillon system for the identification of criminals shall be used there, and all persons arrested are to be measured at police headquarters.

Smallpox in Porto Rico.—The Red Cross agent at Ponce reports that an epidemic of confluent smallpox is prevailing at Ponce. An isolation camp has been established outside of the city. The number of cases known to the authorities the latter part of January was one hundred and thirty, all among the native population.

The Bible Too Dirty to Kiss. — Magistrate Pool, of this city, believes in protecting the witnesses in his court from loathsome disease, as far as he can, and as a beginning has had the Bible removed. The book was old, greasy, and filthy from contact with the lips and dirty hands of prisoners and witnesses. The magistrate says there is no law compelling one to kiss the Bible when making an oath, and he will hereafter have witnesses sworn by raising the hand.

Obituary.

CHARLES FAYETTE TAYLOR, M.D.,

NEW YORK.

Dr. Charles Fayette Taylor, of this city, died of the influenza on Wednesday, January 25th, at Los Angeles, Cal. He had been an invalid for a number of years, and had spent the greater part of that time in California. He was born in Williston, Vt., on April 25, 1827, and was therefore within three months of seventy-two years of age. He was graduated in medicine from the University of Vermont in the class of 1856. He began practice, soon after graduation, in this city, but almost immediately went abroad to study the new therapeutic measure known as the Swedish movement cure, his instructor in the art being Mr. Roth, a pupil of Ling. Upon returning to this country he turned his attention especially to orthopedic surgery, and, being a pioneer of that specialty in America, did perhaps more than any other at the time to open the eyes of medical men to the fact that there is much to be done for the relief of acute deformities. In 1866 he called the attention of Howard Potter, James Brown, Mr. Roosevelt, and others to the need of a place where crippled poor could receive attention and treatment. As a result, the New York Orthopedic Dispensary and Hospital was founded. The dispensary was first located on Broadway near Thirty-sixth Street, but the institution was subsequently moved to East Fifty-ninth Street, where it now is.

Dr. Taylor was a corresponding member of the Imperial Vienna Medical Society, a charter member of the American Orthopedic Association, fellow of the New York Academy of Medicine, a member of the New York County Medical Society, and a fellow of the American Geographical Society. He was the author of numerous works on orthopedic surgery, and an inventor of many orthopedic appliances, among them the Taylor splint for hip disease. He received medals and diplomas at the Paris Exposition in 1867, the Vienna Exposition of 1873, and the Centennial in Philadelphia, for his devices for the treatment of cripples. He leaves a widow, three daughters, and one son, Dr. Henry Ling Taylor, of this city. In compliance with his wish, his remains were cremated at Los Angeles.

Dr. Kenneth F. Maclennan, of this city, died suddenly on January 29th at the home of one of his patients, whom he was visiting professionally. He was graduated at the University of Glasgow in 1867, and came to this country a couple of years later. The cause of his death was cerebral apoplexy.

Society Reports.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-Third Annual Meeting, Held in the City Hall, Albany, January 31 and February 1 and 2, 1899.

John O. Roe, M.D., of Rochester, President.

First Day—Tuesday, January 31st.

The meeting was called to order by the president, Dr. John O. Roe, of Rochester, at 9:40 A.M., and the exercises were opened with prayer by the Rev. Mr. Sylvester. At the beginning of the session there were about eighty persons in attendance.

Inaugural Address.—The President delivered his inaugural address. He called attention to the very prosperous condition of the society, as shown by its very full programme for this meeting, and by the fact that at present the membership amounted to seven hundred and eight. On the subject of medical education, the statement was made that this State contained eleven different undergraduate medical schools, two of which were homœopathic and one eclectic. From the schools in this State there were graduated last year 621 regular, 27 homœopathic, and 16 eclectic physicians. The majority of these schools had already adopted a four years' course. The total number of

volumes in the medical libraries of the State was 138,110, and 50,000 of these were to be found in a single library—that of the New York Academy of Medicine.

State Medical Examinations.—There have been 869 applications to the State examining-board for licenses to practise medicine, of which number 36 were before the homœopathic and 24 before the eclectic board.

Medical Legislation.—Under this topic, the speaker alluded to the bill, recently formulated and presented to the legislature, having for its object the control of dispensaries. He characterized it as the best that had yet been prepared, for the reason that it gave the medical profession equal representation with the laity in their chartering and management. Regarding the licensing of midwives, it was recommended that this important but much-vexed question should be placed entirely under the control of the State board of medical examiners. The inconsistency of the antivivisectionists was well shown by the alacrity with which they turned from attempts to legislate against vivisection to their cruel sports with rod and gun. Regarding the adulteration of food, which is said to have reached such large proportions in the United States as to represent a sum of $700,000,000 annually, the speaker called attention to the fact that two bills, known as the Faulkner and Brosius bills respectively, were before the legislature. He urged that the national and State organizations should make a systematic effort to co-operate with the committee of the national pure food and drug congress in the furtherance of such legislation. It was true that many adulterations of food were harmless, except in the matter of the fraud perpetrated, but there were others that were far from innocent. This was particularly true regarding the adulteration of many important drugs. It was rather singular that only one food product, *i.e.*, butter, was protected from adulteration by an efficient law.

By-Laws of the New York County Society.—The committee on by-laws of the State society—consisting of Dr. H. D. Wey, of Elmira; Dr. Nathan Jacobson, of Syracuse; and Dr. F. C. Curtis, of Albany—reported that it had examined the amended by-laws of the Medical Society of the County of New York, and approved the same, with one exception—*i.e.*, article i., chapter vii., dealing with the matter of instructing their delegates to the State society. The committee questioned the right of any county society to punish its delegates in the degree of expulsion for failure to follow specific instructions. It was declared that this report of the committee carried with it nothing mandatory, but was merely an expression of opinion.

Dr. D. B. St. John Roosa moved that the county society be requested to modify its by-laws in consonance with the opinion just expressed by the committee on by-laws of the State society. In making this motion, he took occasion to show that this was entirely within the established precedents of the State society, and that delegates were free agents and could not be disciplined for acting as such in accordance with the dictates of conscience.

Dr. F. R. Sturgis contended that such action as was contemplated in this motion was entirely outside of the function of the State society, and protested emphatically against this interference of a central body with the autonomy of the constituent societies. The proposed interference, he said, seemed particularly wanton, in view of the fact that the by-laws under discussion had been passed by a large majority present at a well-attended meeting of the society, and that the instruction of delegates, so strenuously opposed by the minority, involved no coercion whatever.

Dr. Frank Van Fleet endeavored to show, by well-known examples in history, that delegates could not properly be required to obey specific instructions regardless of individual judgment and conscience, and he stoutly maintained that the first duty of the delegates was to the State society and afterward to the county societies which they represent.

The motion under discussion was then carried with but little opposition.

State Board of Medical Examiners.—Dr. M. J. Lewi, of New York, presented the report of this committee. It stated that of the 809 applicants before the board, representing the State society, 29.9 per cent. were refused. The rejections by topics were: anatomy, 55; physiology and hygiene, 41; chemistry, 67; surgery, 54; obstetrics, 62; pathology and diagnosis, 68; therapeutics, practice, and materia medica, 78. Among the New York graduates there was one rejected paper for every three students. It was evident that these schools graduated better qualified men than other similar institutions in the United States. It had been decided to hold hereafter only four examinations each year instead of five. The faculties of the various medical schools had been asked to furnish thirty questions, on every branch taught in these schools, for the use of the question committee. It had been proposed to alter the plan of examination somewhat—viz., separating pathology and diagnosis, divorcing medical practice from materia medica and therapeutics, and grouping on one sheet questions on chemistry and hygiene.

Committee on Hygiene.—Dr. Henry R. Hopkins, of Buffalo, read the report of this committee. He said that of the total number of deaths there were 12,370 from accidents or old age. There were 19,510 deaths from diseases universally conceded to be communicable. To these should be added 13,257 deaths from pulmonary tuberculosis, a disease known by physicians to be communicable. Additions from other diseases, probably communicable, brought up the total to 49,875 deaths. This large number, then, represented the deaths from diseases which were in all probability communicable, and therefore preventable. The report also dealt with the desirability of reducing to a minimum the many street noises which so racked the nervous organizations of the dwellers in cities. The committee also indorsed the good work done in Buffalo in the way of improving the condition of bottle-fed children, and the bill now before the legislature, having for its object the establishment of a State hospital for the treatment of incipient pulmonary tuberculosis.

Committee on Legislation.—Dr. Frank Van Fleet presented this report. The report stated that more than forty bills bearing on medical matters had been presented to the last legislature, none, however, at the instigation of the State society. Among the bills which the committee was instrumental in defeating were the Sullivan dispensary bill, the bill for regulating the practice of osteopathy, the antivaccination bill, and bills regarding premature burial and the regulation of the practice of midwifery.

Fracture of the Cervical Vertebræ.—Dr. Chauncey P. Biggs, of Ithaca, reported a case of this kind, and exhibited the specimen. The patient, a man of seventy-five years, was injured by being thrown backward out of a wagon and striking on his head. Two surgeons diagnosticated fracture between the sixth and seventh cervical vertebræ, with dislocation forward of the upper fragment. The specimen presented showed that, while the direction of the canal was changed, it was not obliterated, and the injury to the cord resulted from a spicule of bone from the arch of the fifth vertebra penetrating it. The deformity found in the pharynx was due to the crushing of the body of the fifth vertebra, and not to dislocation and pressing forward of the upper portion. The prominence was situated

below and not above the injury. The fracture of the fifth vertebra probably resulted from a blow on the head, as the latter was thrown forward, while the fracture of the sixth vertebra was apparently produced by a blow on the back of the neck. Neither of the attending surgeons considered operation justifiable, but probably this opinion was largely based on the erroneous diagnosis. The clear mental condition, the subnormal temperature, and the freedom of the genito-urinary organs from infection were prominent features of the case. The only muscles below the point of injury that were not completely paralyzed were the flexors of the arm and the diaphragm. The persistent and marked subnormal temperature interfered very seriously with the efforts made to prevent the formation of bedsores. At times the body temperature sank as low as 95° F. Death resulted from inanition and exhaustion.

Dr. Edward B. Angell said that one lesson to be learned from the case was the importance of paying attention to the physiological rather than the anatomical diagnosis. When there was hemorrhage into the spinal canal, the reflexes would often be present at the outset and would disappear subsequently.

Dr. A. M. Phelps said that the do-nothing plan of treatment for these cases was apt to be disastrous, and, if his own vertebræ were fractured, he would rather take his chances with the surgeon's knife than with the bed-pan and paralysis.

Dr. Mynter, of Buffalo, while agreeing that these cases should be operated upon, was forced to admit that such cases had not done well in his hands under this treatment. If the paralysis occurred immediately after injury, it would be found almost invariably that the cord had been injured. On the other hand, if the onset of the paralysis was delayed for half an hour or more after the injury, the cause might be a blood clot. If the hemorrhage was intradural, he thought the bed-pan treatment as good as that with the knife.

An Unusual Injury to the Kidney.—Dr. W. D. Garlock, of Little Falls, reported this case—one of injury received during a game of baseball. A severe blow was received on the left side between the eleventh and twelfth ribs, and when seen by Dr. Garlock, about three hours later, the patient was in a condition of shock, but no tumor or dulness could be detected. The patient had urinated twice since the injury, and admitted subsequently that the first urine was blood-stained. The next morning the urine was decidedly bloody, and there were tympanites, increasing abdominal tenderness, and dulness over the region of the left kidney. A few hours later abdominal section was performed by Dr. J. J. Kilbourne, of Utica. It was found that, in addition to some peritonitis and the presence of blood in the peritoneal cavity, there was a subperitoneal hæmatoma in the left kidney. Through a posterior incision, blood clots were removed, and then, finding the kidney extensively lacerated, this organ was extirpated. The patient died three hours after the operation, without regaining consciousness.

Dr. Mynter said that when the urine was bloody and there was an effusion of blood about the anus and scrotum, one could be pretty sure that the case was one of rupture of the kidney, no matter how great might be the meteorism present.

Formaldehyde Disinfection.—Dr. W. H. Park, of New York, read a paper on this subject, founded upon a long series of experiments that had been conducted by Dr. Guerard and himself at the laboratory of the New York board of health. He said that formaldehyde gas was exceedingly irritating, and was unstable in its chemical properties. It was usually manufactured in large quantities from methyl alcohol by allowing the vapor of this alcohol, mixed with air, to come in contact with red-hot platinum. For disinfecting purposes it was almost universally obtained from a forty-per-cent. solution of formaldehyde. It united with the nitrogenous products of decay, forming true chemical compounds which were odorless and sterile. Formaldehyde was comparatively non-toxic to the higher animals; nevertheless, caution should be exercised because of its irritating properties. Its destructive action on micro-organisms depended upon its concentration in the atmosphere, the length of the exposure, the temperature, the amount of moisture in the atmosphere, and the nature of the micro-organisms themselves. For purely surface disinfection, probably three ounces to each one thousand cubic feet of space would be sufficient; but for penetration through one layer of moderately thick fabric, at least three times this quantity of gas should be generated. In room disinfection, one can hardly hope to penetrate thick fabrics. The destructive action of formaldehyde on bacteria was much more efficient when the air was moist. In winter, if the rooms could not be warmed, at least double the usual quantity of formaldehyde gas should be generated. Heavy fabrics might be effectively disinfected by the use of vacuum apparatus in conjunction with the formaldehyde. For the ordinary surface disinfection of a room, twelve ounces of formalin would be required for every thousand cubic feet to be disinfected. It would be found most satisfactory to procure the gas from formalin or from solid paraform. The tablets were convenient for measurement and the apparatus was cheap and entirely reliable. In a recent method the formalin was mixed with glycerin, with the idea of making the formaldehyde more stable and more penetrating, but experience seemed to show that this admixture had but little value, and possessed the disadvantage of making it more difficult to remove the odor of the formaldehyde from the disinfected fabrics. Dwellings might be superficially disinfected by using one thousand pastils, or twelve ounces of formalin, to every one thousand cubic feet, the time of exposure being not less than four hours and the temperature of the room not lower than 50° F. Bedding, upholstery, and the like should be subjected to steam or to formaldehyde disinfection in special apparatus. Bedding, carpets, and clothing, which would be injured by steam, might be disinfected by formaldehyde gas, used in the ordinary steam chamber, provided with apparatus for producing a partial vacuum. The exposure should be for at least eight hours, and the quantity of gas ten times that employed for surface disinfection. Upholstery could be treated in this way or in still larger chambers. Furs, leather, or other articles liable to injury by hot air or steam were not affected injuriously by formaldehyde. By spreading out books, placing them on the shelves, and exposing them to the formaldehyde gas, they could be effectively disinfected. Cars, ambulances, and other vehicles could be readily disinfected by exposing them to this gas in a large chamber. In New York City sulphur was still used for disinfection, in the proportion of four pounds to one thousand cubic feet of space. Formaldehyde was, however, more effective and rapid, was less injurious to fabrics, and could be employed more easily and with less danger of fire. It cost from fifteen to thirty cents per thousand cubic feet for formaldehyde disinfection, as against eight or ten cents for sulphur disinfection.

Dr. Seymour, of Utica, said that the great fault of formaldehyde disinfection was the lack of penetration. Another drawback to its use was the lightness of the vapor. With this gas, as with sulphur disinfection, he believed the benefit observed was in great measure attributable to the subsequent free admission of fresh air and sunlight.

Dr. William G. Bissell, of Buffalo, said that the experiments conducted for the past two years under the

auspices of the health department of his city had yielded results corresponding rather closely with those given in Dr. Park's paper, with the exception that in their hands paraform and the various alcohol lamps had proved unreliable. He could not agree with the reader of the paper regarding the germicidal power of sulphur dioxide, unless this gas was combined with moisture.

DR. PARK, in closing the discussion, said that germs, when mixed with a little sputum, would often retain their virulence for weeks, in spite of the free access of sunlight and fresh air. Schering's apparatus had sometimes proved unreliable, because the formalin had been used without moisture and in the small quantities recommended by Schering.

The Dangers of the Long-Tube Nursing-Bottle.—DR. ERNEST WENDE, of Buffalo, proved by an instructive series of photomicrographs, coupled with bacteriological and chemical observations, that the long tubes of nursing-bottles, so long looked upon by physicians with suspicion, were really even worse than had been supposed. They were manufactured out of a very porous kind of rubber sheeting, and they were cemented at their longitudinal margins. The seams thus formed were found to be invariably imperfect, containing pits and sinuses which afforded excellent places for the lodgment of coagulated casein and for the breeding of bacteria. Of the many varieties of bacteria demonstrated to be present in nursing-tubes that had been in use, the lactic-acid bacillus predominated. The photomicrographs made it perfectly clear that it was impossible to cleanse such tubes.

DR. A. WALTER SUITER, of Herkimer, on the strength of this research, offered the following resolution, which was unanimously adopted:

"*Resolved*, That it is the sense of the Medical Society of the State of New York that all city and town health authorities and the county medical societies should further the enactment of laws, in their respective localities, having for their object the prohibition of the sale of the so-called long-tube nursing-bottle, which is a pernicious agent in spreading infantile disease."

The Transmission of Disease by the Use of Second-Hand Clothing.—DR. WILLIAM G. BISSELL, of Buffalo, presented a paper on this subject, which was based on experiments conducted by the health department of Buffalo. They had been suggested by the observation that tuberculosis was becoming unduly prevalent in a certain military organization. Portions of the pockets of a coat which had formerly been worn by a consumptive officer were macerated in distilled water, and the centrifugated sediments were used for a series of inoculation experiments. The latter showed plainly that the germs of tuberculosis were present in the garment and were still active.

DR. J. M. VAN COTT, of Brooklyn, and DR. H. R. HOPKINS, of Buffalo, spoke approvingly of the work embodied in the paper. Dr. Hopkins then introduced, and the society adopted, a resolution declaring that the society approved of the municipal control of dealers in second-hand clothing, and referring the question to its committee on legislation.

Intestinal Resection; Personal Experience.—DR. W. L. CUDDEBACK, of Port Jervis, read a paper with this title, in which he reported an interesting case coming under his observation. The important features of this case were: (1) A hernia, strangulated by constriction of the peritoneal covering, was returned *en masse* into the abdominal cavity unassisted; (2) the relief from strangulation lasted over twelve hours; (3) the rapidly developing collapse was relieved during the operation; (4) the resection of thirty inches of small intestine; (5) the completely successful use of the Murphy button; and, (6), the large increase in the weight of the patient during convalescence, indicating that the remaining portion of the intestine thoroughly assimilated the food.

DR. R. H. M. DAWBARN, of New York, criticised the common tendency to use the Murphy button for end-to-end anastomosis, in the face of the demonstrated danger of this device, and in spite of there being other and, in his opinion, safer methods. He also criticised the method of cleansing the peritoneal cavity, claiming that the surgeons of New York City, at least, were almost unanimous in preferring, in nearly all cases, the plan of wiping out this cavity.

The Close Relation between the Nasal and the Cranial Cavities, and between Nasal and Cranial Disease.—DR. WILLIAM C. KRAUS, of Buffalo, read this paper. Its object was to show the anatomical relation existing between the nose and the brain, and their relation not only in physiological but in pathological states. He looked upon the nasal passages as ventilators of the brain, and instanced the mental dulness commonly observed during the nasal obstruction resulting from an attack of acute rhinitis. He asserted that children should be taught the necessity of making the nasal toilet a part of the regular daily toilet. For this purpose, there was, perhaps, nothing better than small quantities of warm Dobell's solution, followed by the use of some bland oil.

The Importance of Early Examination and Treatment of Catarrhal Mouth-Breathing in the Public Schools.—DR. CLARENCE C. RICE, of New York, read this paper. He said that, according to his experience, in almost ninety per cent. of mouth-breathing children the condition was one of permanent nasal obstruction, very largely the result of more or less enlargement of the pharyngeal tonsil. This might exist independently of enlargement of the faucial tonsils. It required but a very slight degree of hypertrophy of the pharyngeal tonsil to give rise to decided obstruction to nasal respiration. When the post-nasal space was blocked, it was well to remember that nasal sprays did harm rather than good. He was in the habit of making the diagnosis with the aid of the post-nasal curette, but, as a matter of fact, it was often not a difficult task to make the diagnosis solely by exclusion. The normal pharyngeal vault was exceedingly slippery, and tissue could not be removed with the curette; but if the adenoids were enlarged, the curette would readily pull away the hypertrophied tissue. It was much easier to use a small curette than a large finger for exploring the post-nasal space in a struggling child. Permanent interference with the hearing often resulted from long continuance of adenoid hypertrophy. The remainder of the paper was devoted to a consideration of the probable danger arising from the daily association in schools of a large number of children having nasal discharges and various pathological states of the nasal passages and tonsils.

DR. ROBERT C. MYLES, of New York, discussed the anatomical points raised in the paper, and avowed his scepticism regarding the direct absorption of bacilli through the cribriform plate.

DR. WENDELL C. PHILLIPS, of New York, asserted that adenoid vegetations in the pharynx were by far the most potent cause of deafness in young children.

How to Treat Shock.—DR. R. H. M. DAWBARN, of New York, said that cases of shock might be divided into two classes: (1) those in which the cause partially abrogated the functions of the sympathetic nervous centres, and (2) those in which the cause partially abrogated the functions of the cerebro-spinal centres as well. Under the head of predisposing causes, fear should be mentioned as a potent factor. The increased shock resulting from local instead of general anæsthesia was dwelt upon and illustrated. The speaker said that in

connection with operations there were four causes of shock, viz.: (1) Loss of blood; (2) length of operation; (3) excessive anæsthesia; (4) loss of vital heat. Under the second head, it was suggested that it would sometimes be a great advantage to have the operation, so to speak, "parted in the middle." The chief object of the paper was to show, not how to treat shock, but how to prevent it. It was often desirable to administer strychnine for some days before a major operation, but the chief reliance of the surgeon should be in the free use of hot saline infusion. Since 1891 he had made use of this preventive treatment in his clinic, and claimed originality, not for the general plan of treatment, but for the use of these infusions at the right time and at the right temperature. In most cases it was preferable to select the median basilic vein. The infusion of plain water, without any sodium chloride, was a dangerous practice and would quickly cause death by rapid and wholesale disintegration of the blood corpuscles. It should be especially noted that the proper temperature for the saline solution was not about 100° F., as was commonly employed, but a temperature of 120° F., or as hot as could be borne by the hand.

Dr. Walter B. Chase, of Brooklyn, dwelt upon the prominent part played by fear as a factor in the production of shock, and upon the too common practice of unnecessarily prolonging the period of anæsthesia.

Dr. A. T. Bristow, of Brooklyn, said that the stimulation of the heart resulting from the infusion of saline solution at a temperature of 118° or 120° F. was very marked, and one need have no fear that this high temperature would injuriously affect the albumins of the blood.

Fever in Aseptic Surgery.—Dr. B. Farquhar Curtis, of New York, read this paper. He stated that fever might be due to inflammation or to certain results of the injury. In the latter case it was caused by broken-down tissue and blood clot in the wound, from which absorption of fibrin-ferment or nuclein took place. The absorption of nuclein produced certain changes in the urine, and also leucocytosis, which might be used clinically to determine the fact. A high temperature was frequently seen in severe shock after operation, because the classical picture of shock did not hold; the conditions of an operation were totally different from those of accidental injuries, an anæsthetic being given and warmth and stimulants being used as soon as the pulse weakened. Temperature charts, showing the course of fever after infection of an operative wound, after wounds without infection, and in pure shock, were exhibited. The speaker said that primary union might occur after slight infection, the tissues being able to resist the small number of bacteria. The temperature in absorption fever rose within twelve hours after the wound had been inflicted, while the temperature in cases of infected wounds of moderate severity did not rise so soon, and the fever often observed in cases of aseptic wounds must therefore be the result of some other cause than bacteria. Aseptic fever was also distinguished by a relatively low pulse rate and less constitutional disturbance. Practically, however, when a surgeon met many cases of aseptic fever he must be on his guard not to confuse the cases of slight infection with aseptic fever, and he should strive to render his methods more perfectly aseptic.

Dr. A. Vander Veer, of Albany, referred to a number of recent operative cases, occurring during the prevalence of the grippe, in which, in spite of apparently aseptic conditions, he had been worried by temperatures as high as 104° or 105° F. It was always a good sign, and particularly in cases of abdominal surgery, if the pulse did not rise with the temperature.

The Use of Streptococcus Antitoxin in Phlegmonous Inflammation, with a Report of Cases.—Dr. A. T. Bristow, of Brooklyn, read this paper. After a review of the history of the introduction into medicine of serum therapy, the author reported fourteen cases in which he had made use of streptococcus antitoxin. In the three cases of erysipelas the dose was 15 c.c. of Marmorek's serum. The author's conclusions were: (1) Cases of idiopathic erysipelas might be quickly terminated by the use of the serum, the initial dose being 10 c.c. Rarely more than two injections were required. (2) In phlegmonous inflammations the serum seemed to prevent extension of the process, but it had little effect on the results of pus retention; hence prompt drainage was always indicated.

Puerperal Insanity—A Cursory Review for the General Practitioner.—This paper was read by Dr. Carlos F. Macdonald, of New York. He stated that an analysis of sixty cases of puerperal insanity, by Clouston, had shown that about eighty per cent. of these cases occurred within one fortnight after delivery. Puerperal insanity was conveniently divided into three types, viz., mania, melancholia, and dementia. The latter was rare except as a terminal stage of the other two forms. About ninety per cent. of the cases of puerperal insanity assumed the maniacal type, and were of comparatively short duration, while the cases of melancholia lasted longer. Heredity was a most important predisposing cause. Other causes were: prolonged anxiety during pregnancy (especially among unmarried women); severe postpartum hemorrhage; the death of the child, and general ill health. Prominent among the exciting causes stood fright or shock, sometimes induced by the sight of a still-born child. Albuminuria was frequently associated with puerperal insanity, although, perhaps, not a direct cause. A not uncommon cause of puerperal insanity was sepsis.

Military Medicine and Surgery.—A general discussion of this topic had been arranged.

Cardiac Degeneration as Observed in the Soldiers of the Late War.—Dr. Henry A. Fairbairn, of Brooklyn, opened the discussion with this paper. He considered, in a general way, degeneration of the heart wall as it occurred during and after specific fevers. At St. John's Hospital he had had under observation 272 of the returned soldiers. They presented signs of infection, chiefly malarial. In 155 there was marked disturbance of the vascular system. Of these, only 3 presented well-marked signs of endocarditis. In 133 there were soft systolic murmurs heard at the apex and base of the heart, showing the degenerated state of the heart wall.

Hygienic Camps.—Dr. H. R. Hopkins, of Buffalo, presented this communication. He said that in the American war of 1861–65, 2,236,000 troops took the field with the northern army. Of this number, 44,240 were killed on the field, 34,006 died from their wounds, and 149,030 died from disease. In the late Spanish-American war 274,717 took the field. Of this number 293 were killed in battle, and 2,619 died from disease. In the civil war 856,214 died from camp diseases—diarrhœa, dysentery, and camp fevers. Since 1865, $2,327,525,237 had been disbursed by the United States Government for pensions. According to all experience, the loss of life was always far greater in the camps than in battle, but it should not be forgotten that since the Civil War great advances had been made in sanitary science. The first requisite for a camp was a clean soil. That abomination, the "camp sink," must be abolished. Forty gallons of good water should be brought to the camp daily for each soldier. A proper system of piping and sewerage for the regimental camp should not cost more than $1,000; the cost of supplying water would be about

$4,000; and the cost of laying concrete over such part of the camp as the kitchen and sinks, and so protecting the soil from infection, would be about $700. This gave a total cost of $5,700 for a proper sanitary camp for a full regiment. It should be remembered that larger sums of money were expended in the navy for sanitary appliances. Thus the ventilating apparatus alone for the *Oregon* cost between $30,000 and $50,000.

Dr. Vander Veer, of Albany, spoke at length of his experiences in the Civil War, and of the advantages of the hospital system adopted after a year's experience in this war. It seemed as if the knowledge so dearly bought at that time had been largely forgotten.

Dr. W. Warren Potter, of Buffalo, spoke in much the same strain, and from a similar experience. He asserted that the loss of 3,000 men out of a total of about 260,000 in our late short war was a showing of which all Americans might well be proud. In his opinion, the adverse criticisms that had been heaped upon the medical and other departments were not deserved.

The Relations of Preventive Medicine to Political Economy.—Dr. George W. Brush, of Brooklyn, presented a communication on this subject. He said that no less than thirteen thousand lives were lost in New York State alone, each year, from the ravages of pulmonary tuberculosis. By putting a fair money value on these lives, it was evident that, without considering the loss of time of the affected persons, the pecuniary loss to the State was great. According to Dr. Guerard the average number of deaths from tuberculous diseases in New York City, during the period from 1884 to 1896, was 6,072. The speaker remarked that as far back as 1792 the kingdom of Naples made an effort, by stringent legislation, to prevent the spread of pulmonary tuberculosis. As a result the disease was practically stamped out. Only one State in the Union—Massachusetts—had a State hospital for consumptives. Our State society should urge upon the legislature, by resolution, the establishment of State hospitals for tuberculosis, and it should take an active part in the dissemination of knowledge among the laity regarding this terrible disease.

The Relation of the Consumptive to the State.—Dr. John H. Pryor, of Buffalo, followed with a paper with this title. He said that, according to the lowest estimate, there were more than fifty thousand consumptives in New York State. Tuberculosis had not decreased relatively with the acute infectious diseases. The public had a right to demand the same immunity from tuberculosis that it received from other diseases. The blame for the present state of affairs rested largely upon the medical profession, which was the guardian of the public health. Segregation should be employed among the poor; special hospitals near the large centres of population would furnish the best means of caring for the advanced cases. Prohibition of promiscuous spitting, and proper disinfection, were among the most important means of checking the disease. Ideal isolation can be secured only by State care of consumptives. The consumptive should be cared for until he was well, and not until he was dead. The State owned large tracts of land in the Adirondacks, and was, therefore, peculiarly well fitted for undertaking the care of these unfortunates, who constituted a perpetual menace to the public health. The cottage plan of treatment was the best, and the climate of the Adirondacks, not differing widely from that of many other portions of the State, allowed of the return of many consumptives to their homes. An institution for cases of incipient consumption should be largely self-supporting. Assuming that each citizen was worth at least $1,000 to the State, it followed that the death of thirteen thousand consumptives annually meant a pecuniary loss to the State of $13,000,000 each year. The expense per patient under State care should not exceed $250 per annum, and it should yield sixty per cent. of recoveries.

At the conclusion of these papers Dr. George W. Brush introduced a resolution, requesting the committee on legislation of the society to urge the present legislature to pass some measure looking toward the establishment of State hospitals for consumptives, and directing copies of the resolution to be sent immediately to the governor and to the members of the legislature. The resolution was adopted.

The remainder of the session was devoted to an exhibition of "Microscopic Projection," by Dr. William Hailes, Jr., of Albany; a lantern exhibition of "Some of the Uses of *x*-Ray in Medicine and Surgery," by Dr. Louis A. Weigel, of Rochester; and by a similar exhibition, by Dr. G. W. Wende, of Buffalo, of "Some Interesting Cases of Skin Disease."

Second Day—Wednesday, February 1st.

The Treatment of the Uterine Hemorrhage with Stypticin.—Dr. Herman J. Boldt, of New York, read this paper. He stated that stypticin was a derivative of one of the alkaloids of opium—narcotine. It produced intestinal paralysis in rabbits and dogs. In warm-blooded animals it had no direct primary influence on the heart and circulatory system. There was a transient increase in the number of respirations. Both stypticin and hydrastinin augmented the heart's action, but the action of the former was more like that of digitalis. In fungous endometritis and in advanced cancer stypticin had been of no benefit, but it had proved useful in hemorrhage associated with para- and perimetritis after abortion and full-term deliveries, and in other forms of uterine hemorrhage of obscure origin. He had observed no hypnotic effect and no unpleasant results even from large doses of stypticin. This remedy apparently had no oxytocic properties. It could be given by the mouth in doses not exceeding three decigrams. It acted quickly and very satisfactorily when administered subcutaneously in a dose of twenty minims of a ten-per-cent. sterilized aqueous solution.

The Relations of Movable Kidney and Appendicitis to Each Other, and to the Practice of Modern Gynæcology.—This paper was read by Dr. George M. Edebohls, of New York. According to his experience chronic appendicitis was present in from eighty to ninety per cent. of women with symptom-producing movable right kidney, and in twenty per cent. of all women having movable kidneys. He had also found, by long experience with his own special method of palpating the vermiform appendix, that four per cent. of all women had appendicitis, and that 3.5 per cent. had both appendicitis and symptom-producing movable kidneys. A movable left kidney never produced appendicitis; a movable right kidney probably produced appendicitis by indirect pressure on the superior mesenteric vein. He had often followed the development, in the same individual, of mobility of the right kidney, mobility of the left kidney, and chronic appendicitis. A practical point relative to the prognosis was that large abdominal tumors and the pregnant uterus in the later months afforded the best possible splints for keeping a movable kidney in position. For this reason one must expect a return of the symptoms of movable kidney. In most instances in which cœliotomy was done for other conditions he made it a practice to invert the normal unopened appendix, if this could be done through the same incision. This procedure only added three or four minutes to the time of the operation, and such insurance against appendicitis in the future was cheap at such a price.

Conservative Treatment in Diseases of the Ovary and Vermiform Appendix.—Dr. Robert T. Morris, of New York, read a paper with this title. Regarding the appendix, he said that bacteria were responsible for the removal of many more appendices than were the surgeons. The annual death-rate from appendicitis under medical treatment in the United States alone was several times as great as was the mortality from wounds and disease in the late Spanish-American war. When the appendix had been removed immediately after an early diagnosis, a number of surgeons had succeeded in securing a death-rate of only a fraction of one per cent. in cases in which infection is practically limited to the appendix. The death-rate was limited to about five per cent. by several surgeons in cases in which the infection had spread beyond the appendix. On the other hand, the mortality from all methods of medical treatment was above twenty-five per cent.

Dr. A. Palmer Dudley, of New York, said that the great interest he took in the conservative surgery of the ovary was best evidenced by the fact that he had just done his one hundred and fourteenth ovarian section. In only one instance had there been inflammation following this procedure, and there had been no fatalities. He had records of eighteen pregnancies occurring in this series of cases, with twelve living children.

An Experiment in Ovarian Transplantation.—Dr. J. H. Glass, of Utica, under this caption, reported the case of a woman of thirty-nine years, who was in bad general condition following a double oöphorectomy, and upon whom he had performed the experiment. A young woman of seventeen needing the operation of oöphorectomy about this time, it was decided to transplant her ovary into the first patient. Both women were etherized, and then the healthy ovary was extirpated from the second woman and anchored fast in proper position in the first woman. Recovery was uneventful, and subsequently the patient in whom the ovary was placed somewhat reluctantly confessed that six days after the transplantation she had had an erotic dream, and ten days later had had a slight menstrual flow. At present, eight months after operation, she had entirely regained her mental and nutritive equilibrium.

Dr. George M. Edebohls was inclined to believe that the result in this remarkable case was chiefly due to the influence of the imagination. If this was not the case, one should be careful about the subjects from whom the ovaries were taken, as there were many women with apparently normal ovaries whose sexual instinct was almost in abeyance.

Dr. A. Palmer Dudley said that experiments now on record proved that this ovarian transplantation was not an experiment but a certainty.

The Advantages of the Supra-Pubic over Vaginal Cœliotomy.—Dr. J. W. Whitbeck, of Rochester, in a paper with this title, reported nine cases, illustrating the advantages of the suprapubic route.

The Advantages of Vaginal over Supra-Pubic Cœliotomy in Certain Diseases of the Uterus and Appendages.—Dr. H. T. Williams, of Rochester, presented this communication. He said that the choice of route must be determined by the experience of the individual surgeon. Many operations could be done more quickly, with less shock, and with better results, both immediate and remote, by vaginal section. The absence of an abdominal scar and that of a weak spot in the abdominal wall were in themselves important advantages. The argument that the operator is handicapped by being forced to depend entirely upon the sense of touch did not possess much force, particularly in view of the method of operating recently presented to the profession by Dr. Pryor.

Dr. H. J. Boldt said that it was impossible for any surgeon to do as good conservative work per vaginam as through the abdomen. The same might be said of some large tumors. For dermoid tumors, except those of very small size, he considered the vaginal operation the more dangerous. However, the vaginal route offered certain advantages in cases of very diffused inflammation of the pelvic organs.

Lateral Curvature and Pott's Disease of the Spine; the Improved Aluminum Corset for Their Treatment.—Dr. A. M. Phelps made some remarks on this subject, illustrating them with numerous pathological specimens and photographs. For lateral curvature he favored treatment by braces and exercises, and for Pott's disease fixation by means of a suitable corset. He then exhibited the aluminum corset, which he characterized as the acme of modern bracing. It was light, cleanly, and durable.

Dr. L. A. Weigel favored recumbency in the early stage of Pott's disease. He had found it impossible to protect the aluminum from the corrosive action of the perspiration.

Four Unique Cases of Vesico-Vaginal Fistula.—Dr. John O. Polak, of Brooklyn, described these cases, and the special method adopted by him for the relief of the condition.

Diagnosis and Surgical Treatment of Gall Stones.—Dr. E. W. Mulligan, of Rochester, read a paper on this subject, and reported certain cases. Special stress was laid upon the necessity of differentiating biliary colic from gastric disorders, and particularly from gastralgia. One distinguishing sign which had been present in all his cases was tenderness on deep pressure over the gall bladder. He stated that of the three recognized surgical procedures for the relief of this condition, Murphy's cholecystenterostomy was the most recent and possessed the disadvantage of necessitating the wounding of the intestine. Moreover, it did not shut off the field of operation from the abdominal cavity. The so-called ideal method, in which the gall bladder was incised, the stones were removed, and the bladder was returned to the abdominal cavity, had long been under a cloud of suspicion, because of the liability of leakage of bile into the peritoneal cavity. The oldest and, in the opinion of the speaker, the safest operation was open cholecystotomy. Its record was a long and creditable one. Lawson Tait had reported fifty-two of these operations, with only two deaths. Dr. Mulligan said that in his last case he had used the S-shaped incision, and had found it more satisfactory than the older one.

The Management of Lateral Curvature of the Spine.—Dr. Reginald H. Sayre, of New York, made some remarks on this subject. He believed that rickets was at the bottom of numerous cases of lateral curvature, and that a large part of the remainder resulted from paralysis, usually infantile, partially recovered from. This leaves an unbalanced state of the muscular system. Other cases of lateral curvature were due to inequality in the length of the lower extremities, or to pelvic inflammation with involvement of the psoas muscles. In the management of these cases the various causes naturally suggested indications for treatment. When pressure was made on the ribs, it should be toward the median line of the body. Having corrected the position as far as possible, some apparatus must be applied to retain this position, and, in addition, the muscles must be strengthened by appropriate exercises until the patient was able to maintain this improved position.

The Treatment of Umbilical Hernia.—Dr. William B. De Garmo, of New York, read this paper. He said that umbilical hernia was the most amenable to treatment of all the varieties of hernia, if attended to

in infancy, but that it was very rebellious when the treatment was not instituted until adult life. It was more common in women than in men, and particularly in fleshy subjects. The contents of such herniæ were usually omentum and bowel. The operative treatment had not proved so satisfactory as that for other forms of hernia. The incision should rarely be made in the median line, as at this point the skin and sac were usually so intimately united as to make their separation impossible; furthermore, the intestine might be adherent to the sac. The intestine should be kept out of the way with large sponges. The speaker thought that an elliptical incision, surrounding and removing the umbilicus, was preferable to the usual one. Having properly disposed of the contents of the sac, it could usually be cut away, leaving an ordinary cœliotomy wound, excepting that the adjacent tissue was of poorer quality. The wound was closed in layers, relaxation sutures being used if there was much intra-abdominal pressure. A woven elastic belt should be worn after the operation.

Dr. Willis G. Macdonald, of Albany, was inclined to look upon the prognosis as more favorable. The most important part of the operation was the closing of the wound. It was especially important to avoid suppuration in hernia operations.

Panas' Operation for Strabismus. — Dr. D. B. St. John Roosa, of New York, read this paper. He said that with latent squint he had nothing to do, for he never operated for strabismus unless there was positive deformity, or a persistent double vision which could not be relieved by a correction of the errors of refraction, which formed the basis of nearly all cases of true strabismus. Panas had published the reports of his operation but recently; this report having been communicated to the French Academy of Medical Sciences on July 3d of last year, and since published in the *Archives d'Ophthalmologie*. Professor Panas has operated on two hundred and ten cases of convergent, and ten cases of divergent, strabismus. Of the two hundred and ten cases, one hundred and eighty were a complete and immediate success. In the remaining thirty cases there still existed after the operation a certain degree of convergence. In none was there any over-effect. The operation was performed in the following manner: The patient was placed under an anæsthetic. After opening the conjunctiva by a horizontal incision, the tissues were thoroughly divided about the sheath of the muscle, in the usual manner. The muscle was then taken up on the hook and pulled well outward, so that the inner margin of the cornea was on a line with the external canthus. Previous experiments by Dianoux, of Nantes, showed that there was no danger in rupturing the tendon by this pulling, a force of five kilogrammes being necessary to rupture a tendon of the ocular muscles. The tendon was then thoroughly divided, the wound closed by a suture, the operation repeated on the other eye, and both eyes were bandaged for twenty-four or forty-eight hours.

Glioma of the Retina.—Dr. Herman Knapp, of New York, read a paper on this subject. He stated that the first stage was ophthalmoscopic and was rarely seen. Subsequently metastases developed. When let alone glioma invariably terminated in death from exhaustion, or from invasion of the brain, or from sepsis. The prognosis was bad even after enucleation, but was not hopeless. The remainder of the paper gave, in detail, the pathological anatomy.

Membranous Cataract.—Dr. Henry D. Noyes, of New York, read a paper with this title, in which he discussed various types of the disease, and the special instruments and treatment best adapted to each.

The Surgery of Mammary Cancer.—Dr. Daniel Lewis, of New York, presented a paper on this subject. He said that in two hundred and eleven cases in which he had operated by opening the axilla there had been only two deaths, and both of these patients were suffering from sepsis at the time of the operation. The removal of the pectoral muscle greatly facilitated the extirpation of the contents of the axilla, but in the early stage of the disease there was no difficulty in doing this without the removal of the muscle. Much had been said about the danger of infecting the operation wound with cancer by division of the cancerous tumor, but this danger he believed to be purely imaginary, as shown by the difficulty of inoculating persons with cancer, even under what seemed to be favorable circumstances. The removal of fat from all flaps not only did away with tissue of feeble vitality, but also diminished the tension. Passive motion should be begun as soon as the edges of the flaps had become united. The discarding of the drainage tube marked an advance step in the treatment of mammary cancer, as it only admitted air and interfered with healing. As few ligatures as possible should be used; he had often done a complete amputation of the breast without using a single ligature. The results from breast amputations were steadily improving.

Further Study into the Nature and Frequency of Cancer.—Dr. Roswell Park, of Buffalo, read a paper with this title. His object was: (1) to emphasize the ever-increasing mortality from cancer in New York State; (2) to epitomize the more recent studies regarding its etiology, and especially its parasitic nature; and (3) to describe the work done at the laboratory in Buffalo established by the State. He said that accurate statistics justified the statement, that if the death-rate from cancer increased as it had during the past year, and the rate of consumption decreased as it had during the past ten years, in ten years from now there would be more deaths from cancer alone than from consumption, smallpox, and typhoid fever, put together. Dr. Park said that he could not agree with Dr. Lewis that there was any lack of evidence regarding the communicability of cancer. In nearly every fresh specimen of cancer examined at the laboratory they had succeeded in finding in vast numbers certain bodies which could hardly be anything but parasites. Opinion was still divided as to whether they were protozoa or fungi. Both cultures and inoculations had so often been successful as to leave no doubt in the minds of those working in the laboratory that cancer was a parasitic, and therefore a communicable disease. Three lines of experiments in inoculation had been conducted,—viz.: (1) from animal to animal; (2) from the dead human subject to the living animal; and (3) inoculation into animals of pure cultures of organisms taken from the human subject.

Dr. Joseph D. Bryant, of New York, reviewed at length the history of the development of our knowledge concerning cancer.

Dr. H. R. Gaylord, director of the laboratory at Buffalo, described in detail the finding of the bodies believed to be the parasites of cancer. He stated that an Italian observer had recently claimed to have produced cancer by repeated inoculations and transfers from one animal to another.

Address—Some Problems Associated with Typhoid Fever.—Dr. William Osler, of Baltimore, delivered an address on this subject. He laid great emphasis on the fact that for very many years the medical profession had been fully alive to the true nature of typhoid fever. One fact stood out with special prominence—*i.e.*, that with clean soil and pure water typhoid fever disappeared. While many advances had been made in the treatment of this disease, they had been nothing compared to the triumphs of sanitary science. The medical profession could point to

typhoid fever as the best understood and the most carefully studied of the acute infectious diseases—the one in which the greatest victories in hygiene had been won. But in spite of these triumphs, we had had a rude awakening last fall in the many soldiers who fell victims to this dread disease. Ours was a nation, Dr. Osler said, of contradictions and paradoxes—a clean people, careful in personal hygiene but reckless regarding public sanitation. Dr. Smart, the great authority on hygiene, recently made the statement that the cities of this country, as regards the matter of water-supply, were at least a century behind the cities of Europe. In organized sanitation Michigan was one of the model States. The problem of typhoid fever, Dr. Osler declared, was no longer in the hands of the profession; even the lesson of the late war had probably not been bitter enough to teach the public that sanitary science should come within the sphere of practical politics. Our good-natured citizens, who always voted a straight party ticket, were not deeply interested in the problems of sanitary science; they were more easily led by a Perkins or a Munyon than by a Lister or a Koch. Our glorious land had been recently described as "God's own country, with man's own backyard, and the devil's own cesspool."

The Disinfection of the Intestinal Canal.—Dr. Abraham Jacobi, of New York, then delivered an address on this topic. He said that in the duodenum and jejunum there was normally no putrefaction. The putrefaction of albuminoids—a process taking place in the colon—differed from pancreatic digestion. The latter furnished albumoses and peptones. While colonic putrefaction went on to the formation of indol, phenol, skatol, hydrogen sulphide, and other compounds, carbohydrates interfered with putrefaction, and so did milk to some extent. Free acids hindered putrefaction. Many observers had pointed out the adjuvant effect of opiates. The speaker then recited many facts going to prove the existence of auto-infection from the intestinal canal. Bacteriologists, he said, often made the mistake of denying the efficiency of medicinal doses of so-called intestinal antiseptics simply because the bacteria were not killed by these agents; they forgot that exceedingly small quantities of these substances might paralyze the bacteria and prevent them from forming toxins, even though powerless to kill these organisms. Next in efficacy to cleaning out the intestinal canal by purgation came the use of such preparations as chlorate of potash and tannalbin, which improved the condition of the mucous membrane of the bowel. Albuminoid putrefaction in the colon required the use of farinaceous food and the exclusion of meats for its control.

Anniversary Address by the President—The Relation of Medicine to Civilization.—Dr. John O. Roe, of Rochester, delivered this address at the evening session. He said that the general advance in scientific knowledge had resulted, not from progress in any one department, but from the simultaneous discoveries in each—from the "consensus of the sciences," as Spencer terms it, each contributing to the advancement of all the others. But no department had contributed so much to civilization in the prolongation of life and the general happiness of mankind as that of medicine. Attention was then called to the relation of medicine to civilization, noting (1) the influence of civilization on medicine, and (2) the influence of medicine on civilization.

The general influence of the spirit of the times on medicine was referred to. Hippocrates was the first to infuse into the spirit of the medical philosophy of his time the principle of investigation. Stimulated by this spirit, Alexander the Great founded the Alexandrian library, which made itself felt in the works of Erasistratus and Herophilus, in medicine, and in founding the great schools in Spain and Italy which preserved the science of medicine through the dark ages. The threefold influence of mythology, philosophy, and science was found repeated in the history of the Middle Ages, the Renaissance, and the last three centuries respectively. In accordance with the spirit of the times many laws were enacted, retarding the growth and development of medicine. Ecclesiastical decrees were issued, checking chemistry and physics and all experimental sciences, including medicine. Medicine had also derived assistance from the other sciences. Herbert Spencer says: "We find that to make a single good observation in the purest of the natural sciences requires the combined aid of half a dozen other sciences." From physics alone medicine had appropriated very much to its use: light, the microscope, the principles of the ophthalmoscope, the nature of the solar spectrum and its analysis, hydrostatics, hydraulics, pneumatics, barometer, electricity, were all referred to. Chemistry had contributed much to medicine. Among other things might be mentioned the chemistry of gases, the discovery of urea, how to combat the poison of microbes, etc. The advance of botany had influenced medicine not a little, as had also psychology and sociology. Psychology had become of very great importance to the science of medicine in determining the relation of the mind to the body and in throwing new light on the obscure processes of the brain and nerves.

Since medical science was so composite and, from its very nature, could draw material from all the other sciences, it was almost superfluous to emphasize the paramount importance of a thorough knowledge of these different branches of science, in order to be able to utilize their discoveries and inventions in the prevention and treatment of disease. Moreover, from the fact that all the sciences were related, and had always been seen to advance together, we had a suggestion of the necessity of a knowledge outside the limits of our own profession. The very principle of specialization implied a knowledge of other things. We ought to know other sciences also, because of the common aim of them all—the acquisition of truth and the betterment of the condition of humanity and the advancement of civilization.

In proportion to the investment, civilization has derived from no other source so great dividends as from medicine, both for the life and health of humanity and the economic prosperity of the nation. The epidemics of the Middle Ages were due not alone to the lack of knowledge respecting the nature of diseases, but also to the system of crowding people closely together in walled cities, which, with the narrow streets and lack of ventilation and sewerage, and the contaminated water-supply, afforded a splendid breeding-ground for disease. After a time attention was called to the relation between these conditions and the spread of disease, and when the conditions were done away with, it was noted that the public health greatly improved. The importance of sanitary and antiseptic measures in the military service was illustrated by the fact that in the Middle Ages, and down to the time of the Crimean War, it was the rule for a greater number of soldiers to die of disease than of wounds. In recent years, in countries where sanitary measures have been observed, the relative fatality due to disease had been greatly diminished. The most notable exception to this was our recent Spanish-American war. Much of the disease in this case might be attributed to the radical change of climate and an imperfect knowledge of the diseases peculiar to these regions; but by far the more potent cause was the utter disregard of sanitary measures by the War Department.

The beneficial influence of modern medical science

upon civilization was also seen in the lowering of the death-rate, as shown by the statistics of England, where it had been reduced fifty per cent. during the last century. It was also shown in the prolongation of life. Fifty years ago, it was estimated in Europe and America to be thirty-eight years; now it was between forty-five and fifty years. By the prevention of sickness among the laboring classes and the preservation of general health, all the industries were carried on interruptedly, and pauperism and public charity were thus indirectly diminished.

In conclusion, the speaker said that a new day for medicine was now dawning, when tradition, theory, and authority were no longer potent barriers to human perception, and speculation and metaphysics, that had so long engrossed the intellectual world, were vanishing before the light of more substantial reason, and methods based upon the discovery and demonstration of facts and their relation to the laws of nature. This dawning day was the beginning of a new utilitarian era, when belief and experience would be measured by the data of demonstration, determined by the consensus of observation, and reduced to mathematical precision; when the charms of empiricism, the perplexities of individualism, the enigmas of prognosis, and the dark mystery of those protoplasmic laborers of the economy would vanish before the bright searchlight of the *x*-ray, bacteriology, and physiological chemistry. Medical science, having fought many battles for life and liberty in the dark valleys of the past, now stood a victor on the summit of the nineteenth century, looking forward into the twentieth, and, like Hannibal of old, shouted exultantly to its brave and daring followers, "Beyond the Alps lies Italy!"

Third Day—Thursday, February 2d.

Officers and Committees.—*President*, Dr. Willis G. MacDonald, of Albany; *Vice-President*, Dr. John Gerin, of Auburn; *Secretary*, Dr. Frederic C. Curtis, of Albany; *Treasurer*, Dr. Charles H. Porter, of Albany. For honorary membership, Drs. W. W. Keen, of Philadelphia, and Maurice H. Richardson, of Boston, Mass.

Committee of Arrangements: Drs. Samuel B. Ward and William B. Nellis, of Albany, and Reynold W. Wilcox, of New York.

Committee on By-Laws: Drs. H. D. Wey, of Elmira; Nathan Jacobson, of Syracuse, and Frederic C. Curtis, of Albany.

Committee on Prize Essays: Drs. J. M. Van Cott, of Brooklyn; Abraham Jacobs, of New York, and William C. Kraus, of Buffalo.

Committee on Hygiene: Drs. Henry R. Hopkins, of Buffalo; George B. Fowler, of Brooklyn; Ezra H. Wilson, of Brooklyn; B. M. Mosher, of Albany; George Seymour, of Utica; Henry Elsner, of Syracuse, and M. A. Veeder, of Lyons.

Committee on Legislation: Drs. Frank Van Fleet, of New York; Arthur G. Root, of Albany, and Ernest Wende, of Buffalo.

Committee on Ethics: Drs. George McNaughton, of Brooklyn; Charles Mason, of Peekskill, and Louis A. Weigel, of Rochester.

Committee on Publication: Drs. F. C. Curtis, of Albany; W. Warren Potter, of Buffalo; Charles H. Porter, of Albany, and Daniel Lewis, of New York.

State Board of Medical Examiners: Drs. A. Walter Suiter, of Herkimer; George Fowler, of New York; H. D. Wey, of Elmira, and Daniel Lewis, of New York.

Dispensary Abuse.—The committee having in charge the consideration of the recommendations contained in the address of the President reported, among other things, that it was in favor of a bill being prepared which would make it a penal offence for applicants at charitable medical institutions to receive gratuitous medical services at these places, when they are able to pay for same. This was comparable to the existing laws making it a penal offence to obtain money under false pretences.

State Medical Library.—The committee also urged the legislative committee of the society to make an effort to restore the appropriation of $5,000 for the maintenance of the State medical library.

State Board of Health.—Dr. Suiter called attention to the serious hampering of the very important work of this board by the very meagre appropriation made by the State, *i.e.*, about $35,000, as compared with an appropriation of about $200,000 for the fish and game commission.

A Form of Suture for Abdominal Surgey.—Dr. R. J. Wilding, of Malone, read a paper with this title. The suture was described as follows: A piece of properly prepared silk, double the usual length required in a given case, was threaded with a needle at each end, and both needles were passed in about half an inch external to one angle of the wound and were caused to emerge just external to the plane of tissue it was desired to unite. The layer of tissue was then brought together, the punctures of the needles not being opposite each other but alternately. To remove the suture it was only necessary to cut one end of the suture, and make traction on the other. The moisture of the silk made it very pliable, and the slanting manner in which it passed through the tissues caused it to offer very little resistance on removal.

The Limitations of Surgical Work in Country Practice.—Dr. George M. McComb, of Frankfort, read a paper with this title, in which he portrayed in vivid and well-chosen language the present conditions in the practice of the village doctor. Attention was directed to the common, but absurd fallacies that these physicians were poorly educated "back numbers," and that aseptic surgery could only be done in fully equipped city hospitals. He predicted that in time the present hospital fad would act as a boomerang and would destroy its sleek supporters.

The Differentiation of the Chronic Form of Rheumatism.—Dr. Louis Faugères Bishop, of New York, presented a communication on this subject. He said that, like syphilis, rheumatism mimicked many other diseases. The first differentiation should be between rheumatism and non-rheumatic inflammation of the peripheral nerves. Theoretically, this should be easy, but practically it was only made after careful study. Neuritis might affect the peripheral nerves in a very eccentric manner, and consequently the typical distribution was not always present; however, in a general way the distribution constituted an important element in the diagnosis. Pressure on the nerve trunk at the point at which it was inflamed gave pain, and increased the previously existing pain in the area of distribution. Numbness and tingling were often present over the peripheral fibres in the area of distribution. Muscular tenderness was an important symptom of neuritis. It was more apt to be present at the beginning, but might persist throughout a chronic case. The next important differentiation was between the various forms of arthritis, in which the rheumatic poison was not the active cause. The type of arthritis associated with gonorrhœa seemed to be a form of rheumatism complicated by gonorrhœal infection. In its truest sense, the speaker said, chronic rheumatism was not manifested in the disordered or deformed joints. It was rather a disease dependent upon the circulation in the blood of some poisonous element, having the character of an infection. Chronic rheumatism is not greatly influenced by the salicylates.

The Scientific Aspect of the Mind Cure.—Dr. S. A. Russell, of Poughkeepsie, read a paper on this subject. Among the common evidences of the effect of the mind on the processes going on in the human economy, the author cited: (1) The deleterious effect on the secretion of the mammary gland from emotion; (2) the influence of the mind on the digestive processes; and (3) the production of diarrhœa by depressing emotions. It was certain that many diseases can be best cured by mental impressions.

SECTION ON GENERAL MEDICINE.

Second Day—Wednesday, February 1st.

Chlorine in the Treatment of Enteric Fever.—Dr. R. W. Wilcox, of New York, read a paper with this title. Some four years ago he reported a series of cases of typhoid fever treated with chlorine. At that time it was perfectly evident that two theories advanced were fallacious in regard to chlorine: first, it did not irritate the gastro-intestinal tract; second, it was not converted entirely into a chloride in the stomach and excreted as such. It was true that Edwards' case was one of accidental death from chloric poisoning, chlorine being found in the sinuses of the brain. The speaker was afraid he did not appreciate any treatment which aimed at the symptoms of the disease and not at the cause; therefore he could not appreciate Brand's method of treating typhoid fever. Cases of this disease at Porto Rico and Montauk Point, which had the classical facies of typhoid fever, were not typhoid fever alone but were cases of starvation, of many weeks' duration, the patients having fever symptoms which were unchanged by anything they received; in these cases, when chlorine was given, there was a general clearing up of these symptoms within twenty-four hours or less, and a rapid return to the normal temperature, followed by an uninterrupted recovery.

Dr. Simon Baruch, of New York, thought that these cases illustrated a condition of sepsis from the intestinal ulceration, which was perhaps a sequela of the typhoid, and which was exaggerated by starvation. Here we could see how treatment directed to the intestinal canal would be productive of benefit.

The Nervous System in the Pathogenesis of Albuminuria.—Dr. Brownlow read a paper on this subject, in which he called in question the activity and reliability of the alleged causes in developing both the acute and chronic forms of this disease. He pointed out that the toxins of scarlet fever and diphtheria were the only ones that could be recognized as active and potent in the causation of the acute form. He suggested that from autotoxins both the parenchymatous and interstitial forms were caused. The nerve cell or neuron of the nervous system being the more highly organized and sensitive, it was reasonable to conclude that upon these cells the toxins primarily acted; and their control over the processes of metabolism resulted in the development of the pathological conditions found in the kidneys, the arterial system, and the brain. Upon the recognition of this theory the whole series of complex and confusing nervous manifestations, evidencing themselves during the progress of the disease, could more reasonably be accounted for than upon any other.

Dr. A. Jacobi, of New York, believed strongly in the influence of the nervous system and of cold in the production of nephritis. He knew of healthy persons who were exposed to slush and rain at night, and of persons falling into the ice-cold water of rivers, and had seen these persons stricken with nephritis, and even dying of it within five or six days; these are instances of cold. He knew of pneumonias due to exposure to cold. This was contrary to the teachings of the reader of the paper.

Poliomyelitis Anterior Acuta.—This paper was read by Dr. Charles Mason, of Peekskill, N. Y. This disease was described by Underwood in 1784. Dr. Séguin in 1877 published an admirable monograph containing over forty cases. Since that time many valuable contributions relating to this affection had appeared. It was not his purpose to enter into an exhaustive description of this affection, but to describe some of the symptoms, results of treatment, and present condition of the cases that had come under his care in private practice; and to call attention to the singular fact that five cases occurred during four years, within a radius of five miles. Some authors had so divided and subdivided the affections of the cerebro-spinal system that the reader was greatly confused when trying to understand their descriptions. According to Holmes Coote, among one thousand children admitted to the Royal Orthopedic Hospital, there were eighty cases of infantile spinal paralysis, or eight in one hundred. Among one hundred and ninety-two cases of paralysis occurring in children, Heine, Jr., observed one hundred and fifty-eight of spinal origin, of which eighty-four were cases of partial paralysis. This affection was characterized by motor paralysis of rapid onset, with muscular wasting, sensation remaining intact. No age was exempt. The average was two years; it might occur intra-uterine (Sinkler). There were more males than females affected. The majority of cases occurred in hot weather. Its subjects were apt to be the children of the destitute poor, especially those who come of drunken parents. The onset was usually sudden. The temperature was 100° to 102° F. Paralysis might develop in a few hours or days; the fever lasted from one to four days. Vomiting, delirium, and convulsions might occur. Pains in the back and limbs were usually present. The bladder was seldom paralyzed. The extensor muscles were oftenest affected; the paralysis was most frequently paraplegia, first one leg, then the arms and legs, and after that various combinations. The muscles of the eye, larynx, and respiratory apparatus were never affected in infants. In one-fourth of the cases both legs, and in one-half the cases one leg, usually the right, remained affected. Owing to unopposed muscular action the various forms of talipes developed deformities of the knees. Contractions of the plantar fasciæ and lateral curvature of the spine occurred. The anterior tibial in the leg, and the deltoid and shoulder group in the arm, were oftenest affected. The muscles atrophied after reaching a certain stage; the atrophy afterward ceased, and then slight improvement might set in. After the end of a year not much further improvement could be expected. Lowered temperature and diminished growth in limbs were very characteristic of this affection. The general health remained unimpaired. This disease must be distinguished from multiple neuritis, spinal hemorrhage, cerebral palsies, birth palsies, progressive muscular atrophy, and simple and tuberculous meningitis. The following points in the case might assist in making a diagnosis: (1) Age of the patient. (2) Abrupt onset and rapid extreme paralysis. (3) The tendency to improve. (4) Bladder and rectal symptoms wanting; absence of anæsthesia; rigidity and pain in the affected limbs. (5) The electrical reaction in muscles. (6) The limbs were arrested in their growth (Dana).

Patients rarely died of this disease; the usual course was for patients to recover the use of all but one leg.

As regards causation it was believed by many that the primary atrophy of the nerve cells of the anterior horns was the point of departure of this disease. As Sinkler had demonstrated that the disease occurred in

utero, might it not be occasioned by the tardy development of the spinal anterior horns; and might not the straightening of the feet during the first few months of life, without mechanical or other appliances, be wholly due to that development as the child grew? Although orthopedic surgery might have been brought to the little one's assistance, how much might not the development of the cord have assisted in the final cure?

In the cases that exhibited high fever, great excitement, and prostration with cerebral symptoms, antipyretics were useful; attention should also be given to the cerebral symptoms. Local pains should be treated by applications of ice. Every case required absolute rest. The salicylates were indicated in those cases that were supposed to be of rheumatic origin; and locally warm applications and fomentations were necessary. Depletion by leeches, or cupping, was often beneficial to relieve local pains. In the beginning a brisk purgative was beneficial. Diuretics were of advantage; counter-irritation to the spine was useful. Small doses of the tincture of aconite, if fever was present, were of benefit. Ergot and belladonna in full doses, according to age, with iodide of potassium were indicated. The patient's limbs must be kept warm. Electrical treatment was of great benefit in many cases. As regards medicines in long-standing cases, the preparations containing phosphorus, strychnine, iron, arsenic, cod-liver oil, and physostigma were thought to be useful. These remedies were for the improvement of the general health.

Some Clinical Thoughts of Cancer, Hodgkin's Disease, and Consumption.—Dr. H. H. Deane, of Watertown, N. Y., read this paper. Doubtless we had been more or less impressed with the impotency of our resources when we had become clinically convinced of the nature of the disease with which we were attempting to contend, whether it was consumption, Hodgkin's disease, or cancer, and most certainly we all had had occasion to bewail our lot when we had attempted to stop its progress, and had seen the steady development of the disease in spite of our best efforts; evidenced by the daily temperature, steady emaciation, and loss of strength, ambition, and interest in things previously interesting, and many other signs too familiar to all of us. The all-important question was, What could we do or advise for this great class of suffering humanity? That the diseases mentioned were clinically alike in this one particular, if in no other, no one would question, namely, in the tendency to result invariably in the death of the person attacked. What seems most unexplainable was how, in the case of cancer and lymphadenosis, the vitality steadily succumbed to some influence rather than the pathological growths, which were oftentimes enormously exceeded in other cases without any marked deleterious effect. Hence we were compelled to acknowledge that there was circulating in the blood a something, be it ptomain or what you choose to call it, that was visibly poisoning the patient and hastening his death, in spite of our best efforts to prevent it; at least this had been the experience of the speaker in every case where there had been no question of the accuracy of the diagnosis, even when the greatest care had been exercised by the most eminently qualified specialists to remove early and completely every appreciable particle of diseased tissue, and still the disease progressed and invariably ended in destroying those afflicted. Nor could a case be recalled in which there was even a short period of immunity or respite, but only perhaps a period of change in the form of the invalidism. So long as the etiology of cancer remained unsettled, just so long would our efforts in treatment be vacillating and our opinions contradictory; all of which would be settled as soon as bacteriology fixed upon the specific bacterium which produced carcinoma, as it had done in the case of tuberculosis. Then there would be a unity of opinion and harmony in effort to contend with this disease. which seemed peculiarly indigenous and very prevalent in northwestern New York. Speaking of lympho-sarcoma, the only gratifying thought was that the disease was very rare, and this we might deem a blessing, as its range of affection was even greater than carcinoma, and all we could possibly do was to diagnose the disease. In reference to the last of the trio, the one which science had given us the most light upon, what could we say of our stewardship? Were we doing all for suffering humanity that was possible? Had we markedly improved in our treatment on our illustrious predecessor, M. Louis? Could we say, as did our governor recently in his message to the present session of the legislature, that the part borne by the State of New York in the recent unpleasantness with Spain was worth all it cost, for the sake of humanity? Could we say that the expense borne by the State to allow its indigent subjects, suffering with incipient tuberculosis, which was certainly curable by a sojourn in the Adirondacks, under the direction of specialists like Dr. Trudeau, of Saranac, or Dr. Stubbert, at Liberty. was worth what it cost for humanity's sake? Had one of us lifted up his voice and asked the government of the State to make it possible for the great army of our fellow-beings, that were dying yearly in our State, to go into the Adirondacks and live, as it were, in a state of sanitary nature?—not like that furnished by the government of the United States for the Indians, however, who were fast developing tuberculosis as the result of government care, being overcrowded and allowed to exist in the most unsanitary condition imaginable. The therapeutic conditions necessary to benefit those persons attacked with incipient consumption were, in the great majority of the cases, beyond the pecuniary possibilities of the persons affected, and therefore as a necessity the State must come to their relief, or else the statistical history would remain as heretofore, a large annual death-rate among the very brightest of our young men and women, which could be greatly reduced by making it possible for these people to be sent by the State to the Adirondacks, the same as the insane were sent to the State hospitals. We are all conversant with the opposition which we had to overcome in our efforts to put that large dependent population of the State where they would be properly cared for, but we succeeded; and would any one wish to have the chronic insane returned to their cells, rags, and filth before the physicians moved in their behalf? Doubtless we would be told that there were places in the State where persons affected with incipient tuberculosis could go and receive all that the writer would wish for,—which we would readily grant, provided the afflicted had the necessary means to pay the fees for medical advice and proper care and board; but so far there was no place provided where an indigent person could be sent by any town or county and for a small fee, or no fee, receive the only relief that science and all the earnest work performed by all the profession of the past had shown was of real benefit to the incipient cases of tuberculosis. And when one thought of the millions of dollars and the number of lives being sacrificed for humanity in endeavoring to give a people an opportunity to become free who had not manifested any great ability to govern themselves, it seemed that we were all oblivious to the demands of humanity right in our midst, and that by a little effort on our part, and a little expense on the part of the State, the trial at least could be made, and if the result was satisfactory then greater amounts could be appropriated, even to the extent of making a permanent State sanatorium in the Adirondacks for the cure of incipient tuberculosis.

To prove that any effort which we could make was justifiable, a glance at the State's statistics showed that the number of deaths produced by this terrible disease each year was equal to the whole quota required by the general government to be raised by the State for the Hispano-American war; or, in other words, that more than one in every ten deaths occurring in the State of New York was produced by consumption; and, further, when we stop to consider that the greater part of this large number of deaths occurred at the beginning of adult age, when the lives were most valuable from a pecuniary standpoint, to say nothing of the fact that those oftenest attacked were numbered among the brightest of the intellectual. If the expenditure of the people's money could be justified upon the plea of humanity and the saving of life, how much more potent was the argument when the ones to be benefited were those who have the greatest demands upon us, and who were a part of us, by the strongest law of our government, to wit, that the care of the family and those dependent upon us was paramount to all other necessities! That the time was now arrived for the consideration of this subject by the legislature, and that a precedent was already established in its annual appropriation for the Pasteur Institute in New York, we must all admit. By securing the necessary legislation and appropriation a number of patients could be sent to Saranac and Liberty, where a scientific record could be kept and an accurate report presented to the next session of the legislature; and beyond doubt, if the same result was obtained as was shown in private cases treated at these two resorts, then there certainly would be no fear for the further appropriation to carry on the work.

Lithæmia.—Dr. B. C. Loveland, of Clifton Springs, read a paper with this title. He said the synonyms for the condition were uricacidemia, the arthritic or rheumic diathesis, or modified gout. It was responsible for about half the functional troubles with which humanity was afflicted, and also for a large proportion of the graver diseases which ultimately resulted in death. There were two distinct divisions or classes of lithæmics, and in each of these classes might develop all, or nearly all, of the various phenomena which characterized the condition. These two classes might with propriety be called plethoric, or over-nourished, and asthenic, or poorly nourished. This paper was intended to give something of a comparison of these two types, the principal manifestations of each, and what experience had shown to be the best methods of treating them. The plethoric lithæmic was a person of robust habit, usually of ruddy complexion, with a hearty appetite, inclined to be a little over weight, often given to insufficient exercise; and the principal functional manifestations in this class were neurasthenia, cerebral hyperæmia, spinal congestion, biliousness, so-called sick or bilious headaches, insomnia, and melancholia.

If continued till organic changes had occurred, it was the proper ground for the development of inflammatory rheumatism, arterial degeneration, apoplexy, paralysis, nephritis, diabetes, sclerosis of the liver, or general arterio-fibrosis, beside many lesser ills. The amount of urine in these patients was usually below three pints in quantity in twenty-four hours, and the specific gravity varied from 1.024 to 1.035 or 1.040; it was free from signs of kidney disease, unless serious organic change had taken place; the urine might contain uric acid, or oxalate of lime; it was darker than normal in color, and showed other signs of concentration. The blood also was concentrated above normal both in color and in corpuscles. This concentration of the fluids of the body, marked as it was by an excess of uric-acid compounds, played an important part in that excess of solid matter in the body which marks a man as old, no matter what his years. There was an easy way out of this condition when the organs were still free from degeneration, and the early discovery of the condition was of great importance.

The first physical landmark which might be noticed as pointing toward the condition of lithæmia, the finger-nails, was often overlooked. As they were farthest from the centre of circulation, earthy substances were deposited there first; hence it was always wise to note their smoothness and brittleness. The chief thing in correcting this condition was to regulate the patient's diet and exercise, giving less albuminous foods, more water, more exercise, and cutting off from the dietary any of the cereals, vegetables, or fruits which might be the special cause of indigestion. This might be all that would be required, but where the saturation of the system with the uric-acid elements was sufficiently marked it might be necessary to use some mild alkaline medicine in addition to the dietary measures, and in this case the particular alkali was not so important as the fact that it was an alkali.

The asthenic lithæmic was the reverse in physical type from the plethoric, and the most common manifestation in this class was rheumatic gout. Besides this were found chronic gouty degeneration of the kidneys, catarrhal troubles of mucous membranes, either bronchial, nasal, or uterine, and also some forms of muscular rheumatism and neuralgia. Neurasthenia might occur in either type of lithæmics. In this class the assimilative processes were feeble, and the uric acid is not from over-ingestion, but from poor assimilation. Much the same conditions of urine were found, but the blood was poorer in hæmoglobin, often not over sixty-five or seventy per cent., while the corpuscles might count about normal or more. If inquiry was made, it was found that these patients never drank water, and were never thirsty. In our management of this class a very different diet must be enjoined from that prescribed for the plethoric class. Water was to be used abundantly; meats, especially lamb and white meats, might be used with more or less freedom as the conditions indicated. Bread, potatoes, and starchy vegetables were to be eaten very sparingly, if at all; eggs and milk may or may not be allowed, according to conditions,—but all sweets and all sharp acids, including the sour kinds of grapes, strawberries, tomatoes, and pie-plant, should be avoided. Small doses of some alkali which the stomach tolerated should be continued most of the time for months (salicylate and benzoate of soda, five grains each, in hot water, t. i. d., works well); and every effort in the way of outdoor exercise, freedom from anxiety, massage, cool bathing, etc., should be employed to increase the patient's vitality and assimilative ability.

Weak Heart.—Dr. C. M. Rexford, of Watertown, presented a paper with this title. He urged the importance of the early recognition and the advantage of prompt treatment upon the occurrence of any sign of failure in the working power of the heart. While heart lesions received due attention, too often weakness of the heart was regarded as of little consequence because there were no marked symptoms of disease. There was a time when the study of murmurs was about all there was of the question of heart disease, and these determined prognosis and decided treatment. Then more attention was paid to valvular changes, and last came the knowledge that the condition of the heart's cavities and its muscular walls was, after all, the thing of most consequence. The principal question was, How strong was the heart, and how much ability had the cardiac muscle to do the work required of it? It could safely be said that the cause of heart failure was not chiefly valvular lesion, but was weakness of the myocardium. Whether there was such a

thing as serious functional disease without organic lesion seemed hard to understand, but was, after all, of much less practical importance than was the fact that the so-called functional troubles led to those which were plainly organic. All hearts were not equally strong; some were inherently weak. It had been said, and often quoted, that a man was as old as his arteries. It was doubtless equally true that a man was as strong as his heart. If there must be limitations of capacity for activity, it was well to be aware of them. It was better for a man to know his weakness than to know his strength. Heart weakness, if neglected, resulted in dilatation. It was produced by malnutrition and anæmia both in the young and in overworked adults. It was caused by acute diseases and by excessive use of tobacco and alcohol. It resulted from violent muscular exertion, and was becoming common among bicycle riders who ride injudiciously. Physical and mental fatigue, care, and anxiety were causes. The treatment of weak heart was satisfactory if attempted early, and if the cause could be removed. Hygienic measures often sufficed. Iron and oxygen were the great remedies. The first medicine a physician thought of when he saw a case of heart disorder was likely to be digitalis. This was no discredit to him, and was a tribute to the remedy, but it must be used with great care and nice discrimination. It helped in dilatation, but if the arteries were contracted it did harm and increased the labor of the heart. Nitroglycerin was the best vascular dilator. Arsenic and strychnia were useful remedies. In acute diseases care of the heart was very important. The coal-tar products were too much used. In pneumonia the great danger was heart failure, and treatment should, from the first, attempt to prevent it. Strychnine was the best general remedy. Strophanthus was better in this disease than digitalis when a heart tonic is needed. Treatment of weak heart generally was hygienic quite as much as medicinal, but ought to be employed early. Heart weakness meant possible heart failure. It was probable that soon there would be no such thing known as a functional disease, and surer knowledge would enable us better to appreciate disorders in their inception. Medicine was more and more becoming preventive.

Nervous Dyspepsia.—Dr. Grace Peckham Murray, of New York, read this paper (see page 154).

Pneumonia in Infants, the Diagnosis and Treatment.—Dr. W. P. Northrup, of New York, read this paper. By infants the author meant those under two years of age, and by pneumonia he meant primary acute broncho-pneumonia. The three best diagnostic signs were discussed:

First: In acute inflammation of the lungs the respiration-pulse ratio tended to depart from the normal of 4 to 1 and approximated the proportion of 3 to 1; *i.e.*, instead of 80 and 20 it approximated 120 and 40. This was not new; all text-books mentioned it but did not emphasize it. To say that the respirations were rapid was not enough. In children many things increased the rapidity of respiration; it was the disturbance of respiration-pulse ratio that it was here intended to emphasize. This was the first point. The second point was fever—a persistent elevated temperature, whether remittent, intermittent, or uniform. The third sign was the presence of râles, subcrepitant and crepitant, over a circumscribed area. Especially did this apply to infants under one year. The first added signs by auscultation would be diminished muffled or feeble sounds of vesicular filling over the affected region. Later, coughing or deep inspiration, a broncho-vesicular sound, *i.e.*, deep bronchial sounds coming to the ear through aerated lung. Dulness would come last, and really in small infants contribued little to an early diagnosis. No treatment directly influenced the pneumonic process. There was much that might be done to enable the patient safely to pass through the disease.

There were three important points in regard to the treatment: (1) A bountiful supply of fresh air. The temperature of the room should vary inversely as the temperature of the patient: 65° to 68° F. when the patient's temperature was high, and higher—say 70°—when the patient's temperature reached normal. An infant with high temperature and dry skin was in no danger of catching cold. A window should admit fresh air continually. However damp and raw the outer air, the warm walls and furniture of a heated house would temper it to the needs of the child. Nothing so refreshed an infant, nothing was more essential to the condition of blood, nothing acted more favorably as a heart tonic than cool fresh air. On the other hand, the opposite conditions were these—the infant's crib was closely tented about with blankets; the windows were covered with sheets to keep off draughts; added to this there were often in the room numerous relatives and large gas-jets consuming the oxygen. If a well lady fainted from the exhausted air of a heated and crowded room, might not the overburdened heart of a pneumonia patient sometimes be seriously embarrassed in its struggle under similar circumstances?

No fever patient ever caught cold from air coming in contact only with the oval of its face. It was not air going in at its nose or mouth that gave it cold. The second point was the care of the digestion: pneumonia disturbed the infant's digestion; flatulence embarrassed the action of the diaphragm; pressure upward against the heart might determine the unfavorable outcome of the disease. One might almost formulate the advice, "To cure pneumonia, treat the digestion." The third point was, the use of water—bathing, to save nerve exhaustion; or, to put it in another way, to stimulate the nerve centres. A physician once suffered great remorse because a child developed pneumonia after he had treated it several days for typhoid fever, using baths, carefully regulated feedings, etc. This error in diagnosis probably gave the child its best chance of recovery. It must be remembered always that a high temperature was normal to pneumonia. There was no disease in which the thermometer was so nearly useless as in broncho-pneumonia of infants. It might even lead to harm. When the toxæmia produced nervous symptoms—stupor, great restlessness, and sleeplessness, slight delirium, etc.—a bath soothed and prepared the way for quiet sleep. If the circulation was poor, the feet were cold, and the heart was irregular, a hot foot-bath was of service. In most cases a hot foot-bath acted more favorably in equalizing the superficial circulation than a whole bath, and was apt to disturb the patient less. If the patient was stupid or delirious and nauseated from toxæmia associated with high fever, the following plan of administering cold water was most serviceable: A pack in its bed was better than tubbing. The legs and feet were wrapped in a warm flannel blanket, bottles of warm water being enclosed with the feet. The arms and hands were similarly wrapped in warm blankets including warm bottles. Thus the limbs were warmly wrapped; the trunk, neck, and head were free. Cold wet towels were wrapped about the trunk. An ice-cap was put upon the head. Usually the effect of this was to produce quiet sleep, a better pulse, clear sensorium, and ability to take food. It was believed that keeping the feet and hands warm would keep the peripheral arterioles from contracting under the cold swathing. On the whole, this method of applying cold water proved the best of all those tried. Water should be freely administered internally as well. The refreshing cold water on the lips, in the mouth and stomach

of a fever patient need only be suggested. Dr. Northrup used strychnine sulphate in rather larger doses than some; never less than one one-hundredth of a grain for any case, and usually one-sixtieth of a grain every four hours was the maximum for a child of one and one-half to two years. The sole usefulness of a poultice was to relieve pain of superficial origin. A light poultice of flaxseed and mustard, so made as to lie about the back and sides of the thorax, not binding it, the poultice used intermittingly, two to four hours on, then two to four hours off, causing redness of the skin, might prove useful. The skin should be allowed to dry between poultices.

Medical Education: Its Relation to Classical Literature.—Dr. C. De La Montayne, of Port Ewen, read this paper. The speaker referred to many authors whose writings were greatly aided by their knowledge of medicine, such as Holmes and Holland, of the United States; the hand of the physician was shown in all their works. Rabelais, the greatest satirist in any language, showed his knowledge of midwifery in Gargantua and Pentagruel. John Brown, the Scotch physician, Charles R. Darwin, Huxley, and others were assisted by their medical knowledge. Even Homer, in the "Iliad," showed his understanding of anatomy. Fleming, Conan Doyle, S. Weir Mitchell, Brown, and others were literary men whose success was undoubtedly due in no small part to their knowledge of medicine.

Tonsorial Hygiene, and State Control of Barber Shop Sanitation.—Dr. A. Walter Suiter, of Herkimer, read a paper with this title.

Reference was made to a paper read before the American Public Health Association, in Philadelphia, in October, 1897, entitled, "The Barber Shop as a Menace to the Public Health"; in this paper particular reference was made to the activity of sanitarians in the investigation and regulation of all other trades and customs, even to the much-mooted question of the communion cup, yet the barber's cup, in which lurked the most direful dangers of disease transmission, had been to an astonishing degree neglected. The author stated that it seemed entirely unnecessary to mention the subject of doubt regarding the transmissibility of the various communicable diseases which might be conveyed by mediate articles in the common operations of the barber shop. It was perfectly safe to venture the statement that a very large proportion of experienced practitioners could readily call to memory many cases that proved the affirmative of the proposition. Numerous dermatological text-books and monographs made reference to the common contagious and parasitic skin diseases and pediculi which could be communicated in the absence of proper cleanliness. Reference was made to the paper of Dr. George Thomas Jackson (Transactions, 1894), who mentions many diseases in this relation. Dr. L. Duncan Bulkley ("Syphilis Insontium") quoted no less than forty-eight writers who reported the occurrence of chancre as a sequence of razor-cuts upon the face, and a host of similar cases resulting from infected towels, combs, and brushes. A surgeon or dentist was morally and legally responsible for the absolute disinfection of his instruments before operating, and the barber should be made so likewise. In the neighboring province of Quebec there was issued a circular setting forth the dangers to the public and the necessity for taking preventive measures. All barbers were directed, first, to encourage customers to have each his own instruments; second, to disinfect the razors, combs, and clippers, with directions for accomplishing this; third, to disinfect the brushes with a two hours' exposure to the fumes of formalin, etc. (Copies of these instructions could be obtained on application to the secretary of the Board of Health of Quebec, No. 76 St. Gabriel Street, Montreal.) It was earnestly to be hoped that similar regulations might be promulgated generally through the health boards of all cities and towns.

It must be apparent that there could be no objection to the qualification of the barber as to skill and to the system of control by State licensure, but it seemed very clear that the sanitary regulation of his place of business was of so great a public interest, and its sanitary condition so much a menace to the public health, as to bring that part of the subject within the province of a constituted public-health system of authority. Let the proposed examining board make sure that barbers were not ignorant of the principles involved in the required sanitation, after which the local health officer should be required to make it certain that those principles were faithfully put and kept in practical application.

Hydrotherapy in Chronic Diseases.—Dr. Simon Baruch, of New York, read a paper with this title. During the past ten years there had been no rationale in the treatment of acute diseases with water. In February, 1895, he had read a paper on the cold-bath treatment of fever before the State society; immediately upon his return to the city he had met Dr. Flint, who had asked him to explain his technique of the Brand method, which he did with the result that Dr. Flint at once adopted it. Since that time it had been warmly advocated by Drs. Loomis, Draper, and others, of New York, Drs. Tyson and Wilson, of Philadelphia, Dr. Osler, of Baltimore, and many other prominent practitioners. Cold applications in the treatment of chronic diseases were also reviewed by him before the State society in February, 1892, when he pleaded for their more methodical management. The utilization of heat was readily adopted in the treatment of acute disease, the reason for which was plain. The conscientious physician, in the treatment of acute disease, treated the case carefully, laid down certain rules for the guidance of the nurse during and after the bath; the observations were carefully recorded, and all symptoms noted. In chronic diseases, on the contrary, we could not get skilled supervision or regular reports. In chronic diseases, iron and other tonics, iodide of potassium, and mercury were all used, with uncertain results; drugs were unreliable. A positive method of bathing like that of Brand was usually well understood by physicians who had received instructions in colleges or in text-books; while upon hydrotherapy in chronic diseases they had received no instruction in the application of the skilful technique necessary. It was high time that the judicious application of hydrotherapy as a remedial agent was impressed upon the members and its pronounced value emphasized; it was an agent the use of which was based upon sound rational principles. If the enormous vascularity of the skin and its connection with the cardiac and cerebrospinal centres were borne in mind, it at once became clear that we had found an agent which had a powerful effect in regulating the supply of blood to the skin, and that agent was water. It was a known fact that cold water stimulated the muscular fibres and that warmth relaxed them. When cold water was applied to the skin, the cutaneous arterial capillaries contracted, while the veins remained unaffected. The result was that the skin had a cyanotic appearance; if the application was prolonged, there followed a necrosis of the tissues because there was a deprivation of the vascular supply. If the application of cold water to the skin was brief, the contraction of the arteries was evanescent. A smiliar result was obtained from the application of heat; both were cutaneous excitants, whose effects were conveyed to the skin through the medium of water. Water had become popular for this purpose on account of its great capacity for taking up cold or heat; also because it could be applied to por-

tions of the body or to the entire surface, with varying degrees of temperature, and for a longer or shorter period of time. Thus we could have any temperature and any duration in the hydrotherapic applications—principles which made water useful in various conditions, enabling us to modify its effects. To illustrate: in an ordinary case of syncope a dash of cold water roused the patient to consciousness. In more intense involvement of the brain, as from the use of opium, more active measures were required to produce an effect. In both instances the *rationale* was the same: the cutaneous nerve terminals were stimulated and so affected the motor tracts to the brain; this stimulus was reflected to the pneumogastric, which produced a deep inspiration and more increased cardiac action. Upon the utilization of this principle, upon this *rationale* was based all the clinical value of hydrotherapy; the mechanical action upon the skin was produced by positive and readily ascertained means. It might be definitely foretold when the pulse would be accelerated or slowed; when it would become strong or feeble. Change in the size of the blood-vessel, contraction or dilatation, might be positively effected by cold or heat. Alterations in the corpuscular elements of the blood itself and in its hæmoglobin had been demonstrated by experiments personally conducted by Dr. Baruch. That these changes were very rapid was self-evident. Since in the so-called inflammatory processes there were pathological changes, a disturbed condition of the circulation with changes in the vessel walls and in the corpuscular blood elements, which could be removed by restoring the normal circulatory conditions by hydrotherapy, we had in the latter a reliable agent of great potency in gastric, intestinal, and pulmonary diseases. Physiological as well as clinical experiments demonstrated that excretions and secretions depended upon the circulation and might be enhanced by restoring the latter when disturbed. Infectious diseases, like typhoid fever and pneumonia, not only have the quantity of urine increased by the judicious use of hydrotherapy, but their coefficient was doubled or even trebled.

The elimination of urea and uric acid, as ascertained by Strasser, was greatly increased in healthy individuals. It was well established that certain diseases, like gout, rheumatism, syphilis, etc., could be favorably influenced by hydrotherapy. Semmola, of Naples, stated that hydrotherapy caused cutaneous activity and with it all functions were affected. In a paper read by Dr. Baruch before the State Medical Society in 1892, he stated that many cases of chronic nature, in which failures had occurred from the use of medicinal agents, had yielded most happily under hydrotherapy treatment; after a lapse of seven years his belief in this measure was as strong as ever. Many cases were referred to him by his colleagues after the best therapeutic measures had been applied. As an example he referred to a case of chloro-anæmia which had been treated by a well-known physician without results. By the judicious use of cold water to the skin a change soon appeared. It was sometimes difficult to apply such a treatment; the abstraction of heat by cold water applied to the skin in a patient of enfeebled powers was often difficult. The skin was the heat-regulating organ of the body; when affected by cold, the respirations deepened, the pulse-rate increased, the blood was driven from the surface, rendering the circulation in the deeper parts more active, and thus more heat was produced than was abstracted, provided the physician used skill in attending to the reactive capacity of the patient. When Millais was asked what he mixed his paints with, he replied, "brains." More skill and judgment were needed, especially as regarded the dose and the repetition; the temperature of the water, the duration of treatment, the technique, and the condition of the patient must also be considered. In the case of a chlorotic patient the room should be warm; the patient should be in water at 100° F., and receive a rapid ablution with water at 80° F., small quantities being used in the beginning to avoid chilling. The temperature should be altered daily and larger quantities applied; the duration should also be prolonged but a chill avoided. The patient's statement as to feeling chilly should not be taken as a guide. Chattering teeth, cyanosis, etc., indicate that the reactive capacity of the patient was taxed; then the temperature of the bath should be increased and the extent of surface treated should be diminished. The application to the back should be made with good friction, then the patient should be dried and allowed to get warm by exercise. The extent of surface treated should be increased daily. The temperature of the bath should be lowered one degree every day until 60° F. are reached. Now the physician should throw a basin of water at a temperature of 80° F., with force over the body; on the second day two basins should be used, with the temperature lowered one degree; on the following day one basin should be thrown upon the chest; next over the shoulders and back. When six days are past this treatment should have produced an effect. An accelerated pulse followed, the number of red cells was absolutely increased, and the increased oxidation was enhanced by exercise in the open air. If there was any medicine capable of producing such effects he had failed to find it during an active professional life of thirty years. Dr. Loomis was accustomed to state at the New York Academy of Medicine, "We all use less medicine as we grow older." In chronic cases institutional treatment had become almost imperative. Fortunately now in New York institutions were provided in which the poor as well as the better situated may receive this treatment; and similar institutions were to be found at Lakewood, N. J., and in Philadelphia. The speaker's records embraced one hundred thousand treatments in cases of neurasthenia, chloro-anæmia, phthisis, gout, rheumatism, dyspepsia, some cardiac diseases, asthma, sciatica and other neuralgias, and neuritis. The applicability of hydrotherapy to these varied diseases was explained by the flexible nature of the treatment, which made it adaptable to the various conditions. Confidence was given to the treatment born of active clinical observation; confirmation of the latter might be readily obtained by referring to the writings of well-known clinicians, such as Nothnagel, Charcot, Krafft-Ebing, Draper, and others.

Many institutions had sprung up in Germany which were bringing hydrotherapy into disrepute. In New York State also institutions of this kind had sprung up under the management of men whose knowledge was in inverse proportion to their claims. If water is to occupy a lasting position among the remedial agencies, it should remain in the hands of medical men. Its theory and technique should be taught in schools, and the application be demonstrated in hospitals; this latter was now done in Europe. Winternitz, in Vienna, gave now a regular course in hydrotherapy. In Heidelberg, Professor Vierordt had also established a hydrotherapy clinic. Baths must be rescued from the hands of quacks and empirics. History repeats itself in the great fame recently attained by Kneipp, who caused, by the action of water upon the skin, an increased action. Such instances lowered the medical profession in the estimation of people whose faith in medical learning was shaken by laymen. If so much could be accomplished by men who knew nothing of the *rationale*, how much more could be accomplished if physicians were educated in hydrotherapy in medical colleges?

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, January 17, 1899.

LOUIS FAUGÈRES BISHOP, M.D., CHAIRMAN.

The Management of Pulmonary Tuberculosis with Special Reference to Treatment by Sodium Cinnamate.—DR. ALFRED MANN, of Denver, Col., read a paper with this title. He said that the treatment with cinnamic acid, although first brought to the notice of the profession over ten years ago, had never attracted much attention; hence the present communication, in spite of the comparative paucity of the clinical material upon which it was based.

Common Fallacies.—It was a common mistake, he said, to think that a few hours spent each day in the open air was worthy of being dignified with the title of the "open-air treatment." It was, of course, better than no life in the open air, but the benefit to be obtained from this mode of life was in direct proportion to the number of hours spent out-of-doors daily. Another very common fallacy was that exercise in the open air was always beneficial to the individual suffering from pulmonary tuberculosis. When there was a febrile movement every afternoon, and there was evident prostration, then the less exercise taken the better. Mountain-climbing and horseback-riding were to be especially avoided. The speaker said that he had seen a great many patients die almost solely because they came to the West with the general direction from their physicians to keep outdoors and take plenty of horseback exercise. Any physician who saw much of his patients, and observed the effects of such advice upon them, would soon appreciate the mischief done in this way. Some claim that the benefit from residence in high altitudes was largely that resulting from increased respiratory movements, but the speaker would rather say that the benefit was derived in spite of such accelerated respiration. Constant exposure to cold air increased the strength of the body and its power of resisting disease.

Sodium-Cinnamate Treatment. — The treatment especially considered in this paper depended upon the intravenous injection of aqueous solutions of sodium cinnamate—a substance which could be safely injected into the blood current, and which became located in the diseased areas and inhibited the action of the bacilli. The first change produced by the injections was an increase in the number of white corpuscles in the blood, and this took place especially in the eosinophiles. This augmentation of the number of leucocytes was noticeable within a few hours after the injection; it reached the maximum in twenty-four hours, and nearly disappeared within forty-eight hours. The capillaries of the affected areas became dilated and crowded with leucocytes. These leucocytes next began to gather about the tuberculous foci, forming a dense wall around the infected areas. After a time this was sufficiently pronounced to become visible to the naked eye. After a month or two new blood-vessels sprang up, granulations began to form, and as the necrotic material composing the tuberculous mass was absorbed, granulation tissue took its place. Finally, the diseased area was replaced by a connective-tissue scar. The whole process may be summed up by saying that the treatment substituted an active inflammation, the result of which was cicatrization. The subjective symptoms were those commonly observed in persons improving under general hygienic and climatic treatment, except that the favorable signs appeared more quickly. Small cavities, owing to the formation of cicatricial tissue about them and the subsequent contraction, were entirely obliterated, and even very large ones might be surrounded by dense connective tissue, with a smooth, dry lining of the same tissue. The fevers and night-sweats in favorable cases disappeared in the course of two or three weeks, and the general feeling of well-being and increased strength was noted. One of the earliest signs of improvement was a change in the expectoration to muco-purulent or mucoid expectoration, and a diminution in its quantity. The course of treatment usually extended at least over three months, but five months to a year might be required in some cases.

Preparation and Dosage.—The original preparation used was an emulsion of yolk of egg, containing water and cinnamic acid ground up finely and rendered alkaline by sodium carbonate, which was added gradually in several small portions. It was found, however, that the injection of the acid mixture caused chills. The fineness of the emulsion was a matter of great importance. Subsequently aqueous solutions of pure sodium cinnamate were used in strengths of one and five per cent. It was absolutely necessary to begin with one or two minims only of a one-per-cent. solution, especially in severe or hemorrhagic cases or when the patient is very weak. The dose is increased gradually from one one-hundredth of a grain to one-fourth or one-third of a grain. This latter dose should seldom be exceeded. The injections are repeated at intervals of forty-eight hours usually, but for convenience they may be given two or three times a week in somewhat larger doses. It is very important to use only the perfectly pure preparations, such as are made synthetically by certain German chemical houses.

Technique.—The hands of the operator, the skin at the point of injection, and the instruments should all be carefully sterilized. Usually the median basilic or cephalic vein in one or the other arm was selected. By encircling the arm some distance above the elbow by an elastic bandage, the vein was rendered prominent and its walls became tense. The needle was then plunged slantingly through the skin into the wall of the vein. If immediately after the injection, and before withdrawing the needle, the bandage was loosened, there would not be a drop of blood on the surface when the needle was withdrawn. The needle point should be kept very fine and well polished, and if this was done the pain from the injection was less than from an ordinary hypodermic injection. An aseptic dressing should be kept over the site of the puncture for a few hours.

Author's Cases.—CASE I.—A man, twenty-eight years of age, after a period of several months of depressed vitality, during which his lungs were repeatedly examined by Dr. Walter James, of New York, without discovering any lesion, suddenly developed pulmonary disease in the spring of 1892. There was then found to be consolidation of the left apex, extending down as far as the second rib, and there were numerous tubercle bacilli in the sputa. He was advised to go to Denver, and arrived there about the end of June. The first six months of outdoor life produced considerable improvement; then, owing to removal to a less favorable climate, the disease again advanced and both lungs became affected. There were two copious hemorrhages and numerous smaller ones. During most of this time there was an afternoon rise of temperature to 100° or 101.5° F. Early in the fall there was an attack of acute pleurisy, lasting two or three weeks. The out-door treatment was continued for three months, when the left lung showed dulness down to the fourth rib and the right lung to the second rib; there were numerous moist râles over nearly all of the left lung and remainder of the right. Nearly pure pus was expectorated, although the general condition was decidedly better than it had been three months previously. The prognosis, according to two

able physicians of Denver, was unfavorable. At this time, early in February, 1895, intravenous injections of sodium cinnamate were begun. In the first three weeks of the treatment the expectoration became mucopurulent, and at the end of four months great progress had been made, the expectoration containing only a trace of pus and the area occupied by the râles being very markedly less than before. The patient then went one month without injections, and during this time the improvement was very noticeable. He was then given another series of injections for three months, then a rest of six weeks, followed by injections for three months more. The improvement was continuous. By this time his general health was good, except for irregular attacks simulating gout. These were slow to disappear, and might have been the result of the leucocytosis. There were slight dulness at the right apex, dulness over the left apex, and dry râles and creaking sounds over the upper lobe. There was then no dyspnœa. There had been no return of the trouble up to the present time, although three years have elapsed since the cessation of treatment. The patient still resided in Denver.

Case II.—This was a young married woman, who, when seventeen years old, had slight trouble at one apex, but was cured by prolonged residence in the South. After the birth of her second child, although there was no cough or expectoration, she began to lose strength, and the diagnosis, founded on the physical signs, was made of pulmonary tuberculosis. Both apices were found to be involved. Dr. E. G. Janeway, of New York, gave a bad prognosis. The cough and expectoration of tubercle bacilli were not observed for several years after the first symptoms of the disease. Residence in the mountains of Arizona for two years and a half had prevented the condition from growing worse, but had not effected any material improvement. One year of treatment by injections of sodium cinnamate resulted in cicatrization all over the lungs. Now, three years afterward, Dr. Louis Faugères Bishop, of New York, reported that there were dulness and bronchial breathing to be heard on auscultation, but no adventitious sounds were audible, although formerly scattered moist râles were everywhere heard. The body weight had increased very decidedly. Improvement was first noted five weeks after beginning the injection treatment. The scars in the lungs could be easily demonstrated by auscultation and percussion.

The speaker said that he had treated a number of other cases by the same method, but had not been able to follow them sufficiently long. In considering the claims of this method of treatment, it should be remembered that it was not suitable for cases in the last stages of the disease, with large cavities and high fever, as there was not enough normal lung tissue left to allow of cicatrization and still give sufficient breathing-space. The great obstacle to the successful carrying out of the method was the difficulty experienced in keeping the patients under treatment for a sufficient length of time. They were very prone to discontinue treatment as soon as they felt somewhat better. It was, of course, assisted by residence in such a climate as that of Colorado, and also by life in a modern sanatorium.

Respiratory Exercises Very Important. — Dr. S. Knopf said that he had had no experience whatever with the sodium-cinnamate treatment, but he desired to speak of the general principles underlying the treatment of pulmonary tuberculosis. Regarding direct exposure to the rays of the sun, he would say that it was very important that the patient's head should be protected from the sun's rays. If this precaution was taken, the exposure to sunlight would be found a very important part of the treatment. Although some prominent physicians still favored indiscriminate exercise for cases of pulmonary tuberculosis, he was totally opposed to it if there was the slightest fever present. In his opinion, breathing exercises constituted a most important part of the treatment, but, of course, they must be carried on judiciously, and not left to the will and discretion of the patient. Breathing exercises should never be taken except in the purest, clearest atmosphere, and when the patient was not fatigued, and when the head was turned away from the wind. Deep inspirations should be followed by a secondary expiratory effort for the purpose of expelling a little more of the residual air. The speaker said that it was a well-known fact that almost all pulmonary invalids did better in a cold climate. Dr. E. L. Trudeau, for example, found that the patients at his Adirondack sanatorium generally felt very much better during the rigorous winters there. The process of cure described in the paper was that observed in all cases of tuberculosis—a phagocytosis followed by connective formation and cicatrization. Increased phagocytosis was observed even after the injection of decinormal salt solution.

Sodium-Chloride Treatment.—For some time past he had carried out a plan which might be called "the sodium-chloride treatment." He told his patients to eat as much chloride of sodium as possible. The free ingestion of this salt seemed to make the expectoration less tenacious and to increase the feeling of well-being. The patient was simply told to take as much table salt as possible with the food; it was not given as a medicine.

Sanatorium Treatment.—Dr. Alfred Meyer said that he had not had any personal experience with cinnamic acid, or its salts, in the treatment of tuberculosis, but he had seen a great deal of this disease at the Mount Sinai Hospital in all of its manifold phases. The title of the paper called up many other plans of treating this dreaded disease, which had yielded, however, nothing but bitter disappointment. Even guaiacol, he believed, had not done so much as many seemed to think, and it had seemed to be absolutely harmful in some cases. In the same category he would place inhalations of hydrofluoric acid, of peppermint, hydrogen sulphide, and various other medicaments. The trend of professional opinion had been toward the climatic treatment of pulmonary tuberculosis in preference to the treatment by drugs, and there had been an increasing number of voices in favor of the establishment of State sanatoria in proper localities, the argument being that this method had been effective, and, as the State looked after its epileptic poor, it might just as well look after its tuberculous poor, who were a danger both to themselves and others. Even granting that politics and science would join hands for the consummation of this worthy object, still, in view of the great prevalence of the disease, the practical difficulties of providing for all in this manner appeared almost insurmountable. The usually accepted mortality from tuberculosis in most countries was one-seventh of all deaths, but some place the figures as high as one-third of the whole human race. Again, many years must elapse before the sanatorium treatment could be expected to accomplish very much. Our present methods saved only about one-seventh of the cases. In this connection it was encouraging to note that an institution which had been established only one year ago at Bedford, Westchester County, forty miles from New York City, and only a few hundred feet above the sea-level, had yielded so far very promising results.

Cold Climates and Tuberculosis.—Dr. Quackenbos said that it was an old idea that as one passed to the north pulmonary diseases diminished, but this was not true. A friend had explored Alaska, and had lived three years among the Esquimaux there, who

had never seen a white man before. This gentleman had stated to him that tuberculosis was the disease that killed these people—a fact of some interest in connection with the coldness of the climate. Of course, it was quite possible that the good effects of the climate were more than offset by the lack of proper hygiene in their daily lives.

Dr. Louis Faugères Bishop said that the second case described in the paper was one that had been under his care before going West. On her return to this city last fall he had been astounded at the wonderful increase in weight, the general appearance of good health, and the very extensive physical signs of cicatrization. She did not present at that time any evidence of active pulmonary disease. The great difficulty met with in this city was in controlling these patients sufficiently long to secure the desired effect from the treatment.

Effect of Sunlight and Breathing Exercises.—Dr. Mann, in closing the discussion, said that the general opinion seemed to be that the more the tuberculous patient sat in the sun the better it was. Personally he believed it to be useful in many cases, yet he had often known this notion, persistently adhered to and practised, to be responsible for a good deal of harm. The sun of Colorado, moreover, was much warmer than in many other places. In the morning the temperature of most tuberculous patients was below the normal, and at that time of the day they enjoyed the sun and it usually did them good; but in the afternoon the effect was often just the reverse. He had frequently seen deleterious results that could be directly traced to breathing exercises. He could not see why lungs filled with ulcerated areas should be persistently stretched any more than a fractured limb should be subjected to frequent manipulations. Dr. Murphy's new treatment for tuberculosis of the lung had for its object the immobilization of the lung. Rest of the diseased areas in the lung seemed to him very essential. Breathing exercises were undoubtedly of value after the active process had ceased and healing was well advanced. Unquestionably a vast number of methods of treatment had been advocated for pulmonary tuberculosis, many of them on very insufficient grounds. He was of the opinion that creosote and guaiacol were useful in fairly large doses, because they stimulated digestion and favored assimilation, yet he rarely found it desirable to use either of these drugs in his locality. It was reasonable to infer that the great prevalence of pulmonary tuberculosis among the Esquimaux was due to the fact that these people lived amid the most unhygienic surroundings—just those which would favor the spread of the disease. Some of the Indian tribes were very susceptible to tuberculosis, even when living in the very regions where white people went to get rid of this disease, and the same explanation would apply to them.

Revival of Carbonic-Acid-Gas Treatment. — Dr. Achilles Rose read a paper with this title, which was largely historical. He said that in the seventeenth century the antiseptic powers of this gas had been discovered, and that in the eighteenth century many English physicians had made use of it and had published their observations. Perceval referred to the treatment of scorbutic affections by this remedy, and spoke of it as an excellent means of treating ozœna. Carbonic acid, when applied to mucous membranes, produced a hyperæmic condition. Its action, at first, in acute rhinitis was similar to that of cocaine in that it gave immediate relief, but its effect differed from that of cocaine in being more lasting. Perceval used the gas in cancerous ulcerations, and succeeded in modifying the secretion, removing the odor, and relieving the pain. White, an English physician of the eighteenth century, recommended the topical application of the gas in croup, and in this view he was sustained by a number of well-known physicians of his time. The use of carbonic-acid gas in the treatment of various diseased conditions received a set-back in Scanzoni's clinic, from the fact that a pregnant woman died shortly after receiving a vaginal douche of carbonic-acid gas. Subsequent experiments on pregnant rabbits showed that this gas had no deleterious effect on pregnancy, and this, Dr. Rose said, coincided with his own clinical experience. Carbonic-acid-gas baths, as given at Nauheim, had proved exceedingly beneficial in chronic rheumatism and in the treatment of certain forms of paralysis, such as those of hysterical origin. Carbonic-acid-gas douches were formerly considered to be useful in conjunctivitis, but when the disease was acute it was recommended that the gas be applied to the eyelids until they were reddened. Even in severe forms of keratitis it proved beneficial. In certain forms of cystitis and vesical neuralgia, injections of carbonic-acid gas had been found useful. When the gas was applied externally in connection with baths, the patient experienced a tingling sensation of the surface, followed by perspiration, increased activity of the kidneys, and a feeling of exhilaration. This last effect persisted for many hours, and was to be explained by the fact that the gas readily gained access to the lungs, and was diffused in an upward direction, so that more than the normal quantity of oxygen descended, and the lungs were thereby subjected to a ventilating process.

Effect of Gas in Anæmia. — Dr. Rose then presented a young girl, who had been referred to him on September 13, 1898, by Dr. McMaster. She had been suffering for some years from chorea minor, and had been sleepless and extremely anæmic. The carbonic-acid-gas inflations were begun at once, and immediate improvement in her general condition was noticed, particularly in the relief of the anæmia, which had hitherto proved very rebellious under the usual medication. The patient was presented to show that the anæmia had been overcome.

Dr. Wolff Freudenthal said that he had recently tried the carbonic-acid-gas treatment in atrophic or dry rhinitis and in post-nasal catarrh. No other treatment was employed in these cases at first, and as a result no improvement was observed. Then the plan was followed of removing the dry crusts in the passages before using the gas treatment, and this had yielded better results. The bottle in which the gas was generated should be provided with a funnel tube extending down into the fluid, so that if the pressure became too great this tube will afford the necessary vent.

Stated Meeting, January 19, 1899.

William H. Thomson, M.D., President.

The meeting was in charge of the section on neurology and psychiatry.

Inhibition.—Dr. Samuel J. Meltzer read a paper with this title. In it he gave an elaborate review of the various physiological researches through which we had obtained our present knowledge of the vast field of inhibitory phenomena. Only portions of the paper were read, and they were selected to illustrate how widespread were these inhibitory influences. Thus inhibitory nerves for the spleen, he said, had been very recently discovered, and also inhibitory nerves for the lymphatic system. It was the opinion of the physiologists of the present day that reflex inhibition was a normal factor in the respiratory mechanism. Experiments seemed to show that the vagus apparently contained inhibitory fibres for the gall bladder and and bile duct, while the splanchnic nerve carried mo-

tor fibres for the gall bladder and bile duct and inhibitory fibres for the sphincter. Stimulation of the central end of the sciatic nerve was found to inhibit the knee jerk. Stimulation of the optic thalamus and corpora quadrigemina increased the spinal reflexes. A stimulus sufficient to contract an adductor muscle kept the abductor relaxed, and a stimulus which caused contraction of an abductor produced relaxation of its antagonist. Dr. Meltzer then discussed at length the nature of inhibition, and particularly that theory which sought to explain all inhibitory phenomena by the part played by two antagonistic processes, assimilation and dissimilation, or the building up of the tissues and their destruction. The observations on the presence of inhibition, he said, were first made on organs or functions which were normally in a rhythmic or arrhythmic state of contractility. In the collapsed skeletal muscles inhibition could not be recognized. He thought a careful study of the subject would justify the following conclusions: (1) That inhibition extended as far as the existence of irritability, and was an integral part. All the irritable tissues of the living body responded to a stimulus as well as to inhibition of this activity. The actual effect of a stimulation was only the resultant of two opposing forces, though probably leaning more toward one or the other, according to the external circumstances. (2) All the active phenomena of life were not pure manifestations of these factors, but resultants of the two forces—there was, in other words, no action without admixture of inhibition. (3) In the peripheral as well as in the central organs activity and inhibition were apparently separated. In his estimate of the extent and importance of inhibition he was, to a great extent, in accordance with at least two eminent physiologists. He had become profoundly impressed with the fact that the discovery and development of inhibition constituted the greatest achievements in biology of the nineteenth century.

Dr. Frederick Lee said that he had no doubt that inhibition was a very widespread physiological phenomenon. The evidence which had been obtained by experiment and cited in the paper referred almost entirely to the nervous system. The existence of specific inhibitory nerve fibres had been proved, as also the existence of specific inhibitory nerve centres, yet he had no doubt that inhibition was a general physiological phenomenon, and that it applied to all tissues, all organs, and all cells. Just as a nerve could be made by stimulation to cause contraction of a muscle, it was probable in time that one would be able to stimulate the muscle directly and obtain relaxation directly without the intervention of the nervous system. The same might be said of all tissues. In regard to the theory of inhibition, the speaker said that inhibition must be explained in terms of metabolism, and the theory of Hering pointed the way to a correct understanding. According to this theory there were going on at all times in living substances two antagonistic processes—a process of building-up and a process of breaking-down, or anabolism and catabolism. The quantitative relation between these two processes at any moment might be expressed in the form of a fraction, $^{A}/_{D}$. This fraction was exquivalent to the expression "bitonus," which simply expressed the relation existing at any time between assimilation and dissimilation. When the tissue or cell was at rest, and assimilation and dissimilation were equal, then $^{A}/_{D} = 1$. But if this tissue or cell was stimulated, it might cause either excitation or depression. In terms of metabolism, when a stimulus was applied to any tissue, it might excite either assimilation or dissimilation. Under ordinary circumstances a stimulus which would excite assimilation might excite dissimilation, and *vice versa*. When the muscle was stimulated through its nerve and on traction resulted, the muscle gave off certain waste products, and was able to do less work thereafter. The metabolic change *par excellence* was a change regarding dissimilation. What took place metabolically might be conveniently represented by the graphic method. Stimulation might lead to four results, viz.: (1) Excitation of assimilation; (2) depression of assimilation; (3) excitation of dissimilation; and (4) depression of dissimilation. The reader of the paper had contrasted activity with inhibition, giving a very convenient nomenclature, and one which was very commonly employed; nevertheless there was a possibility of misunderstanding from using such terms. These theoretical considerations regarding inhibition, he thought, had an important bearing on the practice of medicine. The physician endeavored in practice to make the disordered cells more active or less active than before, and it was important for him to decide as to whether he should act upon the assimilatory or the dissimilatory processes.

Prof. James M. Cattell said that the theory to which reference had been made was based upon the phenomena of sensation, owing to the fact that red and green could not be seen simultaneously when placed on certain retinal points. In the case of hearing, a tuning-fork of high pitch and loud sound did not prevent one from hearing a tuning-fork of lower pitch and low sound. Again, the sensations of taste described as "sweet" and "sour" emphasized each other, which was not the case with "sweet" and "salt." Our higher cerebral centres and mental processes were undoubtedly largely inhibitory. The child and the savage will let each sensation be followed by its peculiar movement, which was not the rule with the adult and the educated. Crime, vice, and insanity might be said, in a way, to be due to a lack of proper inhibitory function. It had been found in the psychological laboratory of Columbia that if these movements were prevented, the mental processes were inhibited. Children expressed their mental processes habitually by movements; hence if we placed them in school and prevented these movements, we probably inhibited their mental processes. Perhaps a fair example of psychological inhibition would be that in which a person suffering from toothache was relieved of that pain by the sensation of pleasure produced by listening to charming music.

Dr. L. Muskens enlarged upon Gaskell's theory of inhibition, and especially upon deductions from his own observations on the hearts of animals.

Dr. Meltzer closed the discussion. He said that "inhibition" was a short term for inhibition of motion, sensation, and secretion, but we had no single term to describe the opposite condition. The object of his paper was to show that the phenomenon of inhibition was present in all the processes of life, and in this connection he had presented one theory which had gained the larger number of adherents.

Advantages of Intubation Over Tracheotomy.—Dr. Richmond McKinney summarizes as follows: (1) There is an entire avoidance of surgical procedure, always dreaded by child and parents. (2) The intubation tube is easy of introduction to one who has had a little experience in its use, and is worn more comfortably than the tracheotomy tube. (3) A child after being intubated does not require that constant attention necessarily devoted to one wearing a tracheotomy tube. (4) Respiration after intubation is usually easy, and the air is warmed and moistened by passing through the natural passages. (5) It is easier for the child to bring up mucus and other expectorata.—*Memphis Medical Monthly*, October, 1898.

Therapeutic Hints.

Irritable Bladder After Confinement.—

℞ Salol,
Tinct. hyoscyami ..... āā ʒ ij.
Infus. buchu ..... q.s. ad ℥ vi.
M. S. Tablespoonful three times a day.

—Dr. W. E. Fothergill.

Headaches.—

℞ Sodii brom ..... ʒ i.
Phenacetin ..... gr. xxx.
Caffein. citrat ..... gr. xviij.
Sodii bicarb ..... ʒ i.
M. et ft. chart. No. vi. S. One every fifteen minutes till relieved, to be followed by a Seidlitz powder.

—Dr. M. Staller.

In Irritable Uterus, Diffuse Pelvic Pains, and hysterical neuroses in various parts of the body:

℞ Potassii bromidi ..... ℥ i.
Aquæ ..... Ō i.
M. S. Use as a vaginal injection.

—Dr. Mundé.

To Disinfect the Skin before inserting the needle and for cleansing the operator's hands:

℞ Lysol 2
Water 100

Lupus.—

℞ Sod. sulphoichthyolat 2
Aquæ 100
M. S. Inject 1 c.c.

—Unna.

As an Analgesic in Myelitis.—

℞ Ichthyol 0.50
Aquæ destil 10
M. S. Inject one cubic centimetre every second day.

—Dujardin-Beaumetz.

Locomotor Ataxia.—

℞ Ferri lactatis ..... ↄij.-iv.
Ext. cinchonæ ..... ʒ i.-ↄiv.
Ext. nucis vomicæ ..... gr. v.-xv.
Ext. gentianæ ..... q.s.
M. ft. pil. xl. S. One or two as a tonic after three meals daily.

—Erb.

Children's Emetic (Six to Ten Years).—

℞ Pulv. ipecacuanhæ ..... gr. viiss.
Antimonii et potassii tartratis ..... gr. ½
Oxymel scillæ ..... ʒ iiss.
Aq. dest ..... q.s. ad ℥ i.
M. S. One teaspoonful every ten minutes until vomiting occurs.

—Baginsky.

Acute Colic.—

℞ Tinct. opii deodorat ..... ʒ i.
Chloroformi ..... ʒ iss.
Camphoræ ..... gr. iv.
Ol. cajuputi ..... ʒ i.
Aquæ ..... ℥ ij.
M. S. One teaspoonful every hour.

Neuralgia.—

℞ Menthol,
Guaiacol ..... āā 1
Spt. vini rect. absol 18
M. S. Apply on cotton two or three times daily.

Vaginismus and Vaginitis.—

℞ Ol. eucalypti ..... ʒ iij.
Ceræ albæ,
Olei theobromatis ..... āā ad ʒ iij.
M. Div. in supposit. No. iv. (bougie-shaped).

—Lutaud, *Jour. de Méd.*

Poisoning by Creolin.—Atropine, gr. $\frac{1}{120}$, followed in half an hour by gr. $\frac{1}{60}$, in child of five years. Artificial respiration. When the patient is able to swallow, magnes. sulphat. ℥ ss., in saturated solution.—Antony.

Stomatitis in Smokers.—

℞ Salol 1
Tinct. catechu 2
Spir. menth. pip 50
M. S. A teaspoonful in a glass of warm water as a mouth wash.

In the Beginning of Pulmonary Tuberculosis.—

℞ Hydrarg. bichlor 1
Aquæ destil 1,000

For subcutaneous injection in the supraspinous and infraspinous fossæ. Also useful in skin tuberculosis. —Dubois.

Hay Asthma, with cough and difficult expectoration following exposure:

℞ Ammon. chlorid ..... ʒ iv.
Tinct. hyoscyami,
Syr. scillæ comp.,
Syr. senegæ,
Syr. tolutanæ ..... āā ʒ i.
M. S. Teaspoonful every three hours,

—Dr. Eshner.

Pelvic Congestion.—

℞ Magnes. sulphatis ..... ʒ viiss.
Ferri sulphatis ..... ʒ ij.
Manganesii sulphatis ..... ʒ ij.
Acid sulphur. dil ..... ♏ xlv.
Aquæ destil ..... ℥ iv.
M. S. A tablespoonful before breakfast in a wineglass of water.

—*Riforma Medica.*

Whooping-Cough.—

℞ Tinct. belladonnæ ..... ʒ ij.
Phenacetin ..... ʒ iij.
Spts. frumenti (q. s. solve phenacetin) ..... ℥ i.
Fld. ext. castaneæ ..... ℥ vi.
M. S. Teaspoonful every three hours until the face flushes; then every three, four, or six hours, as needed to control the cough, in a child of six years.

—Dr. R. A. Lancaster, *Florida Health Notes*, December, 1898.

Tuberculous Laryngitis.—To relieve the vomiting following as the result of a morning's bout of coughing:

℞ Menthol,
Sulphuric ether,
Ol. pini sylvestris,
Tinct. iodii ..... āā ʒ ij.
Tinct. benzoin. co ..... ad ℥ ij.
M. S. Ten or more drops to be dropped on the sponge of an oro-nasal inhaler, to be worn indoors as often and as long as is convenient.

—Dr. W. Fowler, *Intercolonial Medical Journal of Australasia*, October 20, 1898.

Sirop de l'Enfant Jésus.—This calming syrup, employed in young children for the relief of insomnia, convulsions, etc., is said to represent in each teaspoonful:

℞ Potass. brom.,
Sodii brom.,
Ammon. brom.,
Calcium brom ..... āā 0.05 cgm.
Syr. belladonnæ (Fr. Cod.) ..... 1 gm.
Syr. aurantii flor ..... 5 "
Dose: One to four teaspoonfuls according to age.

—*Bull. de Pharm. de Lyon.*

Gouty Arthritis.—In the acute form rest is recommended, with local applications for the relief of pain. The following has been extensively used:

℞ Atropinæ ..... gr. i.
Morphinæ ..... gr. viij.
Aquæ ..... ʒ i.

A piece of lint soaked with this lotion is laid over the inflamed point, covered with oiled silk and absorbent cotton. The constitutional treatment for gout must be carried out.—J. W. MacDonald.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ANOTHER MIDWIVES' BILL—PROTECTION FROM ANTIVACS—THE HEART IN FACE OF DIFFICULTIES—CASE OF MORPHINE POISONING—TYPHOID ANTITOXIN—EPIDEMICS—ROLL OF THE PROFESSION—DEATHS OF SIR J. MOUAT AND OTHERS.

LONDON, January 13, 1899.

A NEW midwives' bill has been prepared for introduction to Parliament. The promoters profess to have brought it into accord with the views of the Medical Council, and it has secured a degree of approval from Mrs. Garrett-Anderson, who thinks it is a more practical scheme than the one rejected last session. Already some defects have been pointed out, and the new proposal is not calculated to excite enthusiasm in its favor, except among the few who supported the monstrous bill of last year. Moreover, no confidence is felt in the promoters, who admit that they expect opposition to the conditions laid down by the Medical Council. Such opposition they will evidently welcome, and many think they will foster or even endeavor to excite it. They need not wonder, then, that the profession mistrusts them. Last year the government intimated that the conditions of the Medical Council must be complied with. It is to be hoped there will be no vacillation on this point, for the modifications insisted on by the council are all too moderate.

The public seems to be partially awaking to the danger of epidemic smallpox in consequence of the new vaccination law. Thousands of persons have declared themselves "conscientious objectors" to the preventive, and the "tremendous experiment," as Lord Lister termed it, of preparing in all directions a suitable soil for the virus is beginning to be realized. The newspapers are publishing letters describing schemes of prevention. One is the formation of a league pledged to refuse employment to unprotected persons. The Peabody trustees have always insisted on their tenants being protected. Since the new act one of them, having become a "conscientious objector," received notice to quit, and complained to the magistrate, but of course he must take the consequences of his folly, whether it be to change his home or suffer from smallpox. It is proposed that they should refuse to let houses or apartments to unprotected persons, to employ them as servants or otherwise, and as far as convenient boycott them. The word has a disagreeable association, and the antis will rave about it and their own right conscientiously to object. Be it so, but surely every one has an equal right to avoid contact as far as he can with a carrier of contagion.

On Monday evening Sir W. Broadbent read a paper at the Medical Society on "The Conduct of the Heart in the Face of Difficulties." There is almost a *soupçon* of philosophy about the phrase, and the word "conduct" has a moral flavor, which adds to the suggestion. I do not intend to hint that the word or the phrase is inappropriate, although perhaps sufficiently unusual to excite a passing thought as to metaphors in relation to medical matters.

In regard to functional disturbances Sir William reminded his audience that a very considerable proportion are due to interference from without, *e.g.*, those arising from a distended stomach. Peripheral obstacles are more serious, and here he dwelt upon one of his favorite themes—high tension. How often has he enforced the importance of this in going round his wards! To some of his students, indeed, at times high tension seemed to be the key to the most diverse problems, and it took the younger ones time properly to digest the instruction they were gaining. The remarkable susceptibility of the heart to nervous influences was also considered, and the necessity of distinguishing cases thus arising from those due to digestive disturbances was enforced, as successful treatment could not be obtained without such differentiation. Another point in the management of affections of the heart, whether functional or organic, was made, viz., that much more relief could generally be given by reducing the stress or removing obstacles than by directly stimulating the heart to overcome them; and here he once more insisted on the value of small venesections in certain cases. He has often emphasized this point, on which I cordially agree with him. High pressure in the veins and right heart is an indication for a small bleeding followed by a dose of calomel, but in these last days there is wonderful timidity as to bleeding a patient.

In the conversation which followed the paper its author's views were generally accepted, and the speakers referred to the several factors concerned in the production of cardiac disturbance, as they presented themselves in their individual practice. The nerve influence, pressure from the stomach or otherwise, the state of the blood and of the heart muscle were mentioned among the factors, one laying more stress on this, another on that. The grave significance of irregularity of the heart's action was urged by one speaker and is no doubt at times serious, but I have seen it vanish on the disuse or diminished use of tobacco. The use of senega was said by another to be contraindicated in bronchitis with cardiac complication, this expectorant being a depressant to the heart.

A very sad "misadventure"—so the coroner's jury called it—has caused the death of a young married lady. A practitioner who kept a dispenser ordered in the patient's medicine one and one-half grains of morphine. The dispenser actually put in fifty grains. The excuse was that he was not well, much worried, and that the prescription was given partly in writing and partly verbally. The coroner showed the written order to a pharmacist, who said he could not understand it. The prescriber was rebuked for his slovenly method, and the dispenser for his carelessness in dealing with deadly drugs. Both have escaped from a verdict of manslaughter.

Professor Wright, of Netley, who has gone to India on the plague commission, has inoculated two hundred and fifty soldiers with his typhoid antitoxin.

The Forest Gate school is causing some anxiety again. There were six cases of scarlet fever last week among the children, and a number of the officers are reported as having influenza or sore throat. Four scholars were sent in with diphtheria. Dr. Downes, inspector of the government board, was sent down. He advised that bacteriological examination of all the children's throats should be carried out, and this is being done.

Diphtheria has broken out at Market Drayton, nineteen cases being reported last week. Dr. Thursfield, the county medical officer, was called in. He found the sanitary arrangements very bad. The schools were at once closed.

The new books published in 1898 relating to medicine numbered 160 and new editions 36. The respective numbers for the previous year were 152 and 59. The medical directory gives the number of practitioners to be 34,994, an increase over last year of 91. This is not so bad as last year, but still too many for a profession already so overcrowded.

Surgeon-General Sir James Mouat, K.C.B., V.C., honorary surgeon to the Queen, died on the 4th instant, aged eighty-three years, after long and distinguished service. In the Crimean war he was present

at the chief battles, and for his services received the order of the Bath, the Legion of Honor, and the Turkish medal. He won the Victoria cross at the battle of Balaclava by going to the help of a wounded officer in an exposed situation after the retreat of the light cavalry, staunching the hemorrhage and coolly dressing the wound in the presence of the enemy. He served through the New Zealand wars in 1860–61 and 1863–65, was frequently mentioned in dispatches, and received the thanks of the colonial government for his "special and valuable services."

The death is also announced of Surgeon-General Lewis Stanhope Bruce, who died on the 2d instant, in his sixty-eighth year. He had served through the Indian mutiny and Afghan war, and became past medical officer of the Afghanistan field force. General Bruce received various medals for his distinguished services. He retired in 1887 on account of ill health.

The following veterans have also passed away: Dr. John Say Clarke, aged eighty-eight years, on December 22d; John Jeffree, F.R.C.S., aged seventy-eight years, on January 3d; Dr. Keith Jopp, on December 31st, aged eighty-one years; Dr. E. W. Davy, M.D., M.R.I.A., a descendant of the great chemist, Sir Humphry Davy, aged seventy-two years.

THE NEW DISPENSARY BILL.

To the Editor of the Medical Record.

Sir: I notice in your issue of January 21, 1899, among the notices of the week a little note with regard to a new dispensary bill which will be introduced into the New York Legislature this winter, and I trust you will allow me a little space in your columns to comment on what is therein stated. You say: "As it is one favored by the dispensary managers themselves, it will probably meet a better fate than the Sullivan dispensary bill of last winter." If the dispensary managers can persuade the members of the Legislature that their bill is a desirable one, and if they can have more influence with the present Legislature than they had with the last, it is possible that the bill will get through, but I think a careful study of the measure will show that it is about as cunningly drafted a bill as could very well be devised. Indeed, it gives rise to a reasonable suspicion that the real object of the bill is to have no measure regulating dispensaries, rather than an honest attempt to correct abuses. You say that the bill was "drawn up by representatives of the Medical Society of the State of New York, by the Homœopathic Medical Society of the State of New York, and by the Eclectic Medical Society of the State of New York, at the request of the representatives of all the dispensaries in Greater New York, and has received the approval of the latter." As regards the matter of representation from the Homœopathic State Medical Society or the Eclectic State Medical Society I know nothing whatever, but the Medical Society of the State of New York has authorized no one to represent it in this matter, nor has it authorized any bill to be drawn up, and whether the dispensaries in Greater New York requested this bill to be drafted is entirely aside from the question. No request that they might make to irresponsible persons could have any weight whatever in pledging the Medical Society of the State of New York. There is one board, however, whose consent it would be very important to obtain in order to get any such bill as this through, and that is the State board of charities; but it is hardly conceivable that the State board of charities would give its approval to a measure which is a downright insult to it, for it practically says that it is unfit for its position, and should be put in tutelage; therefore a board of control shall be appointed to assume the functions of the State board of charities and do its work for it. It is proposed that this board shall be composed as follows:

"Section 19. There shall be a board of control for the supervision and regulation of dispensaries, consisting of twelve members appointed by the State board of charities, each of whom shall hold office for two years from August 1st of the year appointed. This board shall consist of two members from the Medical Society of the State of New York, two members from the Homœopathic Medical Society of the State of New York, two members from the Eclectic Medical Society of the State of New York, and six members not physicians." In this section it will be noted that the principal function that the State board of charities has, as regards this board of control, is that it shall appoint twelve members from a list of names which will be submitted to them by the State medical societies and the dispensaries.

Section 20 reads: "The Medical Society of the State of New York, the Homœopathic Medical Society of the State of New York, and the Eclectic Medical Society of the State of New York shall at each annual meeting nominate four members, from which the State board of charities shall appoint two to represent each society on the board of control. Each society above mentioned shall also nominate at each annual meeting four non-medical candidates from the directors or trustees of the dispensaries of the State, from which the State board of charities shall appoint two to represent each society on the board of control. The medical and non-medical members nominated by each society during the first year under authority of this act shall be appointed by the State board of charities, one-half to serve one year and one-half to serve two years. The names of all nominees shall be annually transmitted under seal by the president and secretary prior to May 1st to the State board of charities, who shall prior to August 1st appoint from such lists the members required to fill any vacancies that will occur from expiration of term on August 1st. Any other vacancies, however occurring, shall be filled by the State board of charities from the then current lists. . . ."

Here it will be noticed that all these twelve men are to be appointed from a list of twenty-four, and there is nothing whatever which precludes them from all being members of dispensaries, either in their lay or medical capacities. In other words, the dispensaries mean to run the board of charities, so far as the supervision and control of their institutions are concerned.

Section 23 reads as follows: "Each member of the board of control shall receive as compensation ten dollars for each day's attendance at meetings of the board or any of its committees, but not exceeding three hundred dollars in any one year. The board of control may employ such persons and incur such expenses as may be necessary in the performance of its duties, and each member of the board shall also be repaid the amount of all expenses necessarily paid by him in the performance of his duties, provided, however, that the total expenses incurred as above by the board of control and members thereof shall not exceed the sum of thirty-six hundred dollars in any one year. The sum of seventy-two hundred dollars, or so much thereof as may be necessary, payable out of any moneys in the treasury not otherwise appropriated, is hereby appropriated to carry out the provisions of this act, and shall be paid to said board of control or its members by the State treasurer upon the warrant of the comptroller, issued upon the certificate of the president of the board of control or of the member making the charge."

In this section is contained the milk in the cocoa-

nut. It is a pretty little device whereby these amiable gentlemen are to junket over the State, with repayment by the State for every expense; they are to receive compensation for their valuable services, and have an opportunity to obtain an appropriation from the State treasury, as many other institutions have already from the municipal. The old bill relegated this work to a body appointed for that purpose, to wit, the State board of charities, without any increased expenditure by the State.

These are a few of the defects of this bill, and I am only restrained from calling attention to others by the fear that I may trespass too much upon your space and upon your indulgence; but if there are any physicians in this county who are really interested in the question of the regulation of dispensaries, let them get a copy of this bill and read it over carefully, and I shall be very much surprised if after a study of this bill they do not agree with the writer that to pass such a measure as this would be worse than to pass nothing.

F. R. STURGIS, M.D.

NEW YORK, January 24, 1899.

SENNA LEAVES FOR CHRONIC CONSTIPATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Dr. Rockwell's remarks in the MEDICAL RECORD of December 10, 1898, in regard to the apple diet as a treatment for chronic constipation, are both timely and true, as I can attest from my own personal experience. But there are cases that even the apple diet will not relieve; such cases I have met with, and doubtless the majority of physicians have. In such cases I recommend a very simple, inexpensive, not at all unpleasant, and with me very effective treatment, viz., the eating just before going to bed of a teaspoonful to a tablespoonful of senna leaves. The patient will soon learn the amount of leaves necessary for his individual case. A dozen leaves is quite sufficient for some, while others require several dozen. I have had this remedy give relief to cases of more than twenty years' standing, and I cannot now recall a case in which relief has not been afforded.

BARTON DOZIER, M.D.

LOS ANGELES, CAL., January 17, 1899.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending January 28, 1899:

	Cases.	Deaths.
Tuberculosis	200	191
Typhoid fever	14	6
Scarlet fever	202	11
Measles	174	13
Diphtheria	197	30
Laryngeal diphtheria (croup)	10	3
Cerebro-spinal meningitis	0	6
Chicken-pox	27	0

Milk in Great Britain.—The London *Spectator* says: "Sir Richard Thorne Thorne's second Harben lecture on 'Tuberculosis' practically resolved itself into a condemnation of uncooked milk and an appeal to doctors to use their 'great influence' in inducing the public to boil their milk. We are, it seems, the only civilized nation of the world habitually consuming uncooked milk, and that in face of the great prevalence of tuberculosis among our milch cows. To illustrate this statement the lecturer declared that the removal of every tuberculous cow from our dairies and cow-sheds would mean at the lowest estimate the withdrawal of over half a million cows from our milk supply. This he regarded as a counsel of unnecessary perfection, but advocated the immediate seizure of all cows with suspicious udder diseases, compensation to be paid out of the public funds. Two interesting points made by the lecturer remain to be noted—first, that the artificial conditions under which milk is now produced in cow-houses are precisely those which tend most effectually to induce tuberculosis in cows, and, second, that owing to the better supervision of town cow-houses tubercle bacilli were found in far greater numbers in the country than in the town milk supplied to Liverpool and Manchester."

Founder of Red Cross Society.—An English weekly journal says: "The founder of the Red Cross Society was a M. Henri Dunant, who is still alive in his native land, Switzerland. He spent half of a goodly fortune in establishing the society, and becoming reduced in circumstances lived until a short time ago in an infirmary founded by himself in Switzerland. Recently, however, various governments granted him money, and he is now spending his old age in comfort.

Women Doctors in England in Olden Times.—The *Westminster Gazette* quotes from the domestic state papers of the days of James I. a petition to the Privy Council emanating from one Thomas Briggs, himself the appointed medical officer to that august body, declaring that his profession did not afford him maintenance "because it was too much practised by gentlewomen." Many a country practitioner of the present day could pen a similar petition with equal truth.—*Medical Press.*

Health Reports.—The following cases of smallpox, yellow fever, and cholera have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending January 28, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Calvert	December 10th to January 20th	10	
Clarke County	December 25th to January 1st	..	2*
Mobile	January 20th	5	
Connecticut, New Haven	January 16th	2†	
District of Columbia, Washington	January 21st	1‡	
Florida, Pensacola	January 15th	1	
Kansas, Marion County	January 18th	1§	
Missouri, St. Louis	November 1st to January 21st	15	2
Nebraska, Nebraska City	January 9th to 16th	4	3
New York, Dunkirk	January 7th to 14th	3	
New York	January 7th to 14th	..	1
Pennsylvania, Altoona	December 31st to January 23d	1	
Bedford	December 31st to January 23d	1	
Brumbaugh	December 31st to January 23d	2	
Charlesville	December 31st to January 23d	15	
Claysburg	Deecember 31st to January 23d	1	
Philadelphia	December 31st to January 23d	9	
Virginia, Alexandria	January 20th	1	
Norfolk	January 16th	90	

* Disease generally prevalent. ‡ Origin Alexandria, Va.
† Origin of the disease New Durham, N. J. § Origin Oklahoma.

SMALLPOX—FOREIGN.

		Cases.	Deaths.
Africa, Pretoria	December 24th	*	
Belgium, Antwerp	December 24th to 31st	10	2
Brazil, Rio de Janeiro	December 3d to 16th	21	9
France, Paris	December 24th to 31st	..	1
India, Calcutta	December 3d to 10th	..	1
Mexico, Chihuahua	January 7th to 14th	..	1
Mexico	December 21st to January 8th	..	4
Russia, Moscow	December 17th to 24th	14	8
Odessa	December 24th to 31st	..	1
St. Petersburg	December 24th to 31st	1	1
Warsaw	December 17th to 31st	..	4
Turkey, Bagdad	October 22d to November 27th	96	20†
Constantinople	December 26th to January 2d	..	11

* Epidemic suppressed. † Officially reported.

YELLOW FEVER.

Brazil, Rio de Janeiro	December 3d to 16th	10	10
Columbia, Barranquilla	December 17th to 24th	1	1
India, Calcutta	December 3d to 10th	..	1
Mexico, Vera Cruz	January 5th to 12th	..	4

CHOLERA.

India, Calcutta	December 3d to 10th	..	6

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Original Articles.

THE PRACTICAL APPLICATION OF ASEPSIS IN NORMAL LABOR.[1]

BY J. CLIFTON EDGAR, M.D.,

NEW YORK,

PROFESSOR OF OBSTETRICS AND CLINICAL MIDWIFERY IN THE CORNELL UNIVERSITY MEDICAL COLLEGE; ATTENDING PHYSICIAN TO THE LYING-IN HOSPITAL

IT was with some hesitation that I accepted the most kind invitation of Professor Hirst to address the students of this great university upon an obstetric subject this evening. My embarrassment was due to the difficulty in choosing an appropriate as well as profitable subject with which to occupy a portion of your valuable time. Just at this time a text-book of obstetrics, fresh from the publishers, voicing the teachings of the University of Pennsylvania, reached me, and the first words that caught my eye were those of the preface, namely: "This work is the result of a practice devoted for the past twelve years exclusively to gynæcology in both its branches—obstetrics and gynæcic surgery." The broadness of this statement suggests my first thought, namely, (1) The position of obstetrics in medicine; and in addition I shall ask your attention to but one other thought, namely, (2) The new era in obstetrics.

I. The Position of Obstetrics in Medicine.—I take it the above does not intend to belittle the importance of obstetrics in its relation to gynæcology, as we read that obstetrics is placed before gynæcic surgery. Obstetrics has and always will be given the first place in its relations to gynæcology. Gynæcology, as you know, is of recent birth. A branch of surgery, in recent years its growth has been so rapid and phenomenal as not only to compete with surgery in regard to progress, and even to surpass it, but also, unfortunately, so to overshadow obstetrics as to throw the latter, for a time, in the shade. Gynæcology may be looked upon as a branch of surgery; obstetrics as a department of surgery and medicine as well. Both obstetrics and gynæcology have profited by the discoveries of anæsthesia, asepsis and antisepsis, and modern pathology and bacteriology. For a period perchance gynæcology, by reason of its popularity and its aggressive and progressive nature, has appeared to take a more important position than that of midwifery, but the time is surely near at hand, if not already present, when obstetrics will again be ranked with the two fundamental branches of medicine, namely, medicine and surgery.

We affirm our deep conviction that the subject of obstetrics should be considered in no sense of the term a specialty, but a department of medicine and surgery. No part of any subject can be properly understood unless it is studied in its relations to the whole. The interdependence and intimate relationship of these three branches cannot be too clearly brought out or too often insisted upon. The light shed by each on the complications of the others is too bright and too valuable to be lost in the obscurity of prejudice and misconception. Obstetrics to-day and at all times should be taught equally as a department of medicine and as a department of surgery. Obstetrics, especially operative obstetrics, after being taken out of the hands of midwives, gradually advanced to a science, became at first mainly associated with surgery, and so remained as a kind of an adjunct until the middle of the last century, but was finally recognized, after a rapid and independent advancement, as of equal rank with the other branches of medicine, and became second in importance and honor to none of them, but it was not until the present century that obstetrics gained an independent footing in this country. I believe I am correct in stating that the first professor of obstetrics in this time-honored University of Pennsylvania—Dr. Thomas C. James—was appointed to the chair in 1810, but until 1813 it was optional with the students to attend lectures in that branch; it then became a compulsory part of the medical course, and the subject of obstetrics was raised to an equal rank with the other medical chairs.

With the advance of medicine in general during the last half-century has come the recognition from every quarter of the kinship of medicine, surgery, and obstetrics, and of the knowledge added to the general fund by the obstetrician's painstaking research. It is just these facts which we claim should be continually brought to the student's attention in order that he may not in his future career fall into the error of regarding midwifery as a thing apart from general medicine, and, further, that if his work should chance to lie more particularly in other fields, he may carry with him a just appreciation of an art in which he has been at least thoroughly drilled. In illustration it may not be amiss to cite a few instances demonstrating that the physiologic and pathologic states of pregnancy, the puerperium and labor, the therapeutic and surgical measures adopted in handling them differ certainly not in degree from these conditions found elsewhere. It is only that the greater skill of the obstetrician after long training gives him an advantage readily recognizable. The toxæmia of pregnancy is toxæmia still, in spite of its greater import perhaps in the danger to the life of mother and child, and its indications in the way of treatment are the same, save for the additional obstetric treatment. Transient glycosuria disappearing with the termination of labor, jaundice, hemorrhage, cardiac hypertrophy, thrombosis, embolism, offer no essential differences and further exhibit the morbid condition in its inception, throwing a light on its etiology often obtainable in no other way (Barnes).

We are too prone to accept the findings in the deadhouse as a cause rather than effect, and to neglect the opportunity furnished by the pregnant state to observe the affection at its outset and thereby discover the true methods of prevention and cure. Metabolism in both its forms here furnishes unequalled openings for study to the physiologist. There is much to be learned from observation of the progress of intercurrent disease, *e.g.*, tuberculosis, under the intense vascular and nervous strain of pregnancy. The same is true of skin affections, both as to their nature and etiology. The so-called "mask of pregnancy" is the chloasma of other

[1] An address on obstetrics delivered at the University of Pennsylvania, January 19, 1899.

states, herpes gestationis is dermatitis herpetiformis, and here the dermatologist may find a clew to the origin of these affections. These statements are equally applicable in the province of surgery and surgical pathology. Gynæcology may, with reason and right, be ranked as a specialty, its technical procedures entitling it to such a place; but not so obstetrics. Repair of injuries produced by labor, instrumental or manual dilatation of the cervix, symphyseotomy, curettage, fall more naturally to the obstetrician because of his skill and experience in their operative details, not because the general surgeon is not entirely competent to perform them. Certain measures as perforation, cephalotripsy, forceps and version operations, manual removal of the placenta, decapitation, evisceration, correction of malpresentations, positions and attitudes, closely approach the border lines of specialism, but some of these have greatly fallen into disuse since the introduction of other perfected operations, offering a chance of life to the child. Cæsarean section itself is merely the removal by the knife of a foreign body from the interior of a hollow viscus whose outlet is partially occluded.

II. The New Era in Obstetrics.—It may be truthfully stated that the history of obstetrics has been the history of civilization. Somebody, somewhere, has said that obstetrics was in the early ages empirical, then it became superstitious, then scholastic—that is to say, the slave of theories and discussions—and that it was not until the seventeenth century that the science and art of obstetrics were fully established, and the care of the lying-in woman passed more and more into the hands of the educated physicians. Subsequently we see the forceps invented; the practical teaching of obstetrics; obstetric clinics and maternity hospitals established; and finally, in Vienna, in 1847, we see the foundation of antiseptic midwifery laid by Semmelweis and perfected by others along the lines laid down by Pasteur and Lister.

You are undoubtedly familiar with the foundation and history of antiseptic midwifery and with the story of Semmelweis. He it was who, in 1847, discovered the septic nature of puerperal fever, and by means of chlorine solutions instituted an antiseptic prophylaxis against the scourge. There was no bacteriology in those days and not a great deal of pathology, yet Semmelweis (a giant as to his convictions), who was at that time clinical assistant to the Vienna Lying-in Hospital, startled the profession and the world with the assertion that "puerperal patients were chiefly attacked with puerperal fever when they had been examined by the physicians who were fresh from contact with the poisons engendered by cadaveric decay; that fever ensued in the practice of those who, after post-mortem examination, washed their hands in the usual manner, whereas no fever or but few cases of disease followed when the examiner had previously washed his hands in a solution of chloride of lime." In brief, puerperal fever was, according to Semmelweis, no new specific disease, but a variety of pyæmia. Up to the day of Semmelweis there was complete darkness as to the cause and treatment of puerperal infection. With this origin in 1847, antiseptic midwifery grew and developed until it reduced the mortality from septic infection from ten per cent. to a fraction of one per cent.; until it practically did away with so-called epidemics of puerperal fever, and, with the principle of antisepsis properly applied, robbed child-bearing of its greatest danger, whether the patient be confined in a well-equipped maternity hospital, in the palaces of the rich, or in the crowded, unhygienic, and filthy tenements of our great cities. Such have been the marvellous results of the antiseptic prophylaxis against puerperal infection—so marvellous, indeed, that for a time we were ignorant that but a half truth had been stated. The antiseptic treatment of puerperal infection has been far from giving as satisfactory results. With the growth of the antiseptic principle rules were formulated for the treatment of infection somewhat as follows: First: Remove the infecting substance from the genital canal, and seal up as far as possible the veins and lymphatics of the denuded surfaces in order to prevent further infection. Second: Assist nature in her efforts to eliminate the poison that already has invaded the system.

Modern pathology and bacteriology have done much to modify the swing of the pendulum so vigorously set going by the discovery of the antiseptic midwifery, and to guide us toward a more intelligent and conservative practice, which has resulted in a lower mortality and morbidity rate than that obtained by a blind, unintelligent clinging to and following of the older antiseptic principles.

Our plea to-night is not for greater conservatism in the practice of midwifery, but for a rational and scientific application of the researches of modern pathology and bacteriology in our care of the pregnant, parturient, and puerperal woman and the newborn child. We may look upon the present decade as a transitional one in the history of obstetrics. All progress is in cycles, and in every generation we spend a portion of our time in unlearning much that has been handed down to us from former generations. Half truths are always dangerous. For we find the followers of Semmelweis blindly clinging to the belief that all infection could be combated by antiseptics, but not grasping the other half of the truth that all sepsis comes from without the patient. Thus a custom of midwifery gained followers who considered it necessary not only to disinfect the attendant and instruments, but also to disinfect the parturient tract, thus taking the irrational standpoint that labor is a pathological process; and so it came about that the very means employed to counteract septic infection were often the very means of introducing sepsis, or rendering the patient more receptive to sepsis. This belief and practice exist even at the present day in some quarters. Until recently antisepsis and not asepsis has been the keynote of obstetric teaching; and the function of the accoucheur was not the watchful observation of a natural process, but rather the conversion of labor into an artificial condition by constant and routine interference. Even to-day text-books and teachers have not broken entirely with the past, and the thoughtful and observant young practitioner will soon find that he must unlearn much of his former teaching. Modern pathological and bacteriological findings have done much to guide us in the right direction, namely, that asepsis and not antisepsis is the true principle. In surgery we note the abandonment of irritating solutions; the giving up of drainage in non-septic abdominal operations; the recognition of the aseptic character of the contents of ovarian cysts. So, too, we find that while it was once supposed that the granulating surface must be constantly bathed in antiseptic solutions, it is now recognized that if the same surface is covered with a sterile powder and an occlusion dressing the results are still better. In genito-urinary surgery, too, we find the recognition of the aseptic character of fresh urine. The discovery of the rôle of the leucocytes in the destruction of bacteria is along the same lines. In a word, asepsis means that we trust more in the germicidal character of nature's secretions, and less in our own power of destroying bacterial growths by artificial and chemical antiseptics.

You may ask, "What has pathological research accomplished in influencing the modern practice of antiseptic midwifery?" and I point to the comparatively recent work of Widal, Bumm, and Gärtner. The

identity of septic infections in all parts of the body, though presenting the most varied clinical pictures, has been firmly established by the demonstration of the part played in them by micro-organisms. The changing degree in these processes in the puerperium, as in other states, is explained by the theory of a variation in the toxic power of the bacteria. Septic infection may have its starting-point in any solution of continuity of the mucous surfaces of the birth canal, many infections of mild character beginning in lacerations of the cervix and perineum. The former avenue has been particularly signalized by both pathologists and clinicians, and the sequelæ of cervical infection are recognized in pelvic abscess, thickening of the round, broad, and sacral ligaments, and perimetritic inflammation.

Bumm's classification, founded on histological investigation, is at present accepted as the best for septic processes in the uterus, and, arranged in order of increasing virulence, is as follows: (1) Localized septic metritis; (2) thrombotic form of puerperal fever; (3) ordinary lymphatic form; (4) internal erysipelatous form. Both Bumm and Gärtner have by their labors made clear the mode of invasion of the organisms at the placental site. According to Bumm, septic endometritis shows a superficial layer of necrotic tissue, pervaded by putrefactive and pyogenic microbes. A zone of reaction, of protection, the natural barrier against further extension, consisting of leucocytes, lies just below this, including the remains of the membranes and part of the muscular coat, but containing no bacteria. The thrombotic form is only a greater development of the localized septic metritis, together with a general systemic infection through the venous radicles. There is in addition to the putrid endometritis and the reaction zone a purulent phlebitis and thrombosis at the placental site. When the pus thrombi degenerate, portions of them are carried in the blood stream over the body. In the lymphatic variety infection takes place through these channels and results in a general systemic invasion. The deciduæ are necrotic and present the appearance called croupous. The bacteria pass from the endometrium into the open lymphatics, which undergo degeneration and form pus cavities. This may occur, of course, in combination with the thrombotic disease. The internal erysipelatous variety is hardly distinguishable from the lymphatic. Gärtner confirms these findings.

The pathological changes strongly suggest the idea in support of which I have cited them, viz., the necessity for a minimum of interference with a septic uterus. It is never possible to decide macroscopically to what extent microbic invasion of the muscular wall has taken place; and curettage in its softened state is more than likely, instead of totally removing the offending material, to cause general infection by loss of the protective zone of reaction and the opening of venous and lymphatic channels to the cocci present. In the slighter forms nature will raise her barriers high enough to prevent systemic infection with no more resistance than mere removal of cast-off débris, often without any whatever. In severe infections the curette will hardly reach the last lurking-places of the offending bacteria. These deductions have been emphasized by Williams and others. Yet even to-day, as is well known, an immediate vigorous and even repeated curettage of the uterus, upon the first appearance of suspicious symptoms of uterine sepsis, is a routine practice with many.

You may well ask in the second place, "How has bacteriology influenced the modern status of obstetrics?" The whole question of puerperal sepsis is dependent upon its discoveries. From the time of the appearance in 1847 of Semmelweis' statement, which laid the foundation of antiseptic midwifery, the doctrine of infection in puerperal septicæmia has been gaining ground. Pasteur and others have placed it on so sure a scientific basis that the ground of controversy has had to be shifted, and the question is now how to prevent the entrance of morbific agents. Are they always introduced by the attendant, or can a woman be infected by organisms which find their habitat in her genital tract before delivery—that is, suffer from auto-infection? Not more than two years since the question was in great doubt, Winter, Döderlein, Witte, Widal, and Williams discovering them in the vagina in a large proportion of cases; Gonner, Thomsen, and others failing to find them. Now the controversy appears to be definitely settled, clinically, by Mermann, Leopold, and Hofmeier; bacteriologically by Krönig and Williams, who has revised his work. The two latter agree that the "vaginal secretion of pregnant women does not contain the usual pyogenic cocci, and that the discrepancy in results of the various investigators is due to the technique by which the secretion is obtained" (Williams). Consequently, auto-infection is impossible with them, except in such rare instances that they are negligible, and death from puerperal sepsis is almost invariably due to infection from without. Williams found the staphylococcus epidermidis albus only twice in ninety-two cases; Krönig discovered that in his forty-eight examinations not only were there no organisms present but that the vaginal secretion normally possesses actual germicidal power. The clinicians contribute their quota to bacteriology in this way: Leopold in 919 labors found two cases in which there was any possibility of auto-infection. His women were not examined. Hofmeier, who used only subjective antisepsis, reported 0.6 per cent. in 2,000; Döderlein had previously reported 44.7 per cent. of positive findings. Menge has never been able to cultivate from uteri removed in Zweifel's clinic any micro-organisms capable of existence on ordinary culture media.

Why is it, then, that the vagina is sterile, while other cavities contain multitudes of pathogenic bacteria? The answer is found in Krönig's statement that its secretion is germicidal. Various organisms were introduced by Krönig into the vagina of healthy individuals, and the tract was found free always at the end of two days. Streptococci perished first, staphylococci and pyocyanei living twice as long. The resisting-powers are the same toward spores and cocci, whether the secretion is normal or pathological. The micro-organisms most commonly found in puerperal sepsis are the streptococcus, staphylococcus, colon bacillus, and gonococcus. Much more infrequent are the bacilli of diphtheria and typhoid, bacillus proteus and aerogenes. There is a reason for this antiseptic power of the vaginal secretion; it lies probably in its acid reaction. While the vagina normally contains no pathogenic microbes, very soon after birth it becomes infected with yeast fungi and the bacillus vaginæ of Döderlein, which secretes lactic acid. In addition to the free acid which inhibits bacterial development, vaginal asepsis may be partly due to phagocytosis and the germicidal powers of the mucus and epithelium. Granting that bacteria may succeed in preserving their vitality, their virulent power would be so reduced that they would be quite incapable of producing disease. Williams says: "The gonococcus is occasionally found in the vaginal secretion and during the puerperium may extend from the cervix into the uterus and tubes." This is in entire agreement with what has gone before, since it is known to flourish on acid media.

According to Walthards, the genital tract may practically be divided into three parts: (1) The lowermost, containing leucocytes and bacteria, extending to the cervix; (2) The next, the upper cervical canal,

containing only leucocytes; (3) The third, uterus and tubes, showing neither. Leucocytes are poured out in greatest number where the cervical and vaginal secretions mix, due to their chemotactic action. The plug of cervical mucus he finds is not antiseptic, but does not support bacterial life. He found pathogenic microbes both before and after delivery, but they had lost all virulence.

It must be insisted on that a sharp line is drawn between the vaginal and the vulval canal, namely, the portion of the genital tract above and below the introitus vaginæ. The vaginal secretion is normally free from pyogenic bacteria. How is it with the secretion of the vulva and vulval canal? It has been shown that the introduction of a small speculum, no larger than two fingers, carries up into the sterile vagina in some fifty per cent. of cases whatever bacteria may be present at and about the vaginal entrance (Williams). The danger of vaginal examinations, carelessly made, thus becomes evident.

Dr. B. H. Buxton, instructor in bacteriology in the Cornell University Medical College, examined the secretion of the vulval canal from twenty-eight pregnant and two parturient women of the Emergency and New York Maternity hospitals during the service of the writer. His report, dated January 14, 1899, is as follows:

"LOOMIS LABORATORY, January 14, 1899.

"Report of Swabs from Vulval Canal: In each case the swab was dipped in a bouillon tube and rubbed round the sides. From each bouillon tube two loopfuls were put into a melted agar tube and plated out. Observations were made forty-eight hours later, and cultures in gelatin and other media were taken from those colonies that appeared to be of pus cocci, or coli communis. Smear preparations were also taken from the swabs, and in every case showed bacteria in immense number, comparatively few of which grew on the plates. It would appear as if a large number of the bacteria present in the vulval canal are either dead or of a kind which will not grow on the ordinary media.

"CASE I.—Emergency Hospital; primipara; aged eighteen years; eighth month of gestation; no cleansing of external genitals for several hours previous to secretion being taken. An apparent purulent discharge. Six colonies. Negative.

"CASE II.—Emergency Hospital; primipara; aged twenty-seven years; ninth month of gestation; no cleansing of external genitals for several hours previous to secretion being taken. Eighty colonies. Negative.

"CASE III.—Emergency Hospital; no history obtainable; foreign-born; patient had not washed genitals for several hours previous to secretion being taken. One hundred and twenty colonies. Staphylococcus pyogenes albus.

"CASE IV.—Emergency Hospital; IIpara; aged twenty-two years; married; macroscopical cleanliness of parts with common soap and water just previous to secretion being taken. Fifty colonies. Negative.

"CASE V.—Emergency Hospital; primipara; married; ninth month of gestation; macroscopical cleanliness of parts, patient having washed herself with common soap and water just previous to secretion being taken. Forty-five colonies. Staphylococcus pyogenes albus.

"CASE VI.—Emergency Hospital; primipara; married; ninth month of gestation; macroscopical cleanliness, patient having washed with common soap and water just previous to secretion being taken. One hundred and fifty colonies. Negative.

"CASE VII.—Emergency Hospital; primipara; married; ninth month of gestation; macroscopical cleanliness, patient having washed with common soap and water just previous to secretion being taken. No colonies. Sterile.

"CASE VIII.—New York Maternity; primipara; single; aged twenty-two years; sixth month of gestation. No cleansing of external genitals for several hours previous to secretion being taken. Numerous semitranslucent colonies. Negative.

"CASE IX.—New York Maternity; IIpara; single; aged twenty-one years; eighth month of gestation. No cleansing of external genitals for several hours previous to secretion being taken. No colonies or growth in bouillon. Sterile.

"CASE X.—New York Maternity; IXpara; married; aged thirty-five years; no cleansing of external genitals for several hours previous to secretion being taken. Twenty-eight colonies. Negative.

"CASE XI.—New York Maternity; primipara; single; aged eighteen years; no cleansing of external genitals for several hours previous to secretion being taken. Sixteen colonies. Negative.

"CASE XII.—New York Maternity; primipara; married; aged twenty-one years; patient washed external genitals with common soap and water just previous to secretion being taken. Five colonies. Negative.

"CASE XIII.—New York Maternity; primipara; single; aged twenty-two years; first stage of labor; genitals had been prepared for labor by nurse; enema; hair cut short; vulva scrubbed with soap and water and sublimate solution, and sublimate (1:8,000) vaginal douche given. One hundred and twenty colonies. Negative.

"CASE XIV.—New York Maternity; primipara; married; aged twenty years; gonorrhœa suspected; patient had washed external genitals with common soap and water. Six colonies. Negative.

"CASE XV.—New York Maternity; IVpara; married; aged thirty-one years; patient had washed external genitals with common soap and water. Many semitranslucent colonies (streak).[1] Negative.

"CASE XVI.—New York Maternity; VIIpara; married; aged forty-seven years; ninth month of gestation; patient had washed external genitals with common soap and water. Many colonies (streak). Staphylococcus pyogenes albus.

"CASE XVII.—New York Maternity; VIpara; married; aged thirty-one years; ninth month of gestation; patient had washed external genitals with common soap and water. Innumerable small colonies. Negative.

"CASE XVIII.—New York Maternity; primipara; single; aged nineteen years; ninth month of gestation; patient had washed with soap and water. No colonies or growths on bouillon. Sterile.

"CASE XIX.—New York Maternity; IIIpara; single; aged twenty-four years; eighth month of gestation; patient had washed with soap and water. Original plate, one colony of staphylococcus pyogenes aureus. Numerous yellow colonies (streak). Staphylococcus pyogenes aureus.

"CASE XX.—New York Maternity; primipara; single; aged eighteen years; ninth month of gestation; patient had washed with soap and water. Fifteen colonies. Staphylococcus pyogenes albus.

"CASE XXI.—New York Maternity; IIIpara; married; aged twenty-three years; ninth month of gestation; patient had washed with soap and water. Three colonies. Negative.

"CASE XXII.—New York Maternity; VIpara; married; aged thirty-eight years; ninth month of gestation; patient had washed with soap and water. One hundred and seventy-five colonies. Staphylococcus pyogenes aureus and staphylococcus pyogenes albus.

[1] Streak. Where few or no colonies had developed on the plate, a streak plate was made from the bouillon culture after the latter had developed forty-eight hours in the incubator.

"Case XXIII.—New York Maternity; IIpara; married; aged twenty-seven years; eighth month of gestation; patient had washed herself. Numerous white colonies (streak). Staphylococcus pyogenes albus.

"Case XXIV.—New York Maternity; IIpara; married; aged thirty years; seventh month of gestation; patient had not washed for several hours previous to secretion being taken. Numerous white colonies (streak). Staphylococcus pyogenes albus.

"Case XXV.—New York Maternity; IVpara; aged thirty-six years; married; external genitals not cleansed for several hours previous to secretion being taken. Negative.

"Case XXVI.—New York Maternity; primipara; married; aged twenty years; fourth month of gestation; suspected syphilis and dead fœtus. Sublimate (1:8,000) vaginal douche at 10 A.M. and 10 P.M. for several days. Last douche several hours before secretion was taken; no cleansing since. Numerous yellow colonies (streak). Staphylococcus pyogenes aureus.

"Case XXVII.—New York Maternity; Vpara; married; aged thirty-two years; ninth month of gestation; suspected syphilis; vaginal douches of sublimate (1:8,000) given twice daily for several days; no cleansing or douche for several hours previous to secretion being taken. Twenty small colonies, all of streptococci.

"Case XXVIII.—New York Maternity; married; ninth month of gestation; no cleansing of external genitals. Seven colonies. Negative.

"Case XXIX.—New York Maternity; Vpara; married; aged twenty-nine years; in first stage of labor. The nurse had cut pubic hair, given enema, scrubbed genitals, and given sublimate douche (1:8,000) within an hour previous to secretion being taken. Numerous colonies (streak). Staphylococcus pyogenes albus.

"Case XXX.—New York Maternity; IIIpara; married; aged twenty-nine years; ninth month of gestation; just been admitted to hospital; had not washed for at least half a day previous to secretion being taken. One hundred and ten colonies. Negative.

"Summary: Staphylococcus pyogenes albus, 8 cases; staphylococcus pyogenes aureus, 3 cases (both in one patient). Streptococcus pyogenes, 1 case; negative, or sterile, 19 cases. The bacillus coli communis was not found. Subcultures from several suspected colonies proved not to be coli communis."

These findings show pyogenic bacteria of the vulval canal present in forty per cent. of these cases.

Staphylococcus Pyogenes Albus.—In the eight cases in which the staphylococcus pyogenes albus was found in the secretion of the vulval canal, there had been no cleansing of the vulva for several hours previous to the secretion being taken in two cases (Nos. III., XXIV.). Of the remaining six cases the patient had washed her external genitals with soap and water a few minutes before the secretion was taken (Cases V., XVI., XX., XXII., XXXIII., XXIX.). In Case XXIX., patient had for several days been given vaginal douches of sublimate solution (1:8,000) by a nurse, twice a day.

Staphylococcus Pyogenes Aureus.—In three cases in which the staphylococcus pyogenes aureus was found in the vulval canal there had been cleansing of the vulva by the patient with soap and water in two cases (Nos. XIX., XXII.), and in one instance (Case XXVI.) the vulva and vagina had been prepared by the nurse for labor according to the usual routine of the hospital—namely, pubic hair clipped short; enema administered; vulva, perineum, and buttocks scrubbed with soap and castile soap and sublimate solution (1:2,000); vaginal douche of sublimate solution (1:8,000).

Streptococcus Pyogenes.—In the one case (No. XXVII.) in which streptococci pyogenes were found in the vulval canal the patient had received for several days vaginal douches of sublimate solution (1:8,000), at 10 A.M. and 10 P.M., but there had been no cleansing of the vulva nor vaginal douche for at least two hours previous to the secretion of the vulval canal being taken for examination.

Negative or Sterile.—In the nineteen cases reported as negative or sterile, in ten cases (Nos. I., II., III., VIII., IX., X., XI., XXV., XXVIII., XXX.) there had been no cleansing of the vulva for several hours previous to the secretion of the vulval canal being taken. In eight cases (Nos. VI., VII., XII., XIV., XV., XVII., XVIII., XXI.) the patient had washed herself with soap and water just previous, and in one case (No. XIII.) the vulva and vagina had been prepared for labor according to the usual routine of the hospital—namely, pubic hair clipped short; enema administered; vulva, perineum, and buttocks scrubbed with castile soap and water, then with sublimate solution (1:2,000); then vaginal douche of sublimate solution (1:8,000).

Practical Deductions.—The present is an age of germs, just as the last was one of venesection. Thoughtful men are not carried away by popular enthusiasm, either in science or elsewhere. The best authorities are coming around to the belief that venesection when indicated is a most valuable measure; just as bacteriologists are now directly contradicting the views which were held a few years ago. Clinical experience long ago convinced many a practical physician of the folly of interference in natural labor, and recent bacteriology confirms this view. This shows that we should not always accept bacteriological research as infallible. It takes a long time to prove anything in medicine, and clinical experience is, after all, the final test. Lawson Tait with his "water from the tap" long ago demonstrated clinically what bacteriologists have lately discovered from another standpoint—namely, that there is much virtue in macroscopical cleanliness, and that irritating antiseptics do harm, unless positively indicated. The practice of the last century was to regard sepsis as a visitation of Providence, or as something at all events which it was useless to combat. When, however, the true source of sepsis was discovered, and the occasion of sepsis was yet unknown, the pendulum swung so far in one direction that the whole utero-vaginal tract was considered a nidus for septic germs and something to be disinfected. This irrational view was due to the fact that the occasion of sepsis, the introduction of germs from without, was only imperfectly appreciated. It remained for modern bacteriological research to demonstrate that infection comes from without, and even if we agree with Dührssen and Ahlfeld, that auto-infection is occasionally possible, the instances are so rare that the general truth is by no means invalidated.

Vaginal Irrigation.—Because the vaginal secretion of pregnant women does not normally contain pyogenic cocci, the douching of the vagina with antiseptics without a positive indication is unnecessary and increases the risk of infection. Moreover, douching, under such circumstances, is merely the substituting of an artificial germicide for one of nature—sublimate solution for the germicidal vaginal mucus. Nature's safeguard against infection is the vaginal secretion, by reason of its acidity and germicidal qualities. By douching this is removed. In addition, it has been proved that douching does not destroy pathogenic bacteria. This procedure, therefore, is doubly faulty. If infection is known to be present, the vagina should be prepared by thorough antiseptic scrubbing as for operation. The escape of amniotic fluid is as much douching as is normally required, and on this point it may be said that it is a matter of common observation that a considerable proportion of "dry" labors are septic ones. There are

further aids afforded by nature in the resistance to septic infection in the mechanism of labor, which will

FIG. 1.—Plurigravida; age 35; 38th week. Deep vulval canal; atrophy of caruncule myrtiformes, and absence of fourchette; shows introitus vaginæ brought into view, and obliteration of vulval canal by wide separation of labia. (Case at New York Maternity.)

be spoken of subsequently. Further, by douching, we remove the lubricating vaginal mucus and increase the risk of delayed labor, cervical, vaginal, and vulval lacerations. Again, lacerations of the vestibule, sides of the vulva, lower part of the vagina and perineum are more dangerous as regards subsequent infection than those of the cervix and upper part of the vagina, and must be guarded against and treated for infection accordingly.

Vaginal Examinations and Manipulations.—The work of bacteriologists has given us much from which to draw practical deductions, not the least of which was their technique in securing cultures from the vaginal secretion. It would appear as proven, that the different results obtained by various investigators was due to a faulty technique, in that by the faulty methods used the bacteria of the labia minora, vestibule, and margins of the hymen were carried into the vagina, thus affecting the results obtained. We may accept the following statements as proven: The microbes which are known to cause puerperal infection do not exist in the healthy vagina at all, or are in a state of innocuousness. The gonococcus is occasionally found in the vaginal secretions. When pyogenic cocci are found in the puerperal uterus they have been introduced from without (Williams). As the vagina does not contain pyogenic cocci, auto-infection with them is impossible (Williams). Pyogenic cocci do exist in a state of activity on the vulva and in the vulval canal.

The physician, then, in a majority of cases is the responsible party, and must reduce the danger from himself to a minimum by making examinations infrequently and by complete asepsis of his hands and, if possible, of the external genitalia. Bacteriology, like the Babylonian finger on the wall, points to the vulvar canal and introitus vaginæ as that portion of the genital tract which is found wanting in aseptic and germicidal qualities; therefore, avoid contact with these parts as much as possible and as a matter of routine, whether we previously sterilize them or not. Be the fingers never so carefully sterilized, the hands covered with absolutely sterile rubber gloves, the danger of infection of the vagina by the passage of the sterile fingers through the vulval canal remains. The uncleansed vulval canal, bounded by the inner surfaces of the labia majora and minora and containing the bulb of the urethra, vestibule, fossa navicularis, and margin or remnants of the hymen, in a certain proportion of cases contains pyogenic cocci, and these latter are readily carried through the ostium vaginæ by the examining finger, the douche tube, or blade of the forceps. The avoidance of contact of the examining finger with the uncleansed labia or vulval canal and adjacent parts, before the vagina is reached, is essential in order to avoid infection. Contact of the douche tube and examining finger with the vulva and outer portion of the vulval canal can with proper management be readily avoided. Contact with the inner portion of the vulval canal and margins of the hymen can sometimes be avoided in multiparæ and rarely if ever in primiparæ.

The writer made experiments in his services at the Emergency and New York Maternity hospitals upon thirteen primigravidæ and seventeen multigravidæ, and showed conclusively that when two examining fingers were used, and the labia were separated to their widest extent, contact of the fingers with the vulva and outer two-thirds of the vulval canal could always be avoided. On the other hand, contact with the inner third of the vulval canal and the margins or remnants of the hymen could occasionally be avoided in the seventeen multigravidæ (Fig. 1), but never in the thir-

FIG. 2.—Primigravida; age 22; 30th week. Moderate depth of vulval canal; two anterior and one posterior laceration of hymen; shows obliteration of vulval canal by wide separation of labia; ostium vaginæ brought into view and fourchette made prominent. Large hemorrhoid of pregnancy. (Case at New York Maternity.)

teen primigravidæ (Fig. 2). It was further readily demonstrated that an ordinary glass douche tube could in most of the multigravidæ of over IIpara, after wide separation of the labia, be passed directly into the vagina without touching any portion of the vulval canal or remnants of the hymen. With wide separation of the labia in the thirteen primigravidæ in only a few instances was it possible, without the use of the greatest precision, to avoid some contact of the tube with the borders of the hymen (Fig. 3). The observations upon these thirty cases showed that in three cases the pubic hair was so long and abundant that by the widest separation of the vulva it was impossible to prevent some contact of the examining fingers with it before the ostium vaginæ was reached. Also that the depth of the vulval canal varied greatly in both primigravidæ (Figs. 2, 4) and multigravidæ, (Fig. 1) that in a few instances it was impossible, even with the widest separation of the labia, to avoid contact of the examining fingers with a considerable portion of the vulval canal.

The dangers of infection from the vulva and vulval canal by the passage of the sterile finger can, of course, be avoided or reduced to a minimum by previous cleansing of the parts. Hence the importance of the careful cleansing of the external genitals and vulval canal before each and every intravaginal manipulation. In private and even in hospital practice the rendering of these sensitive organs sterile, without shaving them, and the use of general anæsthesia, is often difficult if not impossible. Whether complete cleanliness is possible or not, it is safer as a routine to avoid contact with the external genitals as far as possible and pass the examining finger or douche-tube as nearly through the centre of the introitus vaginæ as the conditions will permit. We should endeavor to render the vulva and vulval canal aseptic, or as nearly aseptic as possible, by an abundant use of soap, water, and sublimate solution; absorbent cotton, gauze, or a very soft brush being used in order to avoid unnecessary abrasions. Cleansing and disinfecting of the external genitals should, we believe, always be carried out with the patient in the dorsal posture. We are convinced that cleansing and disinfection cannot be properly carried out in the lateral position of the woman by reason of the relation of the anus and position of the buttocks. Our aim in the cleansing of the vulva and vulval canal should be to remove offending material and, as far as possible, to render the parts sterile. Our attempts at sterilization, however, should never result in too much disturbance of epithelium or in abrasions of the skin or mucous membrane, which may serve as a nidus for immediate or subsequent infection, as a local septic condition may thus be converted into a general one.

Digital contact with the vulva is reduced to a minimum by the following procedure:

FIG. 3.—Primigravida; 30th week. Moderate depth of vulval canal; shows obliteration of vulval canal by wide separation of labia, and douche tube in vagina, being in contact only with margins of hymen. (Case at New York Maternity.)

Dorsal Position: Vaginal Examination with Partial Exposure of the Patient as for the Use of the Catheter.—The gravid or parturient woman is placed in the dorsal posture, with legs and thighs flexed and the latter separated. A clean bed-sheet is thrown over the patient's body, reaching to the groins. A second sheet is so draped in the shape of a U as completely to cover both lower extremities, and the narrowed transverse portion of the U is gathered up above the symphysis. The draping is so arranged as to leave practically only the pelvic outlet exposed to view, no part of the sheet coming in contact with the external genitals. Genitals and hands having been cleansed, the physician sits, kneels, or stands at the side of the bed, and with the fingers of the free hand the vulval canal is as nearly obliterated as possible by placing the outer border of the thumb upon the inner aspect of one labium and ends of the first and second fingers upon the inner surface of the opposite labium, and widely separating them. Then by the sense of sight the vaginal fingers are passed as nearly through the centre of the opening in the hymen as possible, the greatest care being used to reduce contact of the examining fingers with adjacent parts to a minimum before the introitus vaginæ is reached. This method and position of the patient are preferable to examination by the sense of touch under a bed-sheet, and also to the lateral prone position and examination by the sense of sight, for the reason that it is most cleanly, more convenient, and more in accord with the principles of modern asepsis. As in the lateral position, the patient need not be aware that there is any exposure. In multiparæ, entrance can in this way often be made directly into the vagina, and in primiparæ, unless the vulval canal is abnormally deep, the examining finger or douche-tube need only come in contact with the inner third of the vulval canal and the edges of the hymen, and even in these latter we have passed an irrigating tube directly through the orifice of the hymen without touching the edges until two-thirds of the tube had entered the vagina. When contact with the external genitals is unavoidable, as in forceps operations, the introduction of the hand or arm for version or of instruments for embryotomy, complete sterilization of the external genitals should be practised, and since anæsthesia is produced for these operations, the cleansing may be thorough and complete (Fig. 5).

Lateral Prone Position for Vaginal Examination.—The gravid or parturient woman is placed upon her side in the lateral semiprone position, with her back toward the examiner and the hips well to the edge of the bed. Thighs and legs are well flexed and the clothing is rolled up to the waist. A clean bed-sheet is draped over the patient so as to cover the body and lower extremities, but leaving the buttocks and genitals

exposed. The physician now takes his seat at the back of the patient, facing the head of the bed. Hands and genitals having been cleansed, the hand next the patient is used for the vaginal examination, and the free hand to raise the upper buttocks, the vaginal fingers being introduced by the sense of sight. After repeated experiments with this method in both hospital and private work, we have never been able to convince ourselves that the lateral semiprone position of the patient is as cleanly or aseptic a method as any of the methods of vaginal examinations in the dorsal position of the patient. Our experiments showed that one cannot so completely obliterate the vulval canal in the lateral as in the dorsal position, and in the former the vaginal fingers were more likely, in a given number of cases, to come in contact with the labia and outer portion of the vulval canal before the vaginal entrance was reached. This was particularly true of the labia and side of the vulval canal of the side corresponding to the lower buttock. We have experimented also with a pillow placed between the knees in order to obtain separation of the thighs, but without giving as satisfactory results as regards complete and wide separation of the vulva and obliteration of the vulval canal as in the dorsal methods. The lateral position has an advantage in that the patient is practically unaware that she is exposed.

Vaginal Examination Without Exposure of Patient. — The patient is placed in the dorsal position with the legs and thighs separated. The patient's clothing is rolled up to the waist so as not to interfere with either hand of the examiner. A clean bed-sheet is now lightly draped over the patient with the wide margin parallel with the side of the bed, so as to completely cover the lower extremities and body. The patient's vulva, vulval canal, and both hands and arms of the physician being cleansed, the latter takes his seat at the side of the bed, facing the head. He uses the hand for internal examination which is next the patient, and the remaining or free hand is used for wide separation of the vulva so as to obliterate as far as possible the vulval canal. The nurse or attendant now so raises the sheet that the vulval hand of the physician may reach the external genitals directly over the groin and without being infected by contact with clothing or any portion of the patient other than the vulva. With the thumb on one labium majus and minus and the first and second fingers on the others, wide separation of the vulval canal is obtained. The examining or vaginal fingers are now passed under the thigh, and carefully, without touching anything until the vulval canal is reached, are, using the vulval fingers as a mental guide, passed as nearly through the centre of the vaginal entrance as possible (Fig. 6).

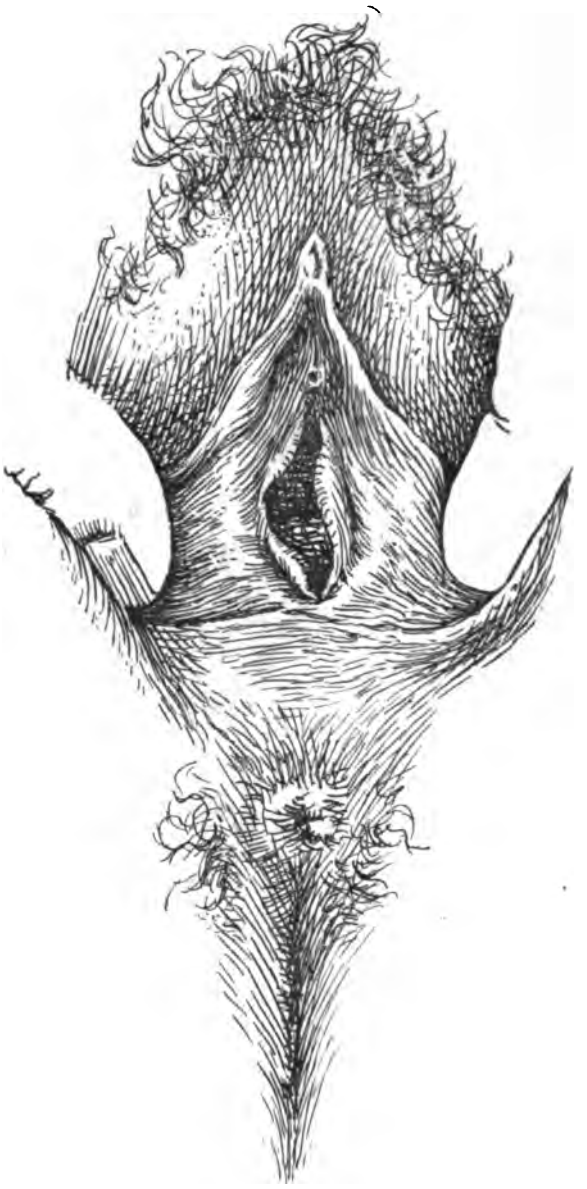

FIG. 4.—Primigravida; 38th week. Shallow vulval canal; small labia minora; medium-sized majora; short pubic hair; anterior, posterior, and right lateral laceration of hymen; obliteration of vulval canal by wide separation of labia. (Case at New York Maternity.)

Obliteration of the vulval canal, and the use of the vulval fingers as a mental guide, are absolutely necessary in order to reduce the risk of infection by the examining fingers to a minimum. Nothing can be more foolish and uncleanly than the common practice of the day of examining under a bed-sheet, without obliteration of the vulval canal and without the vulval fingers as a mental guide to the vaginal orifice. The elaborate and painstaking technique of hand disinfection, the use of absolutely sterile gloves, goes for naught, if the vaginal orifice is sought by the sense of touch alone, the vulva being unseparated, the fingers now coming in contact with the inner surface of one thigh, now with the other, now with the buttocks, now with the anus perhaps or an enlarged hemorrhoid of pregnancy, and finally with the vulva and vulval hair, inverting the former and pushing a quantity of the latter into the normally sterile vagina.

Since bacteriology and clinical evidence agree that the passage of the sterile finger through the orifice of the hymen of a pregnant or parturient woman carries with it a risk of infection, why do we, then, subject a patient to this risk, however slight, oftener than is absolutely necessary? Indeed, we may ask, Why do we subject a patient to this risk at all? Yet modern obstetric teaching reveals a remarkable difference of opinion in the matter. Even to-day, on the one hand, internal examinations are advised during labor at short intervals; and, on the other, we have the statement from both the practical and the theoretical stand-point, that there are only two conditions which cannot be made out by external abdominal examination, namely, the degree of dilatation of the os, and prolapse of the cord, and hence vaginal examinations can be usually done away with. Both of these extremes are, we believe, to be avoided. Much clinical experience has taught us that to rely almost entirely upon external abdominal examinations in pregnancy and labor is not in the best interests of pregnant and parturient women. The positive indications for an internal vaginal examination are too numerous to occupy our time here. One thorough examination of pregnancy, external and internal, one vaginal examination in the first stage, and one when the membranes rupture, are usually all that are necessary, and many cases, especially multi-

paræ, well advanced in the second stage when first seen, require no internal examinations at all.

With proper precautions of vulval and hand cleansing, vaginal examinations may be said to be relatively

FIG. 5.—Dorsal Position. Thighs and legs flexed; vaginal examination with partial exposure of the patient as in the use of the catheter. Partial obliteration of vulval canal by wide separation of labia with fingers of left hand.

harmless. The same statement under the same conditions may be said of intra-uterine manipulations. Yet we do not lightly undertake intra-uterine manipulations in the absence of a positive indication. Clinical experience as well as bacteriology has taught us in the past semidecade to look upon ante-partum, intra-partum, and post-partum vaginal manipulations in the same light as that of intra-uterine manipulations of a decade back. The clinician is too prone to consider only mortality in his results, and to pass over entirely the question of morbidity.[1] Even to-day in carefully conducted hospitals the influence upon morbidity, the ultimate consequences of a mild puerperal septic process, are too apt to pass unrecognized by the obstetrician, until the case passes into the hands of the gynæcologist for the cure of chronic uterine and peri-uterine inflammation, which had its origin in an unnecessary if not careless vaginal examination. We hear much of a lowered mortality and little or nothing of a reduced morbidity. Antiseptic midwifery taught us how to reduce the mortality in childbirth; bacteriology takes up the reform where antisepsis left it, goes a step further, and teaches us how to secure a low morbidity rate. The whole process of labor properly considered is a conservative process, whose tendency is to prevent sepsis, and it should be our aim not to thwart this process or supplant it by the methods of art, but to follow and aid it, only interfering when for one reason or another the resources of nature prove insufficient. Nature's processes in labor are from within outward. The fœtus starts on its journey through the parturient canal from the sterile uterine cavity, passes through the aseptic cervix, continues on its way through the sterile vagina, and only at the point of final expulsion comes in contact with a septic surface—at a time when such contact can do no harm. In other words, the fœtus passes from the clean to the unclean. Moreover, during and after the journey of the fœtus through the birth-canal, nature has provided additional safeguards against infection, notably the physiological increase of the germicidal vaginal mucus which attends the normal progress of the first and second stages of labor; the flushing of the canal from within outward by the aseptic saline liquor amnii at the end of the first stage; by a second flushing of the canal by a rush of aseptic saline blood and liquor amnii at the termination of the second stage; and at the termination of the third stage the cleansing process is completed by the outward passage of the placental mass and the subsequent flow of blood. Then follow quickly the reparative processes of nature to close the open blood-vessels and lymphatics. While, as we thus see, all nature's processes are from within outward and conservative—from the sterile toward the septic, manipulations on the part of the obstetrician must necessarily be from without inward—from the unclean toward the clean. Hence the importance of non-interference, except in the presence of a positive indication.

Importance of Healthy Blood Conditions.—Because we know now that most of the secretions of the genital tract are germicidal in character, we must not lose sight of the fact that healthy blood is the best of all germicides, and so, by appropriate hygiene and treatment we should see to it that this is secured to the pregnant, parturient, and puerperal woman.

Serum-Therapy.—Concerning serum-therapy and the use of antistreptococcic serum in puerperal infection, we can to-day say nothing. So far as we have been able to judge, the usefulness and even the freedom from danger of the antistreptococcic serum have not been demonstrated.

Bacteriology has taught us that there is much to be learned in a careful study of normal labor, that we have devoted too much of our time in the past to the study of abnormal conditions, and that the keynote to the prophylaxis against many of these very abnormalities is to be found, not in the preaching, but in the general practice of the principles of modern asepsis—namely, non-interference with the conservative and reconstructive processes of nature. Never before have the bacteriological studies of the laboratory been more in harmony with the clinical experience at the bedside, both of them daily adding to our knowledge of the subject of prophylaxis against puerperal infection. Never before have the principles of asepsis been so clearly set forth. Bacteriology has shown us not only the uselessness, but even the harm, of much of the bewildering technique of the early antiseptic era; has taught us the folly of the too general use of bacteria-destroying chemical solutions; has clearly and definitely pointed out when and where these antiseptics are to be employed and when and where withheld—in a word, the intelligent application of asepsis and antisepsis.

The glory of recent and modern obstetrics is not the improved Cæsarean section, not this or that brilliant

FIG. 6.—Dorsal Position. Thighs and legs flexed; vaginal examination without exposure of patient. Labia separated with fingers of left hand passed over right thigh. Internal examination with fingers of right hand passed under thigh. Bed sheet raised by nurse to prevent contact with examining fingers.

operative procedure; no, not even the older doctrine of antiseptic midwifery. The glory of modern obstetrics is the light thrown upon so prosaic a subject as the management of normal labor by the results of modern bacteriological investigation, which have

taught us the rational and scientific application and the real meaning of asepsis and antisepsis.

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ULCER OF THE STOMACH—PERFORATION—ACUTE DIFFUSE PERITONITIS—OPERATION—RECOVERY.[1]

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It is by no means infrequently the case that an ulcer of the stomach escapes the observation of even the careful diagnostician, until the symptoms of perforation and the attending peritoneal involvement place it beyond doubt. The lesion in the stomach can often be only surmised, since a simple ulcer without hemorrhage or perforation may give rise alone to gastric irritation, though pain and distress after eating are usually present in some degree. The importance of an early diagnosis cannot be overestimated, since both the palliative and radical measures required depend for their success upon an early appreciation of the exact condition present within the stomach. In this early appreciation of the condition, gastralgia, hæmatemesis, anæmia especially in young subjects, and the symptoms evidencing a perforation, are of the greatest significance.

The pain coming on after eating, and usually relieved by the ingestion of food, is characterized as "shooting or boring through the back." The source of the hemorrhage is revealed by a careful examination, and the exclusion of the nose, pharynx, œsophagus, and lungs as its seat of origin. The vomiting of bright blood in a large quantity practically establishes the diagnosis.

Anæmia without cachexia, in a young person, is one of the most important signs, when taken in conjunction with other diagnostic symptoms. Of the symptoms, however, the most important are those due to the perforation of the ulcer into the abdominal cavity. This condition is evidenced at its onset by a sudden and intense pain, increasing in severity and located in the epigastrium and the left hypogastric region. The exact spot of intense pain in the case described later was directly opposite the ulcer, and was attended with retraction of the upper third of the abdomen, together with a more marked tension in the rectus muscle of the left side than in the rectus of the right side. Following these signs, which occur in rapid succession, come collapse, shock, and the symptoms of a localized or a general peritonitis. If the extravasation be limited by adhesions, the signs of general peritoneal infection are wanting, and those of a localized abscess are apparent.

Operative interference for gastric ulcer is indicated in painful adhesions, in fibrous contractions of healed ulcers, in severe hemorrhage from ulcers, and in perforation into the abdominal cavity or the neighboring organs. In the perforation into the abdominal cavity and in excessive hemorrhage into the stomach, surgical measures should be practised as soon as possible. The present successes in cases of perforation have been attained mostly within twelve hours of the onset. Unless the shock is excessive and precludes any hopeful exploration, operative interference should be instituted immediately, on account of the rapidity with which general infection takes place. Excision and suture, or suture without excision, must be immediately undertaken, according to the circumstances. If the exploration be made for hemorrhage, a complete excision of the ulcer and suture are indicated, although the bleeding point in some instances may be better secured by a gastrotomy and ligature.

The results of operative interference depend largely upon the seat of the ulcer. Those situated upon the anterior surface are more frequently encountered in the operation for perforation, although ulcerations are more frequently seen upon the posterior surface of the stomach. Those upon the posterior surface, however, are more apt to obtain firm adhesions, owing to the smaller amount of mobility of this surface of the stomach and its proximity to serous surfaces, allowing rapid and secure adhesions.

Ulcers upon the anterior surface are more accessible to the surgeon's manipulations than those upon the posterior surface or lesser curvature, and a more favorable chance is given for clean and perfect work, although the liability to a more extensive involvement of the peritoneum is afforded. The result is also greatly dependent upon the time elapsing between perforation and exploration, and too much stress cannot be placed upon this point. According to the statistics collected by Weir and Foote, (1) of twenty-three cases operated upon within twelve hours, fourteen recovered and nine died; (2) of seventeen cases operated upon between twelve and twenty-four hours, four recovered and thirteen died; (3) of thirty-two cases operated upon after twenty-four hours, four recovered and twenty-eight died; (4) of six cases in which the time was not noted, one recovered and five died.

Such statistics as the above clearly indicate the value of time. No less importance, I believe, can be laid upon the fulness of the stomach, and the degree of fermentation in its contents at the time of perforation. In many instances this fact is not recorded. In Barker's seven cases, however, three of the four who died had eaten large meals just before the perforation. In Ackermann's four cases, with one recovery and three deaths, one death occurred to a patient who had eaten a large meal before operation, one death in a patient operated upon two days after perforation; one case was not operated upon. The patient which recovered had not taken food for some time previous to perforation, and the exploration was made between ten and twelve hours after rupture.

I wish to record here a case occurring in my service at the New York Hospital and referred to me by Dr. Samuel Lambert, who had treated the patient previously, and had first seen her in this condition at 7:30 P.M., February 13, 1898. He believed it a perforation demanding an immediate exploration.

H. McK——, aged twenty-four years, a native of Scotland, was admitted to the New York Hospital, February 13, 1898, at 10:15 P.M. For three years the patient had been suffering from what she styled dyspepsia. For the last six months her gastric disturbance, which was characterized by the excessive fermentation of food and pain of a boring character in the stomach after eating, had gradually increased, and had been attended with an increasing anæmia. During the last two months she had been treated for these two conditions, both medicinally and dietetically, and

[1] Read before the Newark Medical and Surgical Society, December 15, 1898.

with some apparent result. Her present illness began at about 8 or 9 A.M. on the morning of February 13th. While removing a jar from a shelf somewhat higher than her head she was seized with a sudden pain in the abdomen, and of such severity that she fell on the floor. Shortly afterward she vomited and continued to do so at short intervals for over two hours. The vomitus consisted of water and mucus. The pain has been from the beginning intense, and though at first located in the epigastrium, a little to the left of the median line, has now gradually extended over the whole abdomen, and has continued to be quite severe and, at the same time, paroxysmal. She has taken no liquids or food since just before the attack of sudden pain this morning, at which time (one and one-half hours before the attack) she ate a roll and drank a cup of coffee. The examination at the house, before admission to the hospital, showed the heart and lungs normal. The urine was normal. The temperature was 102.4° F.; pulse 136, small and compressible; respiration 32, thoracic. The patient is markedly anæmic, but owing to the necessity for immediate action, the blood ratio was not obtained until after operation. The face is pinched, and shows the effect of the pain and sepsis. The abdomen is tender, but not markedly tympanitic. The epigastrium is strongly retracted, and the recti in their upper segments seem tenser and more strongly contracted than in the rest of their extent, and certainly more so than the other abdominal muscles. The point of exquisite pain seems to be located over the left rectus muscle, in its upper segment. The diagnosis made at this time was that of a perforating ulcer of the stomach and a rapidly developing general peritonitis.

The operation was performed at 10:30. A median incision, five inches long, the greater portion being above the umbilicus, was made. As soon as the peritoneum was seen and incised, a quantity of sero-purulent fluid was found over and among all coils of the intestines exposed. The intestines were somewhat distended, deeply injected, and covered with fibrinous plaques. In order to obtain a more efficient field, the incision was at this time enlarged, both above and below, in order that, if necessary, the intestines and omentum might be easily displaced from the abdominal cavity. This, from the extent of the peritonitis, was soon found to be an absolute necessity. The omentum and intestines, after removal from the cavity, were carefully cleansed, with decinormal salt solution (Thiersch's) and sterile gauze pads, of the fluid exudates as well as all the fibrinous plaques. The viscera were carefully covered, kept warm, but not returned. The pelvis was now washed and cleansed with salt solution and packed with dry sterile gauze, which remained during the rest of the operation and exerted its absorptive effect upon the fluid exudates in the lymphatics of and beneath the peritoneum. The accumulation in the pelvis was purulent in character and large in amount. The parietal peritoneum and fossæ between and to the outer sides of the ascending, descending, and transverse colon were similarly cleansed and packed. The surface between the diaphragm and liver, the surfaces beneath the liver and over the kidneys, as well as those of the spleen, were likewise inspected, found involved, and similarly treated with salt solution and sterile gauze packing. The anterior surface and the superior and inferior borders of the stomach were now carefully examined, but no perforation was found, although two apparently healed ulcers were seen. On raising the lower border of the stomach the lesser cavity of the peritoneum (saccus omentalis) was found to be distended with a sero-purulent exudate. This sac was opened in a vertical direction, carefully wiped out with gauze pads soaked in salt solution, and having satisfied ourselves as to its cleanliness, it was packed as in the other regions. The stomach was then brought through the slit in the peritoneum and everted so that its posterior surface was anterior and the lower border uppermost. The posterior wall was thus exposed, and a number of scars (five) were seen situated in the upper half of the posterior surface near the lesser curvature and varying in size from a pinhead to a five-cent piece. In one of these scars a perforation was found, the edges of which were irregular and about one and one-half centimetres in its longest diameter. The ulcerated area was excised sufficiently to present an even and apparently healthy surface. One row of stitches was taken through the serosa, muscularis, and submucosa, over which a second row of Lembert stitches was applied, including an extent of peritoneum equal to one centimetre beyond the borders and ends of the perforation.

The intestines were again washed with salt solution while out of the abdominal cavity. The various cavities, where packing had been left, were again treated as in the first instance. As soon as the peritoneal surfaces, where the gauze had been left, were considered clean, the packing was renewed, the intestines were carefully returned, and two small drains of gauze inserted, one into the lesser cavity of the peritoneum, but not touching the suture line over the perforation, and another into the pelvis. The incision in the abdominal wall was then closed with deep catgut and superficial silk sutures. A good deal of difficulty was experienced in bringing together the abdominal wall on account of the contraction of the abdominal muscles. At two points in the abdominal incision suturing was omitted (at the upper and lower ends), through which the packing left for drainage was carried.

A sterile dressing was then applied. During the operation, owing to the rapidity and diminished volume of the pulse, an intravenous infusion of salt solution (6.6 per cent., 110° F., 1,200 c.c.) was given.

February 14th. The patient had a comfortable night and slept fairly well. Temperature, 110° F.; pulse, 120; respirations, 32. Heart stimulants: strychnine and digitalin were administered p.r.n. Nutritive enemata were given with salt solution, q.s.

February 15th. Temperature, 100.2° F.; pulse, 18; respirations, 24. Water was given by mouth in small quantity, with stimulants and nutritive enemata.

February 16th. Temperature, 101.1° F.; pulse, 98; respirations, 22. The treatment was continued as before. The wound was dressed. The skin seemed red and irritated about the suture-holes in the skin. Owing to the contraction of the abdominal muscles the sutures were necessarily tied with too much strain upon the tissues. This, however, could not be avoided. It was thought best to leave them, and to dress the wound daily.

February 17th. The wound was redressed. The gauze drains were removed and reinserted. The stimulants and nutritive enemata were continued. Temperature, 100.5° F.; pulse, 84; respiration, 20.

February 18th and 19th. The treatment is the same.

February 20th. The sutures in the skin were removed, and drains removed and reinserted. Temperature, 99° F.; pulse, 76; respiration, 20.

February 21st. Temperature, 103° F.; pulse, 100; respiration, 24. Gas passed per rectum was very offensive. The bowel was thoroughly irrigated with Thiersch's solution. All peptonoids in the enemata were stopped.

February 22d. Temperature, 101° F.; pulse, 88; respiration, 20.

February 23d. Temperature, 99° F.; pulse, 75; respiration, 18.

February 24th. Temperature, 103° F.; pulse, 92; respiration, 24. Irrigation of the large intestine was done.

February 25th, 26th, 27th, 28th, March 1st to 15th. The treatment has been practically the same. The wound in the abdomen has entirely closed. The temperature has ranged between 99° and 100° F., and pulse between 70 and 80.

March 16th. The patient ate solid food.

March 25th. She sat up in a chair.

March 28th. She left the hospital, cured.

Examination of the blood on the day after the operation: hæmoglobin, thirty-six per cent.; white to red corpuscles, 1:381; coloring matter diminished. There were deformities in red cells, with a slight tendency to form rouleaux and to stain evenly.

A bacteriological examination of the exudate was not made, unfortunately, owing to a misunderstanding.

I believe the important points leading to the recovery of this case were: (1) The early diagnosis and the immediate operative interference; (2) the comparative emptiness of the stomach before the perforation; and (3) the care with which certain procedures were carried out. This being a case of unquestionable general diffuse fibrino-purulent peritonitis, one involving all portions of the greater cavity of the peritoneum, as well as of the lesser cavity (saccus omentalis), I deem it is not amiss to express my views in reference to the treatment of this condition. It has probably happened to many of us to have saved by operative interference cases of diffuse peritonitis involving a greater or lesser extent of the peritoneum, but to few has it been possible to say definitely that all portions of this membrane have been involved, although we may have believed the peritonitis to be general in character and involvement.

I. I believe the lesions produced by the various micro-organisms in peritonitis (in different degrees of virulence) are so similar macroscopically, that nothing can be learned at the time of operation other than the probable virulence of the infection, which may be judged of by the character of the exudate, the diffusion of the process, and the constitutional involvement, and the probability of a mono- or polyinfection, depending upon the source of the peritoneal infection. Bacteriology does not help us in any way at this stage.

II. I recognize a resistance to infection in the peritoneum, due to the action of the peritoneal fluid and the influence of the endothelial cells. It is probable that the leucocytes play an important rôle here in giving out the antitoxins (alexins) which combat the influence of the microbic toxins.

III. When micro-organisms come in contact with the normal peritoneum, the peristaltic movement of the intestines distributes them in a most complete manner over a relatively great extent of its surface. Small quantities of microbes thus exposed to relatively large areas of normal endothelia, peritoneal fluid, and leucocytes, are rapidly neutralized by the antitoxins and are absorbed. This bactericidal power in the peritoneum holds good for all varieties of bacteria in cultures of a certain virulence and of a certain quantity. This power is a relative one between the virulence and quantity of a specific organism and the individual. When, however, the virulence and quantity of the bacteria are great or the resistive power in the peritoneum is diminished (exhaustive disease), the antibacterial properties and the resorptive power of the tissue cells are destroyed, and the inflammation rapidly extends over a part or the whole cavity.

IV. The toxins of bacteria, as well as slight mechanical, chemical, and thermic irritations, so seriously impair the integrity of the peritoneum that the normal resistive power against bacterial increase is often invalidated. Among these may be mentioned the influence of the air upon the exposed peritoneum. Under its influence evaporation takes place, the peritoneum becomes dry, and the peritoneal fluid (endothelia, leucocytes, a few blood corpuscles, and serum), as well as the peritoneal cells, becomes so altered that if a slightly virulent and small quantity of bacterial infection is introduced, a local or general peritonitis will follow. If the peritoneum is protected with salt solution and the evaporation is avoided, the same quantity and virulence of the infection is not followed by an infectious peritonitis. Mechanical, chemical, and thermic (including air) irritations, when no infections are present, produce localized adhesive peritonitis and localized aseptic purulent peritonitis (pus here means an aseptic collection of serum suspending broken-down epithelia, leucocytes, and a few red blood cells.—M. Walthard and Wieland). Hence, dry asepsis (with exposure of intestines), chemical antiseptics, mechanical injuries due to rough handling of the intestines, in fact, anything which will interfere with the vegetative activity of the tissue cells, are to be avoided, since in aseptic operations adhesions are left, while in the septic ones a great chance is given for constitutional and local infection.

V. The removal of the fibrinous deposits upon the peritoneum should be left largely to the judgment of the operator. Where these deposits in septic cases exist in the neighborhood of a focus or foci, and are evidently fibrino-purulent (macroscopically), I believe they should be removed gently, rapidly, and preferably with the fingers and salt solution, in order to remove and expose the infecting agents in and beneath them. Here we are to take the lesser of two evils—continued infection or the danger of subsequent adhesions.

In aseptic cases certainly, and upon the outskirts of progressive peritonitis, I do not think it necessary to remove them, especially since these deposits and serous fluid present are not yet infected, and represent, as does the œdema on the border of a cellulitis, a purely mechanical condition, and nature's first effort toward localization of the infection. Of this point I am quite satisfied, since in three cases in particular, in which, from an appendicitis, a progressive fibrino-purulent peritonitis—involving the iliac fossa, pelvis, and the peritoneum upon and to both sides of the ascending colon and about two-thirds of the small intestines, the so-called general peritonitis—existed, I made a second incision upon the left side, and finding that peritoneal adhesions, represented by fibrin, had walled off this extensive involvement from the other third of the cavity, which was here and there covered with recent fibrin and a small quantity of serous fluid, I closed this second wound without disturbing these deposits. I obtained a primary union in this wound and a recovery of the patient with drainage of the wound upon the right side. In dealing with these deposits, much must be left to the experience of the surgeon. I believe it is quite as bad to err upon the one side as upon the other. A surgeon who refuses to remove these deposits when the character of the infection warrants it, errs quite as greatly as when he fears to enter a suspected area of peritoneal cavity beyond the focus of infection, because of the danger of infecting the healthy peritoneum. The normal peritoneum is quite able to take care of this danger, provided the surgeon aids it by drainage of that area.

VI. In peritonitis without adhesions, or with very few, in which it is necessary to cleanse not only the intestines but also the various fossæ in the cavity (including the lesser cavity), the surgeon should lose no time in deciding to remove the small intestines from the cavity, taking care to avoid evaporation from their surface, and to prevent a capillary stasis in the vessels from compression at the base of the mesentery. The peritoneal cavity presents a surface for evaporation nearly equal to that of the skin (17,182 q.m. to 17,502 q.m.) and with a richer vascular supply. The fluid thus lost consists of water, serum, albumin, salts, and hæmoglobin. In one hour's duration enough fluid, when

precautions are not taken (about 3.5 per cent. = 3½ pounds), is lost to the blood to lower the temperature from 2° to 4°, owing to the diminished heat production and to evaporation; to diminish the blood pressure in the arteries and to show a diminished peristalsis in the intestine. Even when precautions against evaporation are taken, it is not infrequently observed, especially in feeble patients, in whom it is necessary to expose large portions of the intestines or to eviscerate, that a symptom complex corresponding to this loss of fluid suddenly supervenes. It is as frequently seen also that an intravenous infusion of salt solution combats these symptoms perfectly. I prefer to explain these symptoms of diminished heat production, loss of blood pressure, and diminished peristalsis, in many cases, by the loss of water and salts, hæmoglobin, in the blood, rather than to the shock induced by the manipulation. To avoid just this condition, care must be taken to have the temperature of the operating-room high, the air moist, and the intestines, whether in or out of the abdominal cavity, protected by gauze pads soaked in salt solution. If a further demand is made, I make use of the intravenous infusion of salt solution, and rely more upon this than I do upon its absorption by the peritoneum. The effect is more quickly observed than if produced by any other measure. I am a firm believer in this use of the salt solution, and employ it in all severe abdominal operations with this symptom complex, and certainly have many times observed a rise of temperature, an increase of blood pressure, and an increased peristalsis during manipulation of the intestine, immediately following its use. No matter how we may explain its action, I am sure it will hold its own with any other measure in an equally severe case.

VII. When the intestines are greatly distended with gas, which is not infrequently the case in the peritonitis of appendicular origin, and is in great part due to decomposition and fermentation occurring in chronic enterocolitis, I think it wisest to withdraw from the abdomen the distended coils, and to incise them in one or more places sufficiently to relieve them of their gaseous and semisolid contents. This can be done through small incisions, and, if one wishes, a solution of magnesium sulphate ($\bar{3}$ ss.) may be injected into the intestines as high as possible before suturing. The relief of the increased intra-abdominal pressure, which exerts itself not only upon the intestinal wall but upon the abdominal wall and diaphragm, offers an immediate solution to the great difficulty in respiration and the circulation, and is the most important step toward obtaining a passage from the bowels after operation. The distention of the muscular coats of the intestine by the gas within it under pressure, and the resulting ischæmia of the intestinal wall, are the primary causes of apparent paresis. The longer this condition is allowed to remain, the more difficult is it to obtain success with cathartics. The sooner relieved, the more rapidly will the peristaltic action assert itself. In those cases characterized by excessive or continual vomiting, I have found no better results following the use of the intra-intestinal injection of magnesium sulphate than from lavage of the stomach, calomel, and high enemata. In both instances, passages have taken place in twenty to twenty-four hours. It has often been necessary to give calomel after the magnesium sulphate was introduced into the intestines, in order to secure a good movement.

In the very virulent cases, those attended with a marked septic intoxication, and with a small observable lesion, I have seldom seen a result from any method used to secure catharsis, nor have I ever seen a patient cured.

VIII. Of the value of salt solution and gauze pads soaked in salt solution I am thoroughly convinced. The abdominal cavity should be thoroughly cleansed with salt solution in all the infected areas in which it is necessary to remove the intestines. When it is not necessary to eviscerate, the irrigation is confined to the area of infection. Antiseptic solutions are of no value, for they cannot destroy the micro-organisms in the fibrinous deposits nor in tissue of the serosa. The use of these we must give up and content ourselves with a removal of the exudate and prevention of its reaccumulation. This salt solution offers the least harmful means of removing the exudate, and when followed by the gauze packing, left in contact with the infected area during the rest of the operation, it secures a most thorough cleansing of the peritoneum, the removal of such necrotic tissue in the serosa as cannot be seen, and, by its capillary attraction, the fluid exudate. No matter whether the infected area be a single one or occupying the various spaces in the abdomen around the spleen, above the liver, in front of the bladder, or about the ascending or descending colon, these cavities, after careful washing and the removal of fibrin tags, are filled with gauze during the cleansing of the intestines, their incision or suture (if done). When this is finished and the intestines are returned (in case evisceration was necessary), the gauze is removed and the cavities are again cleansed in the same manner. I do not believe it good practice, unless a complete evisceration is made, to wash out the cavity with large quantities of salt solution by means of tubes. I think it wiser to place my solution, the smallest amount necessary, in the infected area, for the chances of having the solution fill spaces beyond the actual area of dangerous infection, in peritonitis without apparent adhesions, are too great.

IX. Drainage.—No matter how much we rely upon our antisepsis preparatory to operation, and our asepsis during operation, we are not yet able to exclude in all cases microbic infection in our simple wounds of the abdominal wall healing by first intention. The staphylococcus albus, and even aureus, in a certain number of cases, are found in those wounds, in spite of our best efforts. They do not always produce sepsis (pus and fever) simply because the cultures in the skin from which they most frequently are derived (they exist in the air in ten per cent. of other varieties) are of slight virulence, and because of the bactericidal property of the primary wound secretion. If we cannot accomplish such a condition in a favorable situation, how much less are we able to accomplish it in an already infected area! We are never certain of having removed all infection. We leave certainly enough for the peritoneal resorption, even when drainage is used. I cannot bring myself to believe that the abdominal wound in these peritonitides should be sewed up and the patient placed in the slight Trendelenburg posture to favor absorption. I think the peritoneum has as much as it can do to take care of what we leave behind, without adding a further burden. In many cases not connected with the intestinal tract, in which the exudate properly represents a sterile abscess, or in cases in which the virulence is known to be slight, this can be done with safety.

X. As this case shows an undoubted general peritonitis present at the end of the thirteenth hour, and one which with the treatment instituted has recovered, I think it well for me to state here an opinion I have long entertained in reference to the term, "general peritonitis." Among many medical and some surgical practitioners the word "general" signifies to them a complete involvement of the peritoneum, but to the operator many so-called "general peritonitides" are not involvements of the whole cavity, but only such as show no limiting or a few limiting adhesions. This word is certainly one which should be discarded in the sense in which it is at present used. In review-

ing a large number of cases I find only a very few in which the operator describes without doubt a total involvement of the cavity. The character, the actual extent, and the virulence of the condition are so lightly and imperfectly described, that one is in over one hundred cases unable to find more than three in which the exact extent, character of the exudate, and virulence of the infection are sufficiently well stated to be of value in making statistics. The extent of the process, the character of the exudate, and the virulence of the infection should all be taken into account in summing up any case, and until this care is taken and the descriptions of the cases are more accurately made, the value of the reports, except for the purpose of display, will be nil.

In the acutest form of peritoneal absorption (peritoneal sepsis) so quickly does absorption take place by the peritoneum of the bacteria and toxins, that the local appearances are confined to a very small amount of a turbid, bloody exudate, while the constitutional symptoms are those of rapid collapse, heart failure, and gasping and superficial respiratory effort. Surgery is practically powerless against this form.

A less virulent yet still very virulent form is the diffuse purulent variety, in which fibrinous adhesions of the intestines are absent, or, at least, present in slight degree, and involving a greater or lesser portion of the peritoneal cavity. In this variety surgery has a fair proportion of recoveries, especially in those cases in which, owing to the resistance of the patient, the advance of the infection over the whole cavity is delayed. It is just in such instances that surgeons report cases as "general peritonitis," because they observe no adhesions; implying that the whole cavity is infected when, in fact, that portion beyond the exudate is still free from infection, and shows upon its surface the first effort of nature in response to the infection. When the primary focus is removed, such a process retrogresses when properly drained. For such cases it is not always necessary to eviscerate, but it is necessary to expose all observably infected areas. The indiscriminate use of an irrigation tube here is dangerous unless evisceration is done.

The next less virulent variety is the progredient or fibrino-purulent peritonitis. In this variety, as in the other, the bacteria are not so great in number or not so virulent, or the resorptive power of the peritoneum and the antitoxins of the leucocytes (resistive power of the patient) are such as to prevent its spread by fibrinous adhesions in a greater or less degree, depending entirely upon the relation existing between the degree of virulence of infection and the resistance to its advance shown in the individual. The more extensive varieties of this class approach the severer types of the diffuse, and are quite as difficult to cure, whereas the milder types approach the localized suppurative peritonitides. This latter variety, as in the progredient variety, exists likewise under two forms, the one of which approaches the milder progredient peritonitis and the less virulent the aseptic abscess of the peritoneal cavity. It is proper and true that a distinction should be made between the four varieties of peritonitis—peritoneal sepsis, diffuse purulent, progredient or fibrino-purulent, and the localized suppurative peritonitis. In the main, it is of value in prognosis just as the well-known fact that the omentum in a measure offers a barrier to the advance of a purulent peritonitis from the lower segment of the abdominal cavity, and, in many instances, confines the process, so that the upper portion of the abdomen shows only the signs of inflammation, but not of severe infection. Such facts are of importance when distinct and typical classes of these varieties are compared.

The first and last variety are comparatively easily separated, but the other two forms are more difficult, since the difference in virulence of the infection is only a gradual one, while the individual resistance to the disease in the patient is the main issue.

52 East Fiftieth Street.

A CASE OF PHLEBITIS AND THROMBOSIS OF THE SIGMOID SINUS AND THE JUGULAR VEIN OF AURAL ORIGIN.

By CARL KOLLER, M.D.,

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Phlebitis and thrombosis of the sigmoid sinus and the jugular vein, and the surgical treatment of this condition, engage at the present time the attention of aural surgeons and surgeons in general. Hardly ten years have passed (1888) since the operation of opening the thrombosed sinus was performed (by Lane) for the first time, although recommendations to that effect had been made several years before, and the surgical treatment of sinus thrombosis has already an uncontested place among surgical operations, and quite an extensive literature has accumulated on the subject. Perusal of the latter makes one point very clear—that is, that the sooner the diagnosis of sinus thrombosis is made, and the sooner the operation is performed, the greater are the chances for a favorable result. In the cases in which the pyæmic condition has been allowed to last for a week or longer, or in which pulmonic metastases are present, there is hardly any chance of recovery; whereas with early diagnosis and operation the chances are in favor of the patient.

In order to contribute my share to the establishment of this conclusion, and because each case presents some individual and interesting features, I shall record the following case:

Sarah M——, thirteen years of age, was admitted to Mount Sinai Hospital on Tuesday, August 15, 1898. The patient was conscious, looked septic, and was very hard of hearing. Soon after admission she had a chill of five minutes' duration; temperature, 104° F. Two hours later she had another chill; temperature, 106° F. After that she was very apathetic—in fact, hardly conscious; later, she was entirely unconscious, perspired profusely, and looked intensely septic.

According to the statement of her family physician, she had scarlet fever when three years old; from that time she suffered with her ears. The left ear was repeatedly operated on. The ear discharged; sometimes the discharge stopped, and she had fever with chills and vomiting. With the reappearance of the discharge she felt better. The present spell is said to date back two weeks, since which time she has had two chills daily. For the last two days the right ear also discharged, with pain behind the ear and down the neck.

Present condition: She is a well-developed girl of medium build. Her general appearance is septic; the skin is sallow and mottled. Herpes-like eruptions are present on the upper lip and over the right nostril, also on several fingers of the right hand; on the fingers are more recent vesicles grouped together, of slightly hemorrhagic discoloration. The sclera is of yellowish tinge. The pupils are small, equal, and react to light. The tongue is moist and coated brown. A few soft crepitant râles can be heard in both axillæ. The liver is normal; the spleen is enlarged to percussion; the abdomen is slightly distended and tympanitic; the reflexes are normal. Ophthalmoscopic examination of the fundus gives a negative result, except some venous hyperæmia.

Examination of ears: Over the left mastoid process are extended scars, partly adherent to the bone. The tympanic membrane is missing; the medial wall is granulating; whitish cholesteatomatous masses are

visible toward the attic. On the right side the membrane is also missing, the medial wall granulating, partly denuded; from the attic a purulent discharge comes. No visible signs of inflammation are perceptible on the mastoid; strong pressure upon the apex or the fossa mastoides causes pain. A hard cord can be felt in the anterior triangle of the neck along the course of the jugular vein; there is intense pain on slight pressure. This sensitiveness also exists, to a lesser degree, on the left side. The right occipital region is very painful to percussion.

Diagnosis: Thrombo-phlebitis of the right sigmoid sinus and the jugular vein. On account of the ambiguous aspect of the case and history of persistent trouble on the left side Dr. Fred Whiting was called in consultation, corroborated the diagnosis, and advised operation on the right side.

Previous to the operation the patient was unconscious. The physician in charge of anæsthesia observed pleural scraping on the left lower lobe.

Operation: The usual incision for opening the antrum was made. The bone was healthy in appearance. The antrum was opened with gouge and chisel. The antrum and posterior mastoid cells were filled with broken-down granulations and inspissated pus, which led toward a loose, shell-shaped sequester of the interior plate of the sigmoid groove, three-eighths of an inch in diameter. Beneath some more inspissated pus the sinus was found presenting a greenish, glistening surface, pulpy to touch. The incision was extended backward at right angles to the original incision; by removing the bone with the rongeur forceps, the sigmoid was exposed almost its entire length up and down from the point where it was first struck. The bone contained broken-down granulations and pus. I inserted an aspirating needle into the sinus and aspirated thin, greenish, ill-smelling pus. Then I asked Dr. Lilienthal to ligate the jugular vein. He made an incision on the anterior border of the sterno-cleido-mastoid muscle in the lower part of the triangle, dissected down into the depth, ligated some branches, and found the jugular vein as a thin, flaccid cord. He ligated deep downward, incised the thrombosed vein, passed a probe up toward the bulb, and continued the original incision through the deep muscles of the neck, until almost the whole length of the vein was exposed, with the exception of a small piece near the base of the skull. The exposed part was slit open and a sharp spoon passed up toward the bulb. The thrombus was half solid. After that I made an incision into the sinus at the point of aspiration, and evacuated several drachms of ill-smelling pus. Then I curetted down toward the bulb, afterward up toward the lateral sinus, from which locality crumbling, inspissated matter and gelatinous pus issued; finally came a gush of blood. This was stopped in the usual way by placing iodoform gauze under the edge of the bone; then I allowed it to bleed once more, and afterward washed the sinus and jugular vein thoroughly with sterile saline solution, packed the wound with iodoform gauze, and applied a bandage. Toward the end of the operation about two pints of saline solution were infused into the cubital vein.

After the operation, the pulse was 140; respiration, 36; temperature, 102.2° F.; later the temperature went down to 101.4° F. Immediately after the operation the patient looked cyanotic. An hour and a half later she recovered from the anæsthetic, was fully conscious, and asked for a drink.

The next morning the pulse rose to 156; respiration, 40; temperature, 104.2° F. The patient looked sallow and septic. At 2 P.M. the pulse was 168; respiration, 48; temperature, 105° F. The patient became very noisy and had to be given morphine. Severe pains in the chest developed, very hard breathing and cyanosis, with drawing in of the jugulum. Over the lower lobe of the left lung crepitant râles could be heard; breathing diminished; the pulse became imperceptible, respiration shallow, and at 2:45 the patient stopped breathing.

The patient had no more chills after the operation, and this fact and the returning consciousness were the only favorable symptoms. Considering the two weeks' duration of the pyæmic condition, and the involvement of the left lung at the time of the operation, the latter had little chance of saving this life, and was performed as a forlorn hope.

No autopsy was allowed.

The diagnosis of phlebitis and thrombosis of the sigmoid sinus in a case of chronic ear suppuration must be based on pyæmic symptoms supervening on the symptoms of chronic ear suppuration, high temperature with great fluctuations, chills, vomiting, and persistent cephalalgia. These are the most constant symptoms. The local symptoms, due to disturbed venous circulation (Griesinger's, Gerhardt's, and others), may be absent, as they were in this case. The ophthalmoscopic examination may show optic neuro-retinitis, or simple venous hyperæmia, or normal conditions. The diagnosis of thrombosis of the sigmoid sinus is made certain if thrombosis of the interior jugular vein is present, which shows itself by a cord-like hardness in the upper part of the lateral triangle, very sensitive to touch. Pain and sensitiveness to pressure on the occiput and down the posterior part of the neck are indicative of the continuation of the thrombosis into the condylar veins and those of the deep muscles of the neck. In our case both these symptoms were present; not only this, but the tenderness along the jugular vein existed also on the other side, which, according to Macewen, is not infrequently the case, and which he attributes to the venous communications with the other side.

As in our case chronic suppuration had existed in both ears since earliest childhood, and a number of bone operations had been performed on one side (not the one which we rightly assumed to be the seat of the trouble), the presence of hardness and sensitiveness along the upper part of the jugular vein on both sides was very embarrassing. The tenderness over the right occipital region and along the deep muscles of the neck decided the question in favor of the right side.

As to the method of operation, it is worth mentioning that, according to Koerner's statistics, the results are better if the jugular vein is ligated before the sinus is opened and emptied. This mode of operation recommends itself; by first ligating the jugular vein, the possibility of disseminating infectious material while manipulating the thrombosed sinus is excluded.

Still the most important factor of prognostic value is the time when a case of thrombosis of the sinus comes into a surgeon's hands. So long as the vital powers are not yet exhausted by a pyæmic condition of long duration, and so long as no metastases in the most important organs exist, the prospects are fair. With the view of encouraging our colleagues in general practice to keep the possibility of a sinus thrombosis in mind in cases of chronic ear suppuration with acute symptoms, I thought it of interest to record the above case, although it ended fatally and no autopsy was made.

Syphilitic Orchitis.—The treatment should be both local and constitutional. The local consists in removing any hydrocele fluid by tapping, and then strapping the testicle with simple soap or mercurial plaster. The constitutional treatment should be the avoidance of alcohol, the discontinuance of sexual connection, and the administration of mercury combined with small doses of iodide of potassium.—Dr. Henry Morris.

Clinical Department.

A CASE OF OSTEOMYELITIS OF THE INFERIOR MAXILLA WITH SEPTICÆMIA FOLLOWING PERIALVEOLAR ABSCESS—RESECTION OF ONE-HALF OF THE INFERIOR MAXILLA—RECOVERY.[1]

By MOSES S. KAKELS, M.D.,
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A boy, five years of age, was seen by me on the evening of December 22, 1897. He had been ill then about a week, suffering from a toothache and swollen face. On examination, I found a well-marked case of perialveolar abscess, pointing toward the mouth and also slightly bulging under the jaw. The temperature was 103° F.

The next day I made a large and free incision on the inside of the cheek and evacuated a quantity of foul-smelling pus.

A wick of iodoform gauze was inserted and a mouth wash of permanganate of potassium was ordered. Twenty-four hours later, instead of being better the patient's condition grew worse. The teeth over the focus of infection were extracted in order to secure freer drainage. Notwithstanding these procedures, with preceding chills his temperature rose to 106° F., with correspondingly high pulse. The cheek was incised from without in order to secure a wider and more dependent opening. There was no doubt that I had to deal with an intense septic condition due to an acute osteomyelitis of the inferior maxilla.

Accordingly, on December 25th, under narcosis, a larger incision was made, extending from the angle of the jaw to the symphysis menti down through the periosteum to the bone. The diseased tissue was scraped out and drainage tubes and gauze were inserted. The wound was irrigated daily with peroxide of hydrogen and permanganate of potassium. In spite of these active and thorough measures the patient did not improve, but, on the contrary, aggravated symptoms of sepsis continued. Chills followed by a rise of temperature on several occasions as high as 107° F., with sudden drop to 99° F., repeatedly occurred.

The prognosis looked dubious. The question now arose whether an exsection of this portion of the jaw, which was the centre of microbic infection, was indicated. Daily examinations revealed no signs of metastatic infection in any other parts of the body. I could not but think that this was the proper thing to do, notwithstanding the high temperature and rapid pulse. But one must take into consideration that an immediate exsection in such a condition would open new portals for the entrance of infectious material, and with our present means of treating purulent infiltrations, perhaps with conservatism, nature would in her efforts throw out barriers against further septic absorption. Consequently I decided to treat the patient on this expectant plan.

With this decision the patient was fed on whiskey and milk and the wound was treated antiseptically by daily irrigations. The patient hovered between life and death for several weeks. The temperature was always high, between 103° and 106° F., with rapid pulse.

With careful nursing he gradually grew stronger, so that on March 26th, under chloroform narcosis, I was able to remove the sequestrum, which consisted of the entire right half of the lower jaw-bone.

As soon as the necrosed bone was extracted the support on this side was removed, and consequently the muscles on the left side contracted and drew the remaining portion of the jaw to the back and left side, leaving a great and marked deformity. To overcome this I had a dentist make an impression and construct after my plan a mechanical support, which consisted of an intradental splint made of gutta-percha, which was anchored up against the upper jaw and remaining half of the lower jaw by silk sutures through openings drilled in the mould and ligated to the teeth. It was so made that there was room for liquid food to pass into the mouth without having to remove the splint. This was left in two weeks at a time, taken out, cleansed, and reinserted, until the involucrum was sufficiently firm to hold the jaw in place of its own accord.

The wound gradually closed and the boy made a perfect recovery with a normal-looking face, except the scar from the incision, and the deformity was entirely corrected. Conservatism in this case was a wiser procedure than radical measures would have been.

An interesting feature is the recovery from an intense sepsis, due to an osteomyelitis, lasting several weeks, without complications in other organs of the body. The use of the gutta-percha splint in overcoming the marked deformity answered the purpose perfectly.

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[1] Read before the Metropolitan Medical Society, October, 1898.

Progress of Medical Science.

Hysteria appears to exercise a marked influence on the onset of chorea, so much so that some authors have regarded the latter as a form of it.—Dr. Moncorvo, of Rio Janeiro.

Hysterical Pemphigus Associated with Blue Œdema.—In *La France Médicale* of October 14, 1898, is related a rare instance of blue œdema of the hands coming on during an attack of true hysteria and persisting for a number of days. A woman of thirty-six presented herself at Professor Audry's clinic, with a history that the first hysterical crisis has occurred seven or eight months previously, and had been followed by an œdema corresponding to that described as blue œdema (a vasomotor affection in hysterics—the color of the œdema being blue—local lowering of temperature, along with sensory and motor disturbances). Since then there have been many attacks in which the œdema has been complicated with pemphigus lesions, at first upon the forearms, and afterward upon the chest and abdomen. Brown pigmentation remained to mark the site of the bullæ, which at times were confluent. The treatment consisted in daily tepid baths.

Bottini's Operation.—Professor Rydygier (*Wiener klinische Wochenschrift*, January 5, 1899) concludes as follows: (1) Bottini's operation is not altogether without risk and danger. On the contrary, death may result from sepsis. (2) This danger is especially great when cauterization is thoroughly carried out posteriorly and the middle lobe is not enlarged. (3) For that reason, it is desirable before every operation to ascertain which lobe is enlarged, as Frisch pointed out some time ago. Unfortunately this cannot always be determined with certainty, as Guyon states of the rectal examination with the finger; in many cases the same applies to examination with the cystoscope. (4) The incisor does not always work uniformly; for example, it may flow far less on the second application than on the first. Therefore, an amperemeter attached to the accumulator is very necessary, and for that reason the modified instrument of Freudenberg is to be preferred to the original. (5) Whether it is advisable to introduce a hard permanent catheter after the operation is still an open question which further experience must settle.

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DIPHTHERIA AND THE SERUM TREATMENT.

THE London *Lancet* in its issue of December 31, 1898, reviews, as is its wont, the matters of note that have occurred in the medical world during the year. Speaking on the subject of public health, and especially with reference to diphtheria, our contemporary makes the following remarks: "But little has as yet been achieved to diminish the prevalence and fatality of diphtheria, especially in large towns and cities, including the metropolis. Few who are conversant with the etiology of this disease now entertain any doubt that with the largely increased facilities for personal communication which are afforded to children at the age when they are most likely to be attacked by diphtheria, which are the outcome of attendance in elementary schools, there has been a marked increase in the amount of death from this disease. The majority of observers also feel confident that by reason of the aggregation of young children in schools diphtheria among them is apt at times to assume a character of special potency for spread. Some time since it was announced that the education department of the privy council intended to make inquiry into the subject, but no indication of any such investigation has as yet been apparent. . . . Whatever can be done reasonably by school restrictions ought to be carried out without further delay." There can be no doubt that the regulations in force in London and in the large towns of Great Britain generally are by no means so well conceived or so effectively carried out as in the big centres of population in the United States. Diphtheria, chiefly among the young, has been rampant in London within the past year, and this has been in face of the universally conceded excellent sanitary condition of that city. One cause of the prevalence of the disease with children is undoubtedly that the medical supervision of the elementary schools is not so strict as it should be. Again, for reasons not far to seek, the serum treatment in the United Kingdom has not yielded the satisfactory results which have been gained from the use of diphtheria antitoxin in this country and perhaps to a lesser degree in some of the European countries. A short time ago statistics were published comparing the rate of mortality after the use of antitoxin in London with that of Paris and Berlin, much to the disadvantage of the English city. In Germany from 1885 to 1894 there were 119,038 deaths from diphtheria or croup, the average number thus being 11,904 per annum. In 1895, when diphtheria antitoxin was first used on a considerable scale, the deaths went down to 7,266. The diphtheria death rate was 10.69 per 10,000 of the population in the preceding ten years, and only 5.4 in 1895, so that the mortality had fallen 49.48 per cent. The showing of the antitoxin treatment of diphtheria in the city of Chicago is still more remarkable, and, if statistics are worth anything at all, should convince the most sceptical of the worth of serum as a curative of the disease. The antitoxin treatment of diphtheria by the department of health of Chicago was begun, as in Germany, in 1895. During the twenty-six months that antitoxin has been used the department physicians have visited and examined 5,739 cases of reported diphtheria. Of this number the Klebs-Loeffler bacillus was found in 3,956 cases, and 3,822 were treated by the department, of which 3,763 recovered and 259 died, giving a death rate of 6.77 per cent. Prior to the introduction of antitoxin the mortality rate in Chicago was about 35 per cent. But the results recorded for the treatment in November last, according to the report of the Chicago department of health, are nothing short of marvellous. During November 163 reported cases of diphtheria were investigated; of these 98 were shown to be true diphtheria and antitoxin was used. In addition to these cases there were 4 remaining from the previous month, so that in all 102 cases were treated, with 97 recoveries, 3 deaths, and 2 remaining under treatment at the end of the month, affording the extremely low death rate of 3 per cent. Intubation was performed on ten occasions, and of the deaths two occurred among the intubations. Of late there have been signs of a certain antipathy in the minds of some medical men against the use of antitoxin for diphtheria, and doubt has been thrown on its effectiveness. The statistics quoted above should, however, have the effect of removing any remaining scruples which may still exist gainst the serum treatment, as, even allowing that statistics cannot be wholly depended upon, it is an unquestionable fact that since the year 1895 (when it was generally adopted in America and Germany) there has been an extraordinary diminution in the mortality from diphtheria.

THE STATE MEDICAL SOCIETY.

IN the busy on-rush of events, the meeting of the State Medical Society at Albany a week ago is only a faint memory, a distant echo down the corridors of time, and yet it is well to pause a moment to look at the sheaf gathered at this annual harvest. It is large and heavy, and worthy of consideration. The papers were of more than usual interest, and some of the discussions were more elaborate and better considered than often occurs in this large and heterogeneous body. In times past the State society has seemed like a great machine, which had for its purpose the grinding out of papers of a certain length, regardless

of form or matter. The reader of a paper was, in the beginning of delivering his scientific effort, impressed with a feeling of haste, and would read with great speed. Time, however, passes with lightning-like rapidity in the unfolding of scientific thought, and scarcely was the middle reached when he would find that only three minutes remained. With a half-injured feeling that the ideas so carefully conceived and so painstakingly elaborated had been ruthlessly dealt with in thus having to appear in an aborted form, the author would hasten to his conclusions with ever-increasing rapidity, and seat himself to await discussions in a dazed, bewildered condition. Those who rose to "discuss" the subject had the same feeling of the necessity of speed in word and thought, and an attitude of apology that they should be speaking at all. In spite of all this, there was a breathless excitement in the whole proceeding, not unlike that which runners experience in trying to break the record in reaching the goal, the more thrilling since the contest was that of wits rather than of mere physical strength. This Procrustean method of reducing the papers offered to a certain time limit was not, however, without its advantage. It fell upon the just and the unjust alike; the paper of questionable value received no more consideration than the paper of value. All, however, might look forward to that just tribunal, the Transactions of the society, which always appear in due time, when the papers are published in full length and can be read and pondered upon. This year, in order that the proceedings should be less breathless and that the number of papers might be numerous enough to satisfy the omnivorous longings of the members of the honored body, a part of the time the society met as two distinct sections—the medical and the surgical. What was the result of this innovation? It was most serious and bordered on the tragic. The readers of the papers and the hearers were alike pitiably torn with conflicting emotions. Invariably the audience which the reader of the paper most wished to reach would be in the other room, and the seeker after information would have to suffer great distraction, since two papers of equal interest to him would be given at the same time, and he felt "how happy he might be if t'other dear charmer were away." Strange as it may seem, the same feeling of haste and the sense of the prodding spur remained; the habit of years cannot be overcome at once. Those who delivered the papers could not feel that they had before them so much of an occasion, with only half of the members of the meeting present. This, perhaps, was the greatest drawback to the scheme. The State Medical Society is the more impressive as it represents large numbers, and also as it brings together the contrasting medical minds, not only those from the great cities, but those from the villages and the hamlets of this great Empire State, all with varying intelligences, but all animated with the one great desire—the healing of mankind and the betterment of the human race. This feature, consciously or unconsciously, has been to the delegates one of the greatest attractions of the society, and it would seem that the loss of this, for the sake of having more papers and longer discussion of the same, could scarcely be made good; and yet one would hardly feel like having fewer papers, with more time to each and more elaborate discussion.

STREPTOCOCCUS SERUM.

At the present time the diphtheria antitoxin treatment for this disease stands almost on a sacred pinnacle in the eyes of the general medical world. There are still some doubters, and there are still great changes to be made in the precision of details as to methods of preparation, preservation, and application; yet it may be considered as one of the great advances in progressive medicine of the present century, and is to be regarded as the first timid steps taken in a field of almost boundless extent, in which much fruit may be gathered that will be of inestimable value to the human race.

The work done on the strepto-serums has been gathered together in the form of a "*Revue critique*" by Dr. Emil Boix in the *Archives générales de Médecine*, October, 1898, p. 488, November, p. 587, December, p. 690; and it contains many suggestions of theoretical interest and some of practical importance. The time has not yet come, he believes, when we can pronounce authoritatively upon the value of the strepto-serums, yet the steps have been so productive of successively better results that an optimistic attitude should be maintained. One of the main causes for this is, he thinks, to be found in the striking differences in the biological characters of the different forms of streptococci. There is a plurality of these organisms, which, though apparently alike as to their external forms and methods of growing in the laboratory, have in reality markedly different life characters and give different reactions in the human body. Thus one should not be surprised at the non-efficacy of Marmorek's strepto-serum in scarlatina or in a puerperal sepsis of an associated organism. It becomes evident, he believes, that more stress must be laid upon what he designates as polyvalent serums, *i.e.*, serums derived from animals infected by a number of different streptococci, such as are now being prepared in the Louvain laboratories, where horses are being injected by a mixture of at least five different members of this group of organisms. Such a serum, then, in practice has a greater power in accidental infection by an unknown streptococcus, and is far superior to a monovalent serum from an animal reacting to only one known form of organism. A general polyvalent serum would be the ideal therapeutic measure, but thus far it does not exist, and whether it can be produced is still a question of the future.

Mortality at Port Arthur.—It is reported that there is a very high mortality rate among the Russian troops stationed at Port Arthur. During November and December two hundred and fifteen soldiers died there, and the deaths still average four daily. No satisfactory explanation of the mortality is given, but it is believed that the water supply is contaminated.

News of the Week.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 4, 1899. January 27th.—Passed Assistant Surgeon E. S. Bogert, Jr., ordered to additional duty in attendance on officers of the navy and marine corps at New York. Passed Assistant Surgeon C. F. Stokes ordered to duty as member of the board of medical examiners, New York, February 1st. Assistant Surgeon G. L. Angeny, order detaching from the naval hospital, Chelsea, Mass., and ordering to the *Indiana*, revoked. Medical Director E. S. Bogert, retired, detached from special duty at New York and ordered home. Medical Director D. Bloodgood, retired, detached from special duty at New York and ordered home. Surgeon T. C. Craig, retired, detached from duty as a member of the board of medical examiners, New York, February 1st, and ordered home. January 28th.—Surgeon L. B. Baldwin detached from the naval recruiting rendezvous, New York, and ordered home to wait orders. January 31st.—Assistant Surgeon E. G. Parker ordered to the *Pensacola*. February 1st.—Assistant Surgeon W. H. Garton, order of January 14th, detaching from the *Supply* and ordering to the Washington navy yard, revoked. February 2d.—Surgeon G. E. H. Harmon detached from the *Newark* and ordered to the *Amphitrite*. Surgeon A. C. H. Russell detached from the bureau of medicine and surgery and ordered to the *Newark*, February 8th. Assistant Surgeon J. J. Snyder detached from the *Wabash* and ordered to temporary duty at the naval hospital, Newport, R. I.

Correction.—Dr. Simon Baruch writes: "When a medical journal evidences such magnificent enterprise as does the MEDICAL RECORD, by reporting so fully the proceedings of an important medical society, whose meeting occurred only two days before its publication day, it would seem ungracious to say aught as criticism. But an error in the opening of my reported remarks on "Hydrotherapy in Chronic Diseases," on page 183, demands correction. Instead of the first sentence kindly print "During the past ten years the methodical use of water has received an impetus in this country, from which it is hoped there will be no recession."

Smallpox Outbreaks have been reported from all parts of the country during the past fall and winter. The latest to be reported are in Waterville and Winslow, Me., in several counties in Arkansas, and in Omaha, Neb. In Arkansas there is a senseless panic and in several places a shotgun quarantine has been established. Guards are posted along all the roads, and all trains are carefully watched to prevent the coming of any one from an infected district. The fear and excitement are so great that the governor is about to send a second special message to the legislature dealing with the situation. At Omaha three cases of smallpox were discovered at one of the hotels, and the health board at once placed the building in quarantine, allowing no one to enter and none of the guests to leave. The disease has also broken out among the Creek, Cherokee, and Kickapoo Indians, in consequence of which the agent of the Comanche, Apache, and Kiowa Indians has issued orders forbidding any outsider entering the reservations under his charge. In Manila also there is much smallpox among the natives. General Otis has had all the troops in his command vaccinated, and the army surgeons are vaccinating as many of the natives as they can persuade to submit to this measure of safety.

Compulsory Vaccination in Cuba.—Chief Surgeon Maus of the seventh army corps has asked Gen. Fitzhugh Lee, its commander, to make the vaccination of every one in the province of Havana compulsory. One hundred and sixty-one cases of smallpox have been reported.

Indignant Women Students have brought about the suspension of one of the professors in a Chicago medical school. They complained that the offender had "used vulgar illustrations in his lectures and had made jokes that seemed to his feminine hearers questionable and unnecessary." The chief offence is reported to have been that he called woman a "two-legged dyspeptic owl."

Improved Conditions at Havana.—General Ludlow, governor of Havana City, telegraphed under date of February 3d, that the death rate in that city for January had been reduced forty per cent. below that of the same month last year. The causes of this lessened mortality, he said, are the sanitation of the streets and house cleaning, careful sanitary inspection, vigilance in watching and isolating infectious cases, and the supplies of medicines to the sick and food to the starving. It is questionable whether anything will now be done in the direction of carrying out the late Colonel Waring's recommendations, as it is feared the results of digging up the streets for sewers would be disastrous, inasmuch as the rainy season will begin in about three months. Secretary Alger, if not himself to blame for the inexcusable delay in the work of the radical sanitation of Havana, owes it to himself as well as the country to say who is responsible and to see that he is made an example of.

A Pure-Beer Bill.—A bill to prevent the drugging of beer has been introduced into the legislature of this State by the assembly public-health committee. The bill provides that no fermented liquors known as beer, ale or porter, in the manufacture of which any ingredient, material, substance, or element other than pure barley malt, pure hops or pure extract of hops, pure yeast and pure water are used, or which contain any other ingredient of any kind whatsoever, shall hereafter be manufactured or offered for sale in this State, and no fermented liquor shall be sold or offered for sale which has been manufactured within three months prior to the time when sold or offered for sale. Any person or corporation manufacturing or offering for sale any beer contrary to the above provisions is

to be deemed guilty of a misdemeanor, and punishable upon conviction by a fine of not less than $500 nor more than $3,000, and for each additional offence by imprisonment for not less than one month nor more than one year. Any retailer violating the provisions of the bill relative to the sale of the inhibited beer shall be punishable by a fine of not less than $50 nor more than $200, and upon a second conviction shall forfeit his liquor-tax certificate.

Suffering on the Spanish Transports.—The steamship *Chateau Lafitte* disembarked twelve hundred and fifty Spanish soldiers from Cienfuegos at Barcelona on January 30th. All of the men were greatly emaciated. Fifty-six died on the voyage, and three hundred and fifty others are seriously ill.

The New Mount Sinai Hospital.—At the annual meeting of the directors of the Mount Sinai Hospital a few days ago, a report was made on the measures taken for the new hospital. The building will occupy the block between Madison and Fifth avenues, One Hundredth and One Hundred and First streets. This lot was bought in April, 1898, for $387,000. The directors decided at that time to raise $900,000, and two-thirds of this amount was raised by private contributions in less than a month.

Ptomain Poisoning.—Sixty-seven cadets of the Pennsylvania Military Academy at Chester were poisoned on January 30th, the symptoms coming on soon after dinner. Physicians were called in, and gradually the condition of the sick improved until all were out of danger. The doctors made an investigation of the food and decided that the turkey, which had formed the *pièce de résistance* at the meal, had caused the trouble. The fowls were believed to have been cold-storage birds. No trace of mineral poisoning could be found.

Women Nurses for the Army.—The house committee on military affairs gave a hearing on February 3d, in Washington, on the bill of Representative Griffin, establishing a corps of women nurses for the army, and decided to make a favorable report on the bill. Several of the women nurses during the late war detailed their experiences in camp and hospital, and they urged that a corps of nurses should be provided, so that in case of another war trained nurses should be on hand to care for the sick and wounded, and it would not be necessary to depend on volunteers, many of whom, although their spirit of devotion could not be excelled, lacked systematic training to enable them to be of great service to the soldiers or to endure the hardships to which they were necessarily exposed. The bill provides that nurses shall be employed at a ratio of not less than one-half of one per cent. of the number of men in the army, and shall constitute the woman's nursing service of the army under a commission known as the nursing-service commission, composed of the secretary of war, the general commanding the army, the adjutant-general and the surgeon-general *ex officio*, and three women appointed by the President, two of whom shall be trained nurses.

An Aseptic Bible.—At the Court of Special Sessions in this city there has been purchased a new Bible with celluloid covers for the witnesses to kiss. A policeman has been instructed to sponge the cover after each witness has taken his oath, and at the close of the day the Bible will be washed in a solution of carbolic acid.

For a Better Water Supply.—A bill is to be introduced in the present session of the Pennsylvania legislature, aiming at the purity of the water supply. The State board of health is to be given power to examine the water supplied to municipalities for domestic purposes, to determine its purity, wholesomeness, and freedom from prejudicial contamination, to investigate the causes of any impurity, unwholesomeness, or contamination, and to take prescribed steps to secure its abatement.

Quarantines in Children's Homes.—The board of health has ordered quarantines on the Messiah Home for Children, the Five Points House of Industry, and the Home for the Friendless. At the Messiah Home there was an outbreak of diphtheria, at the Five Points House of Industry there were three cases of scarlet fever and one of diphtheria. The patients were sent to the Willard Parker Hospital. At the Home for the Friendless one case of measles had been found among the one hundred and fifty children. This patient was also sent to the Willard Parker Hospital.

Vital Statistics of Philadelphia.—For the week ended January 28th, there occurred in the city of Philadelphia 518 deaths, 64 less than during the preceding week and 60 more than during the corresponding week of last year. Of this number 133 occurred in children under the age of five years. The most prominent causes of death were as follows: Pneumonia, 66; pulmonary tuberculosis, 60; typhoid fever, 40; heart disease, 28; influenza, 24; inflammation of the brain, 22; old age, 20; diphtheria and apoplexy, each 18. There were reported to the board of health 427 cases of typhoid fever, 98 of diphtheria, and 35 of scarlet fever.

A Pleasing Story comes to the public press from Russia—or from the inner consciousness of the scribe—that a physician discovered the "death seal" of leprosy imprinted upon the brow of the beautiful daughter of a baron, with whom he was waltzing at an aristocratic ball recently given in the lady's honor at St. Petersburg. The affection had not been previously suspected and no attention had been paid to the few spots which constituted the "seal." The story goes on to state that the disease had been contracted during the summer at a watering-place in the Eastern provinces, all of which goes to show that Russian leprosy must be of much more rapid course than that found elsewhere.

Many Suicides have recently been recorded in and about the metropolis. It is a matter of some wonder that so many seemingly intelligent persons elect to depart with the aid of carbolic acid, a most distressing way it would seem, although eminently antiseptic.

The man who took a large dose of laudanum and then pulled down the lid of a trunk, hermetically sealing himself up in his own carbonic-acid gas, surely had a more comfortable time of it.

Smallpox in Abyssinia.—News comes that smallpox is ravaging the Abyssinian army under command of Ras Makouven, and that Ras Michael, second in command, is among those dangerously ill with the disease.

A Military Hospital at Nagasaki.—Major-General Otis has reported from Manila that the proposed military hospital at Nagasaki is unnecessary. He says that the convalescent hospital on Corregidor Island, at the entrance to Manila Bay, is working well, and that as soon as peace is declared and the natives are quieted he will establish a hospital in the mountains on the island of Luzon.

Record Breaker in Renal Calculi.—Dr. Charles K. Briddon, of this city, recently removed from one kidney stones weighing in the aggregate six and one-quarter ounces (troy). The largest was one ounce five scruples, four were over three drachms, one weighed two drachms, nine were over one drachm each, and the remainder under one drachm, making one hundred and forty-nine stones in all. The patient made an excellent recovery.

Proposed Missouri State Board of Medical Examiners.—The profession is having a hard time in Missouri to secure a suitable enactment for a State board of medical examiners. A committee of the Missouri State Medical Association was liberal enough to propose that one medical examiner be appointed from one thousand doctors of the State according to the respective schools of practice. This would give five regular doctors, one homœopath, one eclectic, and one osteopath. The bill further provides that there shall be no discriminations made against the different systems of medicine that are recognized as reputable by the laws of the State.—*Virginia Medical Semi-Monthly.*

Inhalation of Illuminating-Gas has of late been a comparatively frequent cause of death in supposed suicides. Several years ago the MEDICAL RECORD drew attention to faulty gas jets in some of the older and cheaper hotels and boarding-houses of this city, in which, if the key is turned until it comes to a stop, the jet is opened again after the flame has been extinguished. One accustomed to the more modern and decidedly safer burner might readily make a fatal mistake and have his name added to the list of intentional self-destroyers. A physician who was recently discovered overcome by gas, the morning after his arrival in town, may have been a victim of such defective burner key and not, as was supposed, a would-be suicide. An inspection of gas burners is quite as important as many other forms of inspection now in vogue.

A Gift to the Scientific Alliance.—Miss Esther Herrman has presented $10,000 to the Council of the Scientific Alliance as a contribution to the building-fund. The plans of the council are for a building which will cost about $500,000. The Scientific Alliance is composed of eight scientific societies, which include the New York Academy of Sciences, the New York Section of the American Chemical Society, the Torrey Botanical Club, the New York Microscopical Society, the New York Entomological Society, the New York Mineralogical Club, and the Linnæan Society of New York.

The Bubonic Plague has appeared at Port Louis, Mauritius. The cases are said to be increasing in number, and it is feared that the disease will become epidemic unless energetic measures are taken by the authorities.

Behring after More Patents.—Behring has made application in Germany for a patent on a sure cure for consumption. His method, he says, is one "for producing a highly poisonous and immunifying substance from tubercle bacilli or from cultures of tubercle bacilli."

Smallpox among the Pueblo Indians.—Reports from the Zuñi Pueblo in Valencia County, New Mexico, are to the effect that smallpox is raging among that tribe with terrible results. Since the disease broke out, two hundred and seventeen deaths have occurred, and six hundred Indians are sick, of whom possibly one-half will recover.

Cinematographic Exhibitions of Operations.—The Paris correspondent of *The Sun* says that the latest craze of the *jeunesse dorée* of that city is for postprandial exhibitions of surgical operations by means of the cinematograph. Upon a recent occasion the guests at one of these entertainments expressed great indignation upon recognizing a distinguished lady of Paris as the subject.

The American Orthopedic Association.—The thirteenth annual meeting of the American Orthopedic Association will be held at the New York Academy of Medicine, May 31 and June 1 and 2, 1899. The officers of the association for this year are Dr. W. R. Townsend, No. 28 West Fifty-ninth Street, New York City, president, and Dr. John Ridlon, No. 103 State Street, Chicago, secretary.

Tuberculous Cattle in Germany.—It has been discovered that about all the aged cows sold to sausage-makers in the Berlin cattle market are tuberculous. Dr. Bang, of Copenhagen, asserts that calves acquire tuberculosis only by drinking the milk of a diseased cow, and that they can be kept healthy by separating them and giving them boiled milk to drink. The Prussian Government is now making an elaborate test of these doctrines.

Sections on Ophthalmology and on Laryngology and Otology of the American Medical Association.—At the June meeting of the American Medical Association, in addition to their regular programmes, the section of ophthalmology and that of laryngology and otology will devote the morning of the second day, June 7th, to a joint meeting, under the chairmanship of Dr. Casey A. Wood, of Chicago, and of Dr. Emil Mayer, of New York. The subject for discussion will be "The

Relation of Ocular Diseases to Affections of the Nose and Neighboring Cavities." Four papers are to be read on this subject, by invitation, as follows: Dr. Charles Stedman Bull, of New York, on "Some Points in the Symptomatology, Pathology, and Treatment of the Sinuses Adjacent and Accessory to the Orbit"; Dr. D. Bryson Delavan, of New York, on "Nasal Stenoses in their Relation to Ocular Disturbances"; Dr. Joseph A. White, of Richmond, Va., on "Eye Troubles Attributable to Naso-Pharyngeal and Aural Disturbances"; Dr. J. H. Bryan, of Washington, D. C., on "Diseases of the Accessory Sinuses in their Relation to Diseases of the Eye." There will be a general discussion on the main question.

A Successor to Stricker.—Dr. Philip Knoll, professor of experimental pathology at the German University of Prague, is to succeed Professor Stricker in the chair of experimental pathology in the University of Vienna.

The St. Louis Medical Society.—At the annual meeting of this society, held January 7th, the following were elected officers for the present year: *President*, Dr. Joseph Grindon; *Vice-President*, Dr. Bransford Lewis; *Recording Secretary*, Dr. C. S. Dudley; *Corresponding Secretary*, Dr. Frank Hilscher; *Treasurer*, Dr. A. R. Kieffer.

The Health of Santiago de Cuba.—Reports from officials of the Marine Hospital Service at Santiago show that the sanitary condition of the city, under the strict supervision ordered by the military authorities, is still further improving. In the whole population of the place there were only fifty-eight deaths during the last week in December, and that was a decided improvement over the sanitary record of the week before.

"The Southern Medical Journal" is the name of a new monthly published in La Grange, N. C., under the editorial management of Dr. J. W. P. Smithwick. In his salutatory the editor expresses his confidence that, with the aid of the strong arm of the medical profession, he will be able to withstand the herculean efforts of others to overthrow him. We trust he will, and that he will also see his hope realized of having ere long a large subscription list—one that will be the cause of envy of journals much the superiors in age of his own. We also join him cordially in wishing all a prosperous year.

The British School of Tropical Medicine.—The project for the establishment in London of a school for instruction in the diseases of warm climates has aroused a more than tropical quarrel. One cause of the trouble is that the leading lights in the Royal College of Physicians and Surgeons were not consulted in the matter, the Government and the promoters of the scheme having foolishly assumed that men who had passed the greater part of their professional lives in the tropics would know more about the diseases of those climes than would a few old gentlemen who once took a trip to Montreal and back. There is some ground for complaint, however, in that the Seamen's Hospital, where it is proposed to deliver the lectures, is out of the way, and another is that the Government will contribute only a small sum for the building and maintenance of the school, leaving a large building fund and also about £2,000 a year to be raised by voluntary subscription. It is feared that such a sum can be raised only at the cost of a falling-off to a like amount in subscriptions to the London hospitals, and thus fewer patients could be taken into the hospitals, and the physicians and surgeons would lose good material.

Leprosy in Russia.—Leprosy is said to be spreading to a marked extent in Livonia and Courland. The military authorities in these districts have been compelled to reject for the army many young men found to be infected with the disease. It is found to be exceedingly difficult to confine the disease to any one district, as the Norwegian authorities have found to their cost. It is a very serious thing that this complaint should apparently be establishing for itself another European centre and should be displaying so much activity. More than five thousand cases are already reported from Russia.

A Consultation Bureau.—It is proposed by some would-be benevolent persons in Birmingham, England, to establish a consultation bureau in some accessible portion of the city, where anybody who wishes expert medical advice can obtain it at the cost of half a guinea ($2.50). The specialists in charge of the institution are to be hired by the company and guaranteed a definite sum, which will be paid them by their employers in case the fees do not come up to the required figure. The minimum fee for a consultation in England is a guinea, but the men of established reputation charge much more than that.

New York State Home for the Aged.—A bill is to be introduced in the new legislature, providing for the institution of a State home for the aged in the city of New York and the counties of Westchester, Rockland, and Suffolk. The bill appropriates $100,000 to buy the land and build, furnish, and maintain the home, with permission to the governors to apply for more money each year. The buildings are to consist of a central hall and a number of one-story cottages, all properly plumbed, heated, and lighted. A board of governors, appointed by the mayor of New York and the superintendents of the poor of the three counties above mentioned, will manage the home under the terms of the bill. Respectable, industrious, law-abiding aged persons, twenty years resident of any of the counties, may become inmates upon proof of lack of means of support. Employers of labor may also obtain admittance for superannuated employees on payment of a fixed yearly sum.

Unmarried Women and Maternity Hospitals in England.—The recent death of Miss Yates, in connection with which Robert Wark was convicted of murder at the last Liverpool Assizes, has directed public attention to the desirability of establishing maternity hospitals in which (as in Queen Charlotte's Hospital, London) unmarried women may be admitted

for first confinement. As a result of agitation a change has been made in the rules of the Liverpool Ladies' Charity and Lying-in Hospital, an institution established over a century ago. Under the rules of this hospital only married women have hitherto been admitted, but now the tremendous concession has been made that "single women in exceptional circumstances, who after careful investigation by the ladies' committee are found to be deserving objects of charity, shall be eligible for admission into the hospital for their first confinement."

Rush Medical College has adopted the quarterly system, in vogue at the University of Chicago, which will go into effect the present year. The academic year will begin July 1st, and will be divided into four quarters, designated the summer, autumn, winter, and spring quarters, and beginning on the first days of July, October, January, and April respectively. Instruction will be given in all departments during each quarter, and the several courses will be so arranged that a student can begin his medical study at the commencement of any quarter, and continue it advantageously. He may continue in residence at the college as many successive quarters as he desires, but credit will not be given for more than three successive quarters. Attendance upon twelve quarters will be required for graduation, and at least forty-five months must intervene between the beginning of a student's first course of medical study and the date of his graduation.

Fattened on Arsenic Fumes.—A curious story is reported in *Dunglison's College and Clinical Record* concerning a bark which arrived recently in Philadelphia, having in her cargo three hundred casks of arsenic: "The crew slept very near the large array of barrels containing the drug, which were stored in the hold, near the forecastle, and partially exposed to the rays of the sun. When only about a week out, one of the crew noticed a peculiar indescribable odor coming from the casks. They soon all noticed the same thing, and several of the tars became aware that they were filling out their clothes to a much greater extent than when they shipped. Many became abnormally stout, in contrast to their former slim appearance. One man gained, it is said, twenty-five pounds. The aggregate extra weight put on by the entire crew was little less than four hundred pounds. This was attributed to vapor generated by the action of the sun on the casks and inhaled by the seamen while they slept. Captain Hammes, who slept aft, entirely removed from the arsenic, does not show any effect of the inhalation." And yet it was only a few years ago that several of Boston's physicians were greatly exercised over the dangers of arsenical wall papers.

The Ninth International Congress of Ophthalmology will be held at Utrecht, Holland, August 14 to 18, 1899. The work of the congress will be divided among three sections of (1) anatomy, pathological anatomy, and bacteriology; (2) optics and physiology; and (3) clinical and operative methods. The three official languages will be English, French, and German, and at each meeting of the different sections one of these three languages will be designated as of preference for the reading of papers and discussions, although the other two will not thereby be absolutely excluded. The fee for those in attendance is fixed at 25 francs ($5). Those intending to assist in the deliberations of the congress are requested to communicate as soon as possible with Prof. H. Snellen, of the University of Utrecht, stating whether or not they will be accompanied by ladies, giving the titles of papers which they will present at the congress, and also which of the three languages they will use in their communications and discussions. The first part of each day will be devoted to the scientific labors of the congress, the last part to social pleasures.

The Jenner Society Congratulates a Novelist.—Mr. Rider Haggard recently published a novel "with a purpose," that purpose being to show the necessity of vaccination, and dedicated it to the Jenner Society. At the next meeting of the executive committee of this society, held in Gloucester, the following resolution was passed unanimously: "The members of the executive committee of the Jenner Society desire to express their appreciation of the recognition of the work of the society by Mr. Rider Haggard, in the dedication to its members of his powerful story, 'Dr. Therne.' They also desire to assure Mr. Rider Haggard of their warm sympathy with his just and vigorous protest against the dangerous agitation carried on against vaccination, by which many thousands of persons have been misled, and have been induced to deprive their children of the only certain protection against a virulent and fatal disease. The committee congratulate Mr. Haggard upon his uncompromising exposure of this evil, and trust his book may have a large circulation, as being calculated to lead a considerable section of the public, who cannot be otherwise interested in the subject, to give serious consideration to a matter of urgent and overwhelming importance, affecting, as it does, the health and lives of multitudes of hapless children who may be exposed to the infection of smallpox, without the protection afforded by vaccination."

International Congress on the Abuse of Alcohol.—The Seventh International Congress Against the Abuse of Alcoholic Liquors will be held in Paris, April 4 to 9, 1899. The preliminary programme of this congress gives promise of the widest discussion of this topic ever made at any one gathering. Nearly every aspect or phase of alcoholic injury and loss is treated by persons familiar and able to discuss it. The morning sessions are to be confined to scientific studies. The preliminary programme contains forty-one titles arranged under the three heads of "Medical Science and Hygiene," "Political and Social Economy and Legislation," and "Teaching, Education, and Propagation." The afternoon meetings are to be open for educational, moral, and sociological studies of the drink problem. The first day the various questions of the relation of alcohol taking to the higher university training will be presented. The second afternoon the temperance cause in the primary schools will be discussed by many of the leading educators of France, Germany,

Switzerland, the Netherlands, and other places. The third afternoon session will take up alcoholism among workmen in city and country. The fourth session will study the effects of alcoholism on native races and the means of prevention. The evenings will be open for the discussion of special topics by leaders and specialists. One will be devoted to the work of societies, the other to the influence of law and legislation, the other to women's work, the other to the crime phases of the question, and so on. The president of the congress is Dr. LeGrain, of France. Five hundred delegates are expected, and the organizers hope that the meeting will be memorable. Short papers are solicited from American workers in this field. All letters should be addressed to the American chairman of the organization, T. D. Crothers, M.D., Hartford, Conn.

Prizes Awarded by the Paris Academy of Medicine.—The annual distribution of prizes, in which thousands of dollars are awarded, recently occurred at Paris. Few of the prizes were presented entire; none came across the Atlantic to this country, but some were awarded to persons outside of France. Among them we note the names of Czerny and Trunecek of Prague, 1,200 francs for their treatment of epithelioma of the face with arsenious acid. A. Rondino, of Naples, received the Capuron prize of 1,500 francs for the best article on experimental studies on some obstetric subject. The Herpin prize of 1,200 francs was awarded to Jules Janet, of Paris, for his article on "The Abortive Treatment of Gonorrhœa." The Mège prize of 900 francs, subject, "Hay Fever," was divided between Garel, of Lyons, and Guder, of Geneva. The Orfila prize, 2,000 francs, was awarded to Guinard and Dumarest for their research on picrotoxin. The Tremblay prize of 7,200 francs was divided between Albarran and Motz, Bazy, Delore, and Guiard. The female sex was honored in the person of Madame Hervieu, of Sedan, with an enamel medal for her great work in promoting hygiene among children, also by a number of silver and bronze medals for the efforts of women in promoting vaccination. Several prizes were not awarded on account of the non-reception of competing articles. The Audiffred prize, an annuity of 24,000 francs for an absolute cure for tuberculosis, in connection with which Hirschfeld's results with oxytuberculin were mentioned last year, was not awarded, but 2,000 francs "encouragement" were bestowed upon J. Auclair, of Paris, and a smaller amount upon Auché and Hobbs, of Bordeaux.—*Journal of the American Medical Association.*

The Tax on Medicinal Preparations. — Assistant Attorney-General Boyd has rendered, at the request of the secretary of the treasury, an opinion relative to the war revenue taxes on medicinal articles. He holds that the only articles subject to the tax are the various compounded patent, trademark, and proprietary medicines, and such medicines as are put up in packages ready for use by the consumer without the intervention of a physician or pharmacist. On the other hand, it is held that the law does not tax medicinal preparations which are uncompounded, or which, if compounded, are put up under medical or pharmaceutical names for classification for the use of physicians in practice or druggists or pharmacists in their trade. The opinion holds that no tax is imposed on any uncompounded medicinal drugs or chemicals, no matter how put up. According to the act the compounded medicinal articles subject to taxation are divided into two classes: First, articles compounded by any formula and put up like patent medicines; and second, medicinal articles compounded and advertised as remedies or specifics for special diseases. Under the latter classification articles subject to tax must not only be compounded by some formula, but must be advertised as remedies or specifics for some particular ailment or ailments, or as having special claim to merit or to peculiar advantage in mode of preparation, quality, use, or effect.

Revision of the Pharmacopœia.—The committee on United States Pharmacopœia of the Medical Society of the State of New York has formulated six propositions, upon which, in a circular addressed to members of the society, it requests comments, either in the way of extended remarks, or by simple answers of Yes or No. The following are the propositions: 1. That all drugs and preparations not now prescribed to any extent by physicians be dismissed. 2. That all chemical drugs necessary to other preparations, but which are not directly prescribed, be placed in a list apart from the body of the work. 3. That doses be included in the next revision. 4. That doses be placed in the index rather than in the text of the book, for readier reference and to avoid making them official. 5. That a section be devoted to giving reliable information concerning new remedies, without in any sense making them official. 6. That an annual supplement of a few pages, for the purpose of continuing similar disinterested information concerning new drugs, be issued. The drugs which it is proposed to exclude from the list are the following: Absinthium, allium, amylum, anthemis, apocynum, asclepias, bryonia, calamus, calendula, cascarilla, castanea, caulophyllum, chelidonium, chenopodium, chondrus, coccus, crocus, cusso, cypripedium, dulcamara, euonymus, granatum, guaiaci lignum, hedeoma, humulus, inula, iris, juglans, kamala, lappa, macis, marrubium, matricaria, melissa, menispermum, oleum sesami, pepo, phytolacca fructus, phytolacca radix, picrotoxinum, pulsatilla, rhus toxicodendron, rumex, sambucus, santalum rubrum, santonica, scutellaria, serpentaria, spigelia, stillingia, sumbul, tabacum, tanacetum, and xanthoxylum.

The Indian Plague Commission. — Considerable interest has been shown in the evidence given by Dr. Laurie before the plague commission at Hyderabad, as he pronounced against inoculation with Professor Haffkine's serum, proclaiming it to be a putrescent organic liquid, which was occasionally bound to contain pathogenic organisms. He declared its use to be opposed to modern antiseptic surgery, being likely to cause blood poisoning. A writer in the *Bombay Gazette*, commenting on Dr. Lawrie's evidence, points out

that Surgeon-Major-General Hawly, director-general of the Indian Medical Service, was deputed by the Government to visit Bombay and other parts of the country and report on the effects of protective inoculation against the plague. This distinguished officer came to Bombay and made a careful inquiry into all that had been done under the close and constant supervision of hundreds of medical men, official and non-official, during the last two years, and he heard no complaints of blood poisoning after inoculation with Professor Haffkine's fluid. Had there been such cases, the lynx eyes of the medical men, eager to observe and to report, must have detected them. It would be the duty of the profession, if the population were being poisoned in tens of thousands by such a process, to warn the public against it and appeal to the Government and the medical authorities peremptorily to prohibit their officers from dispensing the serum. The director-general did nothing of the kind. He reported to the Government that the results were most encouraging. He went to Baroda to pursue his inquiries in the Gaekwar's dominions, where, under the enlightened instructions of the Gaekwar, full advantage had been taken of the means which science had placed at the disposal of his government to arrest and circumscribe an outbreak of the plague that caused great anxiety. The director-general found that inoculation had been of great service in combating the plague. He reported accordingly that there was no history of blood poisoning, suffering, or death from the pathogenic terror which Dr. Laurie had at a glance discovered in the prophylactic fluid. Either the director-general is blind and deaf, and the hundreds of medical officers in hospitals and private practice who have used the serum or seen it used, and watched the result, have been preternaturally stupid, or the residency surgeon at Hyderabad is blessed with a preternatural acuteness of vision which can discern what no one else has seen. Surgeon-Major-General Hawly will be examined by the commission, and he will be able to quote the returns of Dr. Leumann, who inoculated seventy thousand persons without ill effects being produced.—*London Times.*

How Santiago was Cleaned.—In a report to the Secretary of the Treasury, Mr. Robert P. Porter, speaking of improvements made at Santiago, says that the disagreeable smells of the typical Cuban city are less pronounced in Santiago, while whitewash, fresh paint, and disinfectants have deodorized the surrounding atmosphere and made the old town quite habitable. The streets are no longer used as sewers, and any person violating the law is compelled to work on the street for thirty days. Sanitary Commissioner Barbour has under him one hundred and twenty-six men, dressed in spotless white, and employs thirty-two mule teams and carts. The streets are now kept absolutely clean and the garbage is regularly burned. The work of sanitation is not confined to the streets, but extends to the dwelling-houses and other buildings. In many cases the people making sewers of the thoroughfares were publicly horsewhipped in the streets. Some of the most respectable citizens were haled before the commanding general, and sentenced to aid in cleaning the streets they were in the habit of defiling. The campaign has resulted in a complete surrender to the sanitary authorities, and the inhabitants of Santiago are now learning the necessity of living like human beings and of observing the decencies of life, at least in public.

Dr. Francis J. Quinlan, of this city, has been appointed laryngologist and rhinologist to the Charity (City) Hospital, Blackwell's Island, by the order of the commissioners of charity and correction.

International Congress of Gynæcology.—Dr. Paul F. Mundé has been offered and has accepted the honorary presidency of the International Congress of Gynæcology and Obstetrics to be held at Amsterdam, August 8 to 12, 1899.

Sickness at Dawson City.—Reports from Dawson, dated December 22d, reveal a gloomy situation there. The number of sick is increasing, and the six hospitals are full. The mounted police have given about $30,000 in cash from their treasury to relieve the poor. The death rate this winter has been almost as great as in the summer.

Munificent Gift to a Hospital.—Mr. William Cadge, member of the council of the Royal College of Surgeons of England and one of the best-known provincial surgeons in the country, has given £10,000 ($50,000) to the endowment fund of the Norfolk and Norwich Hospital, making £20,000 ($100,000) given by this gentleman in recent years.

Hospital Appropriations in Baltimore.—The city of Baltimore has made appropriations for the various hospitals and dispensaries, having reduced the amounts from last year in order to decrease the tax rate. Baltimore is looking forward to the time when all the sick poor will be under immediate municipal supervision, and by a system of centralization will be cared for more economically.

The Beth Israel Hospital.—A ball in aid of the Beth Israel Hospital took place recently at the Grand Central Palace, on the tenth anniversary of the establishment of the hospital. The palace was filled and a handsome sum of money was realized. The Beth Israel Hospital is situated at 206 East Broadway, and now has thirty beds. The directors have recently purchased three lots at Jefferson and Cherry streets, and are endeavoring to raise funds to build a new hospital.

"The Journal of the American Medical Association."—At a meeting of the board of trustees of the American Medical Association, held in Chicago, January 2d, the selection of an editor to succeed the late Dr. John B. Hamilton was postponed until a future meeting, and in the mean time the *Journal* will be issued under the direction of Dr. Truman W. Miller, chairman of the publication committee of the association.

Sir Richard Douglas Powell, who has been appointed a physician-in-ordinary to the Queen, is the second and only surviving son of the late Capt. Scott

Powell, second Welsh fusileers. He is an honors graduate of the University College Hospital. He is physician to Middlesex Hospital, a knight of St. John, and member of the chief medical societies of London. He has published various works on medical subjects. Since 1887 he has been a physician-extraordinary to the Queen. He was created baronet in 1897.

New York County Medical Association.—At the annual meeting, held January 16, 1899, the election of officers resulted as follows: *President*, Dr. Frederick Holme Wiggin; *First Vice-President*, Dr. Parker Syms; *Second Vice-President*, Dr. Edwin Gaillard Mason; *Recording Secretary*, Dr. Ogden C. Ludlow; *Corresponding Secretary*, Dr. Charles E. Denison; *Treasurer*, Dr. John H. Hinton; *Members of Executive Committee*, Drs. George Tucker Harrison, Francis J. Quinlan, and John Shrady.

A Spanish Transport.—The steamship *Notre Dame de Salut* arrived at Barcelona, Spain, a few days ago, with eleven hundred soldiers from Havana. The steamship was not large enough to furnish accommodation for the number of troops put aboard of her. Thirty-nine of them died on the passage, three hundred and sixty were taken in ambulances to the hospitals after they landed, and one hundred were taken to sanatoriums. All were very weak and emaciated. So there are transport scandals elsewhere than here.

Officers and Members of the Illinois State Board of Health.—At an election held January 17, 1899, Dr. C. B. Johnson, of Champaign, was made president; Dr. J. E. Egan, of Springfield, secretary and executive officer; and Dr. R. F. Bennett, of Litchfield, treasurer. The other members of the board are Drs. J. C. Sullivan, of Cairo; L. Adelsberger, of Waterloo; P. H. Wessel, of Moline; and Florence W. Hunt and M. Meyerovitz, of Chicago.

Regulating the Sale of Poisons.—A bill has been introduced into the New York legislature, requiring druggists, pharmacists, manufacturers, wholesalers, or retailers, who shall sell any proprietary medicine containing poison or poison in any form, to put it in "such bottles or packages of such size, shape, or condition as to give notice of its contents." Failure to do so is made a misdemeanor. Such an indefinite law as this would accomplish nothing, and it is safe to assume that the bill will never pass the legislature.

The Alfonso XIII. Hospital in Havana is the most important and best of the military hospitals in the city. It is also the newest, having been completed in the summer of 1896. It is constructed on the pavilion plan, and is situated on one of the highest points in Havana. The hospital has a capacity of two thousand beds. It possesses an electric-lighting plant and a steam laundry capable of washing the clothes of five thousand patients. A large disinfecting apparatus of French manufacture is attached to the laundry. The cooking is done by steam. The water supply comes from the Vento Canal, and is excellent. Each pavilion has its own cesspool, which empties into the sea. There are several other military hospitals in the city, but none is so good as this. The San Ambrosia is built of stone, but is in one of the most unsanitary portions of the city; the Manera is built of wood, but is in a better location. Each of these has accommodations for one thousand beds.

The Late Dr. Judson C. Smith.—At a meeting of the medical staff of the Demilt Dispensary, held February 1, 1899, the following resolutions were unanimously adopted:

"*Whereas*, It has pleased Almighty God to remove our late associate, Dr. Judson C. Smith; and

"*Whereas*, As colleagues we had reason to respect his professional attainments and his character as a man and as a physician, and as we recall the friendship which existed in our work in the dispensary—

"*Therefore be it Resolved*, That by the death of Dr. Smith we feel that the medical profession has lost an active, conscientious member.

"*Resolved*, That we extend our profound sympathy to the family of Dr. Smith in the hour of their bereavement.

"*Resolved*, That a copy of these resolutions be sent to the family of the deceased and to the medical press.

"JOHN H. FRENCH, M.D., WILLIAM B. NOYES, SILAS F. HALLOCK, M.D."

Obituary Notes.—DR. WILLIAM C. CAMPBELL, of New York City, died on Sunday last of pneumonia, after an illness of only a week. Dr. Campbell was born in 1854, and was the son of the late Dr. John Law Campbell, whose death occurred a little over three years ago. He was graduated in arts from Princeton in 1877, and in medicine from the College of Physicians and Surgeons in this city in 1880. He served the regular term as house physician to St. Luke's Hospital, and was recently appointed visiting physician to the same institution. He was also visiting physician to the New York Orphan Asylum.—DR. JOSEPH B. GOODNOUGH, the oldest physician in Long Branch, N. J., died there on February 1st, of cardiac disease. He was seventy-three years old, and was a graduate of the College of Physicians and Surgeons in this city in 1852.—DR. TEMPLE S. HOYNE, a well-known homœopathic practitioner of Chicago, died in that city on February 4th. He was a graduate of the Bellevue Hospital Medical College in this city, in the class of 1865. He was professor of skin and venereal diseases in the Hahnemann Medical College in Chicago, and formerly editor of the *Medical Visitor*. He was also the author of several treatises on homœopathic medicine.—DR. ALVIN C. HENDERSON, of Brooklyn, died on February 6th, at the age of fifty years. The cause of death was gangrene resulting from an injury of the toe which was accidentally stepped on by a heavy person. The leg was amputated, but the operation was not successful in saving life. Dr. Henderson was a native of Ohio, and was graduated from the University of Michigan in 1872. He was coroner's physician at the time of his death.—DR. HARRY YOUNG, who was surgeon to the Utah artillery division at Manila, was captured by the Filipinos on Sunday last and murdered by them, his body being found when the natives were driven from one of their outposts on the following day.

Reviews and Notices.

CHIRURGIE DE L'UTÉRUS. Par HENRI DELAGÉNIÈRE, Ancien Interne en chirurgie des Hôpitaux de Paris, Membre correspondant de la Société de Chirurgie de Paris. Avec 378 figures dans le texte. Paris. Institut de Bibliographie Scientifique. 1898. Pp. 467.

WHILE there would seem to be no special need of a separate treatise on the surgery of the uterus, in view of the number of excellent monographs on operative gynecology, we have no hesitation in commending this work to the special student. Its scope may be inferred from a glance at the table of contents. In the first part, Chapter I. deals with the various operations for shortening the round ligaments, both without and within the abdomen, and by the vaginal route. These are well arranged and are quite exhaustive, due credit being given to the authors of original methods and their modification. In Chapter II. the author includes a number of operations on the broad ligaments which hardly belong to the surgery of the uterus, *e.g.*, the drainage of abscesses, enucleations of broad-ligament cysts, etc. Abdominal hysteropexy is included in the first chapter of the second part, but we miss references to several ingenious American operations. The subjects of myomotomy and hystero-myomectomy are treated at considerable length, as their importance demands, as are also the various methods of performing vaginal hysterectomy.

The concluding division of the book (seven chapters) deals with operations on the pregnant uterus, from reduction of the retroverted gravid organ to Cæsarean section. The work presents many interesting features, especially the illustrations. It can hardly be regarded as of uniform excellence, and a considerable amount of useless material has been introduced, which seems rather to call attention to the tireless ingenuity of gynecologists in devising and modifying operations, than to instruct the reader. While it will not attract the general surgeon, special workers will find in its pages many valuable hints, as well as an exhaustive record of the possible attacks to which a long-suffering organ may be exposed.

THE PURIFICATION OF PUBLIC WATER SUPPLIES. By JOHN W. HILL, Consulting Engineer. New York: D. Van Nostrand Company. 1898.

THE chief object of this work is to show the necessity of paying attention to water pollution as a cause of typhoid and other fevers, and to impress upon those in authority the need of pure water for public supply. The substance of the material has been contributed to scientific bodies in the form of papers read during the past five years. The statistics as to death rate in typhoid fever are of great interest and importance, culled as they are from European as well as American centres. Much information of instructive nature has been given in condensed form relative to the origin and spread of epidemics. Those having charge of the health and vital interests of communities will do well to study what Mr. Hill has to say on these points.

A TEXT-BOOK OF PATHOLOGY. By ALFRED STENGEL, M.D., Instructor in Clinical Medicine, University of Pennsylvania, etc. With 372 Illustrations. Philadelphia: W. B. Saunders. 1898.

THE writing of a text-book covering a subject like pathology is no small task, and is one from which, at present, most of us would shrink. It is questionable whether, with our present methods of teaching and considering the extent of our subjects, it is well to try to cover the ground in one volume by one man. A text-book on pathology can now only hope to be a successful epitome of the subject, and if the author has any original views to offer, they are pretty sure to be upon only one department, in which case he might better have confined himself to a monograph. The volume before us now has most of the qualities desirable in a text-book, but we cannot say that it is an important addition to didactic literature. The subjects are taken up in much the same way as is employed in a course in a medical school, and the matter is arranged in a way that ought to appeal to the student. We are glad to note that matters of controversy have been very lightly touched upon, and that the usual interminable bibliographical references have been omitted. The author's conclusion that so far there is no entirely satisfactory classification of tumors will probably be accepted by all who are not themselves the inventors of classifications. So far in this subject, the best thing to do is to describe as accurately as possible microscopic and other characteristics, and not to make too many hard-and-fast rules. There is a good chapter on animal parasites, and here, as elsewhere, the illustrations are excellent. The chapter on diseases of the digestive system is satisfactory and has some instructive illustrations. According to the author's preface, he has intended to write a practical text-book, and in this we think he has succeeded. The book ought to be useful to the student class, and in a less degree as an epitomized work of reference.

CONTRIBUTIONS TO ORTHOPÆDIC SURGERY. By A. SYDNEY ROBERTS, M.D., Late Surgeon to the Philadelphia Hospital, Orthopædic Surgeon to the Out-Patient Department in the University Hospital. With a brief Biographical Sketch by JAMES K. YOUNG, M.D., Professor of Orthopædic Surgery, Philadelphia Polyclinic, etc. Philadelphia: 1898.

THIS work represents the collected writings of the late Dr. Roberts with an excellent frontispiece engraved portrait. The collection has been made and published with a sketch of the life of Dr. Roberts, as a mark of esteem and gratitude by the editor, and in the hope of increasing the interest in these subjects. The conception and execution are equally commendable, and the character of the essays stands as a monument to the ability and skill of the author. The work is intended solely for private distribution.

THE DISEASES OF THE LUNGS. By JAMES KINGSTON FOWLER, M.A., M.D., F.R.C.P., Physician to the Middlesex Hospital and to the Hospital for Consumption and Diseases of the Chest, Brompton; Late Examiner in Medicine at the University of Cambridge and on the Conjoint Examining Board in England; and RICKMAN JOHN GODLEE, M.S., F.R.C.S., Fellow and Professor of Clinical Surgery, University College, London; Surgeon to University College Hospital and to the Hospital for Consumption and Diseases of the Chest, Brompton; Surgeon in Ordinary to Her Majesty's Household. With 160 illustrations. Pages 707. London, New York, and Bombay: Longmans, Green & Co., 39 Paternoster Row. 1898.

THE authors of this work have succeeded in offering to the public a most satisfactory description of the various diseases of the lungs and pleuræ. Wisely including many minor details, they nevertheless have placed the diseases of clinical importance in the foreground and have made a most practical handbook for those who wish to gain a full working knowledge of the subjects it treats. A novel feature is the anatomical description of the lungs, written with special reference to the thorough understanding of the relations of the various thoracic contents, and introducing points which can be utilized in the differential diagnosis of puzzling conditions in this region. The completeness of the work has certainly been favored by the association of a physician and a surgeon in the authorship; one being the complement of the other, and both speaking from a large practical experience, they do not have to employ the unsatisfactory method of quoting too often the thoughts of others. The charts and illustrations are unusually interesting and numerous, the publishers having evidently afforded every facility to the authors for carrying out their purpose of clear and definite instruction.

The chapters on Pulmonary Tuberculosis are unusually full, occupying over one hundred and thirty closely printed pages, and giving the reader one of the best pictures of the disease that have been presented to a text-book. The pathology, sources of infection, hereditary influence and predisposing causes, varieties, complications, symptomatology, surgical and medical treatment, and a short report on serum therapy are all considered in a concise and scientific manner. In addition to the usual diseases treated in works of this kind we find Anthracosis, Actinomycosis, Pneumomycosis, Hydatid Disease of Lung and Pleura, Tumors and Injuries, Diseases of the Pulmonary Vessels, Chylothorax, Diseases of the Diaphragm, Mediastinal Diseases, Thoracic Dermoid Cysts, and Pulmonary Osteo-arthropathy. Although the medical aspects of the diseases necessarily occupy the major portion of the volume, the surgical part has been treated with sufficient detail and equal clearness. The book is one which will undoubtedly be widely read and as widely commended.

Therapeutic Hints.

Sciatica.—The following combined plan has cured every case treated for seven years:

℞ Crude carbolic acid (No. 5) ..... 3 ij.
Water ..... ad ℥ ij.
M. S. To be well shaken and rubbed in for five minutes with the edge of a rolled-up bandage, care being taken that none gets on the fingers.

℞ Potass. iodid ..... 3 i.
Sodii salicylat ..... 3 ij.
Spir. chloroformi ..... 3 ij.
Aquæ ..... ℥ viij.
M. S. Tablespoonful every four hours in water.

—J. Murray Gibbes.

Anæmia.—After correcting digestive derangements and constipation by a ten-days' course, begin with one of the milder preparations of iron; subsequently a modified Blaud pill may be given.

℞ Ferri sulphatis exsiccat ..... gr. lxxij.
Potassii carbonat ..... gr. xij.
Pulv. nucis vomicæ ..... gr. xxiv.
Saponis ..... gr. vi.
M. et div. in pil. xxiv.; coated. S. One to three after each meal.

Some prefer the insoluble preparations given immediately or about one hour after food, so that they may be dissolved by the gastric juice and so absorbed with the food. Where there is intolerance of iron preparations, this is a good plan.—Burney Yeo.

Hypodermatic Medication.—

℞ Creosote 25
Ol. oliv. sterilis.,
or Ol. amygd. dulc.,
or Vaselin liq 100

Or:

℞ Guaiacol 10
Ol. oliv. steril 100

Subcutaneously in pulmonary tuberculosis.—Eloy.

Caution.—Not to be used in congestion, hæmoptysis, renal lesions, and pyrexia.

℞ Camphor 2
Liq. paraffin 8
M. S. A syringe (one c.c.) contains twenty centigrams camphor.

—Bosner.

Hypodermic Solutions.—

℞ Creosote pure ..... 1 gm.
Aseptic olive oil ..... 14 "

℞ Iodol or iodoform ..... 1 gm.
Olive oil ..... 29 "

℞ Crystals of phenic acid ..... 1 gm.
Olive oil or water with a little alcohol ..... 49 "

℞ Neutral hydrochlorate of quinine ..... 1 gm.
Distilled and boiled water ..... 9 "

℞ Antipyrin ..... 1 gm.
Distilled water ..... 10 "

℞ Ichthyol ..... 10–20 gm.
Aq. destil ..... 100 "

℞ Sod. arsenit ..... gr. i.
Aquæ destil ..... 3 i.
Dose: Two or three drops.

Night Sweats are relieved by fifteen-grain doses of camphoric acid taken an hour before bedtime.—H. A. Hare.

Sciatica.—Antipyrin and water in equal parts injected in the neighborhood of the affected nerve.—Kuhn, *La Chir. Méd.*, September 15, 1898.

Dysmenorrhœa.—Dysmenorrhœa is a painful and distressing condition. It may precede or persist through the menstrual period. Usually it precedes the appearance of the discharge. The pain is often so acute as to cause the sufferer to roll about the floor in agony. The treatment usually adopted in all countries is to give alcohol with hot water under these circumstances. The relief so afforded is often very great, so much so that the late Sir James Simpson asserted that this constituted the worst feature in the treatment. The relief afforded by alcohol in this condition, he asserted, was one of the most common causes of ultimate excessive indulgence in alcohol by women. Having learned to resort to it, he declared they were led to resort to it at other times, and he advocated strenuously the use of any other stimulant than that which is at hand in almost any sideboard. Sal volatile, spirits of chloroform—anything, indeed, but alcohol, he advised, as being equally efficacious and being free from the dangerous allurements of the other. —J. Milner Fothergill.

Anæsthesia.—Dr. J. Lewis Thomas, in an article on this subject, concludes as follows: (1) Make a thorough physical examination of the patient. (2) Prepare the patient carefully; the minutest details to secure the best conditions should never be regarded as too insignificant. (3) Give the least amount of anæsthetic consistent with the required degree of narcosis. (4) The cardinal points to recognize are: the respirations, pulse, pupil, and color. (5) Safety in anæsthesia means accurate knowledge and stringent application. (6) To resuscitate: inversion, artificial respiration, heat over cardiac region, strychnine, nitroglycerin, ammonia, amyl nitrite, and divulsion of the sphincter ani. By close attention to these few fundamental principles you can hold in abeyance almost all complications, and intercept many sequelæ. If I can leave no other thought with you to-day, I wish you to grasp the important fact that intelligent anæsthetizing means knowledge of the physiological action of the agent employed, caution and vigilance in its administration, keen perception in the discernment of complications, and quick, cool-headed judgment in averting or combating the same. There are times when nature proves refractory, and the endeavors of the most experienced are sometimes frustrated. But if we have done our work well, our cheeks need not blush, our lips need not apologize.—*Columbus Medical Journal*, September.

Disorders of Puberty.—The entrance upon her reproductive period of life in woman is almost invariably accompanied by a certain amount of disturbance of the general health; its cessation is not rarely, if not usually, accompanied by a certain amount of erotic excitement, a period of active recrudescence of the generative instinct. Both periods commonly produce such disturbances as necessitate the calling in of medical aid. The first change, or puberty, is frequently accomplished under the circumstances of rapid growth; and the double tax upon the system produces in many cases a distinct debility, which may lead ultimately to tuberculosis or other wasting disease. Commonly there are recurring periods of lassitude, weight, and sense of dragging in each groin, before the menstrual flow is actually established. Under these circumstances it is advisable to counsel the patient to sit over a vessel containing hot water, or, if that be not sufficient, to stay in bed and have warm cloths applied to the vulva; the last is a powerful means of exciting a flow from the genitals, and is useful not only at puberty, but at other times when the catamenia have been checked, as by cold; and it is especially useful in any arrest of the lochia. (In the last case the application of hot cloths without delay, on the arrest of the lochial discharge, will often avert a grave condition.) If these measures are insufficient, it is usual to give iron with aloes.—J. Milner Fothergill.

Society Reports.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 23, 1899.

HENRY C. COE, M.D., FIRST VICE-PRESIDENT, IN THE CHAIR.

Three Months' Experience in Camp Thomas.—DR. J. HERBERT CLAIBORNE read a paper with this title (see page 156).

DR. GEORGE GRAY WARD, major Twelfth New York Volunteers, said that he had listened with great pleasure to the vivid descriptions in the paper, and could indorse most heartily what had been said. Shortly after reaching Camp Thomas the orders were so changed that he was left with one hospital steward and one man as the medical staff to take care of thirteen hundred men. Both the steward and the helper became ill with typhoid fever, so that he was soon left to fight the sickness almost single-handed. The principal trouble with the water was not its quality but its scarcity. The regiments were placed a certain distance apart without any regard to the nature of the soil, or to the fact that often a very slight change in this distance would secure a much better site. The men were camped under the trees with the idea of protecting them from the hot sun, but this very fact prevented the soil from drying out properly during the wet season, and consequently the men had to sleep in the mud. One of the greatest mistakes in connection with the management of the camp was the appointment of volunteer surgeons to high and very responsible positions. A failure on the part of the line officers properly to co-operate with the volunteer officers also caused much trouble. The regular army rations were exceedingly good; he had personally inspected the beef and had found none of it bad. The great trouble was that there was no provision made for the sick men, and naturally the regular rations were not suitable for them. He personally expended about five hundred dollars, which had been placed in his hands by charitable persons, for the purpose of securing proper diet for the sick soldiers.

Needless Haste in War Preparations.—DR. ANDREW H. SMITH said that, as a medical officer of seven years' service during the Civil War and subsequently, he wished to say a few words. He thought the root of all this evil lay in the anxiety of the press, of Congress, and of the people lest the war might come to an end before it began—the fear that Spain would give up the contest without crossing bayonets. This, in his opinion, was responsible for the unparalleled haste with which two hundred and fifty thousand men were brought together—not an army, which was an aggregation of soldiers, but an immense mob, which was simply an aggregation of individuals. A man could not be made a soldier simply by enlisting, or be made an officer by receiving a commission. There seemed to have been no good reason why the preparation should not have been deliberate, and if this had been done quietly on a proper scale, it was more than probable that there would have been no war at all. Under these circumstances he felt sure that Spain would never have joined with us in the clash of arms. The fact that so large a body of men was gotten together and kept under such favorable conditions that only one per cent. was lost was, in itself, very remarkable; it could hardly have been equalled by any country in Europe. It seemed to him strange to hear men complain of the hardship of occupying tents without floors, as he had been many months, with thousands of others, without any tents at all, and with nothing under him on the ground when asleep. "War was hell," and nothing else could be made of it. Instead of complaining about the executive management of the war, Americans should be proud of the result. He claimed Dr. Sternberg as an old friend, and was proud to do so. Dr. Sternberg had, at the very outbreak of the war, pleaded with Congress for a larger and better medical department, but to no avail. Of all responsible bodies, the aggregation of men in Washington known under the name of "Congress" was about the least responsible, and if efficient work was required that was not the place to go for it.

DR. CLAIBORNE closed the discussion. Regarding the vaccine, he said that he could not state where it had been obtained, but he had a painful recollection of the fourteen abscesses that he had had from it. He was pleased to hear the stout advocacy of the surgeon-general by two of the speakers, for he could not but feel keenly on the subject because of hardships that had apparently been the result of official incompetency. He believed that in the first three months of the Civil War there was as much complaining among the soldiers as in the late war with Spain; it was after the men had become seasoned that they probably paid little attention to the hardships and exposure to which allusion had been made.

The Curability of Bright's Disease.—DR. ELMER LEE read a paper with this title, in which he took the position that only a small percentage of humanity necessarily died of this ailment; that many did so was because of numerous mistakes in living, both of omission and commission. But the dietetics of Bright's disease was, as in other diseases, sadly confused—a motley combination of scientific principles and various crude notions regarding eating. Healthy kidneys could only accompany a sound body. The notable frequency of micturition in infancy caused by overfeeding was often the first step in the development of disease of the kidney. Albuminuria was only one factor in the diagnosis; a more important one was the occurrence of renal casts in the urine. The presence of fatty epithelium from the kidneys was the third factor in the diagnosis. When these three were found in a given case, the diagnosis was reasonably certain. Bright's disease was practically a disease of fatty degeneration, produced by improper food or food taken in excess. Exclude the excess of fat-forming foods, regulate the quantity of food so as to facilitate digestion, and attend to the ordinary principles of hygiene, and Nature herself would stop the advance of fatty degeneration, provided the morbid processes were not already too advanced.

Water the Best Diuretic.—There were few disorders more under medical control than catarrhal inflammation of the kidneys. Under favorable conditions, recovery might be expected under the simplest treatment in a large percentage of cases. Stimulating diuretics should, of course, be avoided, and the diet should be so regulated as to reduce to a minimum that nitrogenous diet which called upon the kidneys to do a great deal of work. Spare diet and pure water would often be found sufficient in these cases. Water was the best of all diuretics. The symptoms of catarrhal disease of the kidneys often escaped the notice of the patient, and even of the medical attendant. The condition was usually the result of excessive eating and insufficient exercise. This disorder was frequently present in young children. These little ones were specially liable to pleurisy, pneumonia, bronchitis, and even membranous croup. From a consideration of the foregoing the indications for treatment were plain.

The Treatment Simple.—Experience in the successful management of Bright's disease had satisfac-

torily demonstrated that the use of plain and easily digestible food, suited to the amount of exercise taken, constituted an important factor in the cure. The meals should be two in number, morning and evening, with a little bread, if necessary, in the interval. The food might consist exclusively of properly cooked fresh vegetables and fruit. The best drink was water, preferably distilled, or water which was very free from salts and organic impurities. A sufficient quantity should be taken to keep the urine of low specific gravity—not higher than 1.010. The clothing should be light and loose all the year. The importance of free ventilation of the skin was very commonly overlooked. Exercise was indispensable, but must be exactly in accord with the strength and the amount of food consumed. Exposure to the air and sunlight was also necessary. The climate was not material. The least amount of medicine possible should be the rule. This simple treatment would cure many cases of Bright's disease in which other measures failed and hope was wellnigh abandoned.

Chronic Renal Disease Incurable.—Dr. Andrew H. Smith said that he agreed with the reader of the paper that many of the measures advocated by him would accomplish a great deal in the way of preventing nephritis, and, so far as the disease was curable, might to some extent contribute to its cure. He could not, however, agree with him regarding the simplicity of the processes which we group under the name of "Bright's disease." Once the structure of the kidney had been changed, and in place of the regular excreting machinery there was connective tissue or other material, and with the glomeruli practically obliterated so that natural methods of secretion must be suspended, he could not understand how anything in the way of diet or hygiene could yield very satisfactory results. Every physician knew that acute nephritis might be recovered from, and that the limit—say, three months—beyond which the disease was considered to be chronic, was not sufficiently long. He had seen cases last almost twice that length of time and yet terminate in recovery. When the disease had once become thoroughly chronic, it certainly must be looked upon as incurable, although life might be greatly prolonged and the person rendered more comfortable by proper diet and hygiene.

Author's Views Opposed to General Experience.—Dr. Morris Manges agreed with the remarks of the last speaker. He said that a disease of the kidney, characterized by casts, renal cells, and fatty epithelium in the urine, and curable by plain diet and the use of water, was a malady not generally recognizable by the profession under the name "Bright's disease." The part played by syphilis and other constitutional diseases had been entirely ignored by the author, and nothing had been said about the different varieties of this disease. The reader of the paper had presented a series of broad and hasty generalizations which certainly did not correspond with the experience of most physicians. It had been stated that climate played no part in the causation of this disease—an assertion that would not find very general support. Again, exercise was claimed to be an important factor in the treatment, yet this was not the common experience. Exercise might be useful under certain circumstances, but certainly rest was often far more useful. Nothing, perhaps, would so quickly reduce the quantity of albumin in the urine as prolonged rest and an exclusive diet of milk. Nothing had been said about the advantages of such a diet. It had been stated that the specific gravity of the urine should be kept below 1.010 by the use of water; he would rather express the hope that some method would be discovered by which the physician could raise the specific gravity of the urine in Bright's disease above this point. Modern methods of research showed that once a renal lesion had been established it was never entirely recovered from. He took the same position as Dr. Smith regarding the incurability of Bright's disease.

Dr. Elmer Lee, in closing the discussion, said that the view of the paper was confessedly narrow, and did not extend into the fields touched upon by the speakers. There were undoubtedly cases of disease of the kidney, characterized by albuminuria, tube casts, and fatty epithelium from the kidneys, in which recovery took place. If the views expressed by him were at variance with those generally accepted, he would only say that they were founded on his own experience in the practice of medicine for over twenty years. It was his custom to encourage his patients with Bright's disease to take as much exercise as was consistent with their condition at the time, and this was done with the object of increasing elimination and augmenting oxidation. Bright's disease resulted from an unclean body within, which, in turn, was the result of a clogging up of the secretory and excretory processes of the body. He was sure that he had secured far better results from judicious and gradually increasing exercise than from the so-called "rest treatment."

The Dispensary Bill and Instructing Delegates.—The old contest on this subject was revived by an effort of Dr. F. R. Sturgis to introduce a resolution, the purport of which was the formal indorsement by the county society of the Sullivan dispensary bill and the specific instruction of the delegates to the State society to further its passage.

Dr. Wendell C. Phillips spoke against the resolution, on the ground that it was well known that another bill had been prepared which had practically received the approval of the *comitia minora* of the society and of the delegates.

Dr. Sturgis replied that the new bill referred to was understood to take away from the State board of charities all its power of control over the dispensaries, placing it instead in the hands of a board composed of twelve salaried men. The members of this board were to be selected from twenty-four nominees, and half the number were to be physicians and the other half were to be representatives of the dispensaries.

Dr. Daniel Lewis then offered the following amendment, which was adopted: "That the delegates of this society to the State society be instructed to use every effort possible, and consistent with the dignity of the profession of this city, to secure a measure which shall give the needed relief from dispensary abuses."

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, January 26, 1899.

Edwin B. Cragin, M.D., Chairman.

Placenta Duplex.—Dr. Edward A. Ayers exhibited a rather rare anomaly of the placenta duplex.

Placenta Prævia Centralis: Fatal Post-Partum Hemorrhage.—Dr. Ayers also reported the following case: A primiparous woman, twenty-six years of age, pregnant at the eighth month, had a hemorrhage on January 1, 1899. On January 14th labor pains began in the morning, and at eight o'clock that evening *accouchement forcé* was practised. The largest-sized Barnes' bag was inserted in the cervix, and was held there by the fingers of the left hand constantly kept in the vagina. This bag produced dilatation of the cervix without hemorrhage. In the present instance, the time required was sixty-five minutes, much longer than

usual. The fœtal heart was auscultated every fifteen minutes. The cervical dilatation having been completed, the child was brought into the R. O. A. position, the forceps applied, and delivery accomplished in a few minutes. The fœtal heart had ceased to beat. The uterus was packed with gauze, and ergot was administered. She was in good condition after delivery, but on the second day hemorrhage began after midnight, and terminated fatally. Post-mortem examination showed complete paralysis of the uterus. The placenta weighed one pound and twelve ounces. He did not think the patient lost more than one quart of blood during the whole time she was in the hospital. The hemorrhage was attributed to the paralysis of the uterus, which was apt to ensue in these cases, and which, to his mind, was the most difficult factor to treat. Even with ergot it was almost impossible to get the lower segment of the uterus to contract properly. He did not look upon these patients as out of danger for at least twenty-four hours after delivery. He had lost two patients in this way, both of them having been in excellent condition at the time of delivery. He greatly preferred the Barnes' bag to the hand for dilatation, because of the perfect control of hemorrhage during the period of dilatation.

The Uterine Paralysis Preventable.—Dr. S. Marx said that he believed that a baby at eight months was as viable as one at nine months, and that, therefore, with proper surroundings, it was not justifiable to postpone delivery even one day in a case of placenta prævia. Cervical laceration was a small matter compared with the danger of delay associated with slow methods of securing cervical dilatation. He maintained that the Barnes' bag could not sufficiently dilate the cervix to admit of the passage of a child's head of ordinary size. He also insisted that the application of forceps in such cases was wrong. As the Barnes' bag produced dilatation, it ballooned the lower uterine zone, displaced the presenting part, and led to malpositions. He would emphatically take exception to the statement that efficient contraction of the lower uterine zone could not be obtained; it could be done by careful and thorough packing, not only of the uterus, but of the vagina. This tamponade acted both by producing firm compression and by exciting uterine contraction.

Regarding the specimen of placenta duplex, the speaker said that only a few days ago he had met with a very similar condition. In his case the patient was a hæmophiliac, and had previously been attended by him in confinement. She had recovered at that time in spite of a severe post-partum hemorrhage. In this last confinement the patient was very anæmic, and he remained a long time after delivery to assure himself that she was safe. However, hardly had he left the house before there was a gush of blood, and she immediately collapsed. Some hours later she developed a temperature of 108° F., probably due to septic matter introduced during the hasty emergency treatment, and she died as a result both of the hemorrhage and of sepsis. The diffused attachment of the placenta to the uterus probably explained the very sudden hemorrhage.

Dr. Ayers said that this was the first case of placenta prævia that he had delivered by the head, and with forceps. He preferred delivery by the breech. The Barnes' bag did not dilate thoroughly, but it allowed of the bringing down of the leg, which continued the tamponade of the cervical canal. He had formerly been of the opinion that uterine tamponade was sufficient to secure proper uterine contraction, but he had learned that even this measure would not always suffice.

Uterine Tamponade Not Always Demanded.—Dr. Mundé said that it so happened some years ago that he saw in consultation in one week three cases of placenta prævia. In all three the placental implantation was nearly central. In the first case premature labor was induced, version performed, and the child delivered, but being premature it died. There was no further trouble from the placenta prævia. The second case was that of a multipara who had nearly reached term. She was exceedingly anæmic because of a recent hemorrhage before coming to the city. Examination showed the os partially dilated. The membranes were ruptured, and the child was turned and delivered with the loss of very little blood. About one hour after delivery he was hastily summoned from an adjoining room to find the patient gasping for breath, but giving no evidence of either external or internal hemorrhage. She died almost immediately, apparently from pulmonary embolism, or heart-clot. The third case was also in a multipara, who was near term. A living child was delivered by version, the uterus contracted firmly, and there was absolutely no hemorrhage after delivery. In all these three cases there was no post-partum hemorrhage, and consequently he saw no reason for the routine use of the uterine tamponade. He favored delivery by version as quickly as possible, if it could be done without too much damage to the cervix. Extensive laceration of the cervix would, in itself, give rise to severe and troublesome hemorrhage.

Dr. Marx explained that he had recommended the tamponade because it was most common for placenta prævia to occur in women who have had a number of children, and who had usually lost considerable blood before the physician was called. It was important that every drop of blood possible should be saved, and he firmly believed, with Dührssen, that this could be most certainly accomplished by tamponade of both uterus and vagina. This should be left in for thirty-six hours.

Subperitoneal Rupture of the Lower Uterine Zone; Low Placental Implantation.—Dr. H. J. Boldt presented, in connection with the foregoing discussion, a post-mortem specimen—the uterus of a multiparous woman who had been confined twenty-four hours previously. One hour after delivery she was in excellent condition, but two hours later her attending physician found her completely collapsed. It was in this condition that Dr. Boldt had seen her. The uterus was distended up to the umbilicus. On emptying the completely atonic uterus, an extensive bilateral laceration of the uterus was discovered. Before she could be tamponed, death occurred. The autopsy showed that the fatal hemorrhage had been due to the abnormally low attachment of the placenta. There was also a subperitoneal rupture of the lower uterine zone. He had been told that the labor was easy and normal.

A few days ago he had been called to see a case of central attachment of the placenta. There had been free hemorrhage previously. Rapid manual dilatation of the cervix was performed, and the woman was delivered without further incident. A second case of placenta prævia, also seen within the past few days, had had no hemorrhage post partum. These cases were mentioned to emphasize the remarks made by Dr. Mundé.

Dr. Ayers, in closing the discussion, called attention to the rarity of his case, it being one of placenta prævia in a primipara. It was because of this fact that the dilatation of the cervix was so slow. The forceps was applied largely with the idea of saving, if possible, the child's life. It did not seem to him that this class of cases could be successfully treated by any one method.

Congenital Malformations of the Female Sexual Organs.—Dr. Paul F. Mundé said that he had recently had two cases of congenital absence of the female pelvic organs, though the subjects presented the usual attributes of the female sex. Photographs

of these individuals were exhibited. One patient had been married for three years, but presented externally only a very slight pocket, and examination per rectum showed only a slight trace of any internal sexual organs. The other woman was unmarried, and presented absolutely no evidence of organs in the pelvis other than the bladder and rectum. In the first case the vagina was deepened, and in the second an artificial vagina was made. According to his office records, he had seen there in the past two years thirteen cases of congenital malformation of the sexual organs.

Fallaciousness of Palpation.—Dr. H. N. Vineberg said that in the paper which he had recently published, on the absence of uterus and vagina, he had stated, after searching the literature, that any assertion regarding the rudimentary condition or absence of the uterus and ovaries could not be taken very seriously unless the abdomen had been opened, and the condition present actually determined by a very thorough and careful inspection. In his own case, one ovary was found a little below the kidney. In the twenty-six cases collected by him complete absence of the ovaries or of the uterus had not once been noted; some rudiments were always found on opening the abdomen and making an exhaustive search. A new operation for the formation of an artificial vagina had just been published and recommended by a general surgeon in this city. A review of the literature showed that Mackenrodt had previously adopted his plan of using the mucous membrane of the vagina, obtained at colporrhaphy. In the twenty-six cases already alluded to, the operation was done to relieve the menstrual molimina.

Dr. Boldt remarked that in one case a number of surgeons besides himself had made a diagnosis of absence of the sexual organs. An abdominal section showed the uterus to be the size of a hazelnut, and the ovaries the size of peas.

A Case of Double Sex.—Dr. A. Palmer Dudley reported the case of a young servant girl seen in the Harlem Hospital. The physical examination showed one well-formed labium, one testicle, a clitoris enlarged to about four inches in length, an absence of the urethra, the presence of a sulcus or vagina, about one inch and a half deep, and a circular opening in the perineum through which she voided urine and confessed that "she" could ejaculate semen. Palpation showed a small uterus and rudimentary ovaries. The case had been under observation only two days. He had also seen five cases of double vagina and double uterus, and in two he had had occasion to perform laparotomy. It was difficult to palpate the ovaries in these cases because they were attached by a long ovarian ligament. In one of his cases this ligament had been four inches in length. One patient, who was three months pregnant, had one ruptured and one intact hymen. He delivered her of a child, and removed the septum between the two vaginæ.

Dr. Mundé said he thoroughly agreed with Dr. Vineberg regarding the fallaciousness of bimanual palpation in these cases, but he had not had occasion to perform abdominal section on any of his cases. When the female type was well preserved it was quite probable that rudiments of the internal sexual organs would be present. The cases that he had just reported were examples of imperfectly developed women, while Dr. Dudley's case must have been one of an imperfectly developed man, because there was ejaculation of semen. He did not know of a single authentic case of true, living hermaphroditism being on record.

Ascites and Ovarian Cysts.—Dr. Boldt presented an ovarian cyst and papilloma removed from a woman thirty-two years of age, a patient in the Post-Graduate Hospital. She had been recently delivered of a living child, and had been tapped several times for an ascites of undetermined origin. The physical signs were exactly those of an ordinary ascites. A mass could be indistinctly felt through the tense abdominal walls, which was taken to be a sarcomatous ovary. Her temperature had varied from 101° to 105° F. for a considerable time. The operation disclosed an enormous ovarian cyst without any ascites. Microscopic examination showed the tumor to be a papilloma of the ovary. The tumor, including the fluid, weighed about forty pounds. Dr. Boldt said that in all instances in which there was doubt about a case being one of ascites, it was better to make an exploratory incision than to resort to tapping.

Glass Syringe Broken in the Uterus.—Dr. Boldt also exhibited three fragments of a glass syringe which had been inserted into the uterus and accidentally broken there. One piece was situated just above the os internum, one was lodged firmly in the body of the uterus, and one was located in the left horn of the uterus. It was necessary to split the whole uterus before these fragments could be removed.

Atrophic Vaginitis and Gonorrhœa.—Dr. William S. Stone reported the following case: A Polish woman, forty-two years of age, who had been married eighteen years, but had not lived with her husband for a number of years, sought advice because of frequent and painful micturition and the presence of a foul vaginal discharge. Examination showed the vulva to be bathed in a purulent fluid, and on either side of the vestibule were several reddish patches. Pus could be pressed out of the urethra. By recto-abdominal palpation the vagina could be felt as a long, hard body, not unlike the uterus, except that it was narrower. Higher up a small retroverted uterus could be detected. The pus was stained by Gram's method, and a considerable number of gonococci were demonstrated. The case was of interest because of the extensive damage done to the vagina by an atrophic vaginitis. Dr. Dudley, the speaker said, had given chronic senile vaginitis as one of the evidences of an old gonorrhœa.

Dr. Vineberg thought the age of the patient must have had a good deal to do with the production of this marked contraction of the vagina. It was rare to meet with gonorrhœal inflammation of the vagina, although it was common in the uterus and the urethra.

Dr. Stone said that he had taken into consideration the senile atrophy probably present in his case, but he had made the report because of the interesting question that had been raised regarding the production of such a form of vaginitis by a previous gonorrhœal inflammation.

Torsion of the Ovarian Pedicle.—Dr. Paul F. Mundé read a paper on this subject. He said that the first case of this kind had been reported in England in 1845, but since then many had been placed on record. The pedicle was usually not more than two inches long, and from one-eighth to one-quarter of an inch thick. The larger the tumor, the thicker the pedicle was likely to be, and hence, even if rather long, the less likely was it to become twisted. The Fallopian tube was always included in the twist, which might be directed toward the uterus or the reverse. Torsion of the pedicle was, therefore, possible only when the tumor was small and freely movable. The size of the tumor when removed did not indicate its size at the time the torsion occurred, for it grew with every twist. It was probable that the peristaltic movements of the intestine played a prominent part in the twisting of the pedicle. The irregular shape of multilocular ovarian tumors, and the displacement of the tumor by the gradual growth of a pregnant or fibroid uterus, or the sudden emptying of a pregnant uterus, were other factors which were possibly chargeable with the occurrence of this accident. A case was cited in which during his examination of a tumor it under-

went a twist, causing considerable pain and nausea, and resulting in an attack of peritonitis. In this instance, he postponed operating until the acute inflammation had subsided, but he would now prefer to operate upon such a case at once. As a result of the twisting in these cases the tumor underwent a rapid increase in size, associated with some rise in the pulse rate and in the temperature, with perhaps nausea. More than once even experienced practitioners had mistaken the symptoms caused by the twisting of a pedicle for those indicative of an appendicitis. Of thirty-five ovarian dermoids removed by him, torsion was observed in twenty-four per cent., or about four times the usual frequency of this complication. Torsion of the pedicle might occur on either side; he had never seen two twisted pedicles in the many cases of double ovarian tumor upon which he had operated. The results of torsion of the pedicle were: (1) Interference with the circulation, and consequent congestion of the parts; (2) increase in the size of the tumor; (3) the formation of adhesions; (4) gangrene; and (5) chronic peritonitis, with turbid serous exudation, from rupture of the gangrenous cyst. Fortunately the last result was rare. These tumors often became dark and friable, and yet were preserved from actual putrescence by adhesions. The symptoms would necessarily vary with the suddenness and tightness of the twist. He had never observed shrivelling of the cyst, with calcareous degeneration of its contents, as a result of torsion of the pedicle, although such a result had been observed by others. He had met with twenty-nine torsions of the pedicle out of his four hundred and thirty-eight abdominal sections for ovarian disease, or about six per cent. An ovarian tumor with a twisted pedicle should be removed as soon as the diagnosis had been made, or if the diagnosis was doubtful, and the symptoms urgent, an exploratory operation should be done. The differential diagnosis from appendical abscess was often very difficult.

Dr. J. Riddle Goffe said that his own experience confirmed the observations given in the paper. Bland Sutton, in his work on the pathology of the ovary, had asserted that there was a law regulating the direction in which the twisting occurred, giving in support of this view a number of illustrative cases. The twist on the left side was from the left toward the right, or anteriorly, and on the other side it was in the reverse direction. Dr. Goffe said that he once had a case of double ovarian cyst with twisting of both pedicles. He had never found more than one complete twist and a half.

Dr. Boldt cited a case, seen some years ago at the Manhattan Hospital, in which there were four complete twists in the pedicle. The tumor itself was absolutely black.

Dr. Mundé said that certain German observers had propounded theories regarding the direction of the twist, but their views had always seemed to him speculative. He could explain the occurrence of the double cyst with both pedicles twisted only by the supposition that the torsion had occurred when both tumors were very small. He had seen one case in which there must have been six twists, and he had certainly seen three complete twists.

The Use of Credé's Silver Ointment in Puerperal Sepsis.—Dr. S. Seabury Jones read a paper on this subject. He said that Dr. Tracy, registrar of the New York City Board of Health, had kindly furnished him with the statistics as to the number of deaths from puerperal septicæmia, grouped in periods of five years, from 1866 to the present time. These figures, together with the fact that last year, in the boroughs of Manhattan and the Bronx, there were three hundred and seventy-six deaths from all puerperal diseases, indicated that there was much yet to be done in the line of making childbearing more physiological and less pathological. These statistics, of course, left entirely out of consideration the large number of cases of puerperal sepsis in which life was not sacrificed, though much damage might have been done.

In spite of the brilliant results claimed to have been secured in Credé's clinic by the use of the new silver salts, the literature of the subject in this country was still very meagre. The reader of the paper then proceeded to review the literature, calling special attention to the researches, in this country, of Carey Lea on allotropic silver. What he described as "gold-colored allotropic silver" appears most nearly to correspond with Credé's soluble silver. Lea says that it was soluble in water, and that when heated on platinum it was converted into ordinary silver. It occurred in small, hard pieces having a greenish metallic lustre, but when subjected to trituration it became pasty and assumed a yellow tint. Credé used a fifteen-per-cent. ointment containing soluble uncombined metallic silver. He estimated that of the three grammes which he recommended for the initial inunction, about four and one-half grains of pure silver were absorbed into the system. This investigator used the ointment only in well-observed cases in which the diagnosis of severe septic infection was clear. In local processes the inunctions were made as far from the seat of disease as possible. He found that in acute and recent cases one inunction was usually sufficient to effect disinfection of the system in from twenty-four to thirty-six hours. Improvement was usually observed in from three to ten hours—indeed, it was so sudden as to astonish both patient and physician.

Author's Remarkable Case.—Dr. Jones said that he had used the ointment in only one case, but in that one the result had been thoroughly conclusive and exceedingly gratifying, and seemed worthy of presentation to his fellow-practitioners. The patient, a primipara, twenty-one years of age, was delivered by him with the aid of forceps, on December 24, 1898, after a tedious labor. The placenta was detached with difficulty from the bottom of a pocket. There were only a very small lesion of the vaginal mucosa and an insignificant laceration of the cervix. The usual antiseptic precautions were observed during the labor, and a post-partum douche of lysol was given. On the third and fourth days the temperature varied from 103° to 104° F., and there were slight rigors and perspirations. In spite of intra-uterine douches of formalin and the internal use of quinine in full doses there was no improvement. The patient was anæsthetized on the evening of the sixth day, and the site of the placental attachment was scraped with the finger. Some shreds were removed, and the débris was foul-smelling. The curette was not used because the placenta had been detached from the bottom of a pocket, leaving the uterine wall very thin. The uterus had been exceedingly tender for several days, and the picture was that of septic metritis, but not of general sepsis. The patient passed a bad night, and the temperature remained high during the next three days. On the ninth day there was a severe rigor, and fifteen hours later there was another rigor, with a pulse of 130 and a temperature of 105° F. General infection then seemed to have been effectually established, as was shown by the cessation of tenderness and the occurrence of diarrhœa. On the eleventh day the pulse became very rapid and thready, and her condition seemed very desperate. That evening between one and two drachms of the Credé ointment was rubbed into the skin on the inner surface of the thighs. The temperature at that time was 104° F., the pulse 120, and the patient was bathed in profuse perspiration. The subsequent history was like that of a bad case of diphtheria treated by antitoxin. At 1 A.M. the pulse was 110 and the tempera-

ture 102° F. At 8 A.M. the temperature fell to normal and the pulse to 90, and the patient expressed herself as feeling quite well except for the perspiration. The inunction was repeated in the morning. The diarrhœa ceased after the first inunction. The local process was not at once checked, but it rapidly improved after the third inunction. After this no more inunctions were given for four days. The pulse and temperature remained normal for five days, during which time she had a good appetite and felt nearly well. Four days after the last inunction she was suddenly seized during the night with abdominal pain, and the temperature rose to 102° F., and by 7 A.M. had reached 104° F., with a pulse of 130. The inunction was again given, and within twenty-four hours the temperature and pulse reached the normal. The inunctions were then given in smaller quantities for four days, and then in still smaller quantities for a short time longer. From the time of the first inunction all internal douches and local applications were discontinued. Daily examination of the urine failed to show any albumin, and there was no evidence of poisoning from silver. On the twenty-seventh day the patient was completely well and was allowed to get up. The speaker said that, of course, one case alone did not amount to much, but the close correspondence of the phenomena observed in this case with those reported by Credé was instructive, and constituted his reason for placing this single case on record. Altogether about one and one-fourth ounces of the ointment were used. He thought one drachm was not too much for the initial inunction, and he would not hesitate to repeat this in from twelve to twenty-four hours. It was also well not to suspend the use of the ointment too soon. He hoped further experience would establish the soluble silver of Credé as a true chemical antitoxin.

Puerperal Sepsis a Surgical Disease.—Dr. H. N. Vineberg said that he had been particularly interested in the figures given in the paper regarding the mortality from puerperal sepsis, as he had intended to make this a special study. There could be no doubt about the frequency of puerperal sepsis in New York City, and the high rate of mortality from it. No matter how limited one's experience, quite a number of such cases were encountered. Dr. Vineberg said that puerperal a sepsis should be looked upon as a surgical disease. There was always a wound somewhere—either in the perineum, vagina, cervix, or uterus. If the infection had spread beyond there, a lesion would usually be found elsewhere. It was quite common for the cellular tissue around the uterus to be involved. The infection might pass through the uterus and give rise to general peritonitis. A case reported recently by Dr. Saunders showed the danger of using a remedy like the Credé ointment. A puerperal woman had been presumably cured of her sepsis, nevertheless she died on the forty-second day, and the autopsy first revealed the cause, *i.e.*, a small puerperal abscess behind the uterus. Had this case been treated on surgical principles, in all probability the patient's life would have been spared. In the cases upon which he had himself operated he was confident that no other treatment could have been successful, except possibly in one of the cases. In one of the four, the uterus was studded with small abscesses. It was not probable from our knowledge of medicine that anything which could be introduced by inunction could affect such a condition. He was willing to try the ointment, but he hoped never to forget the principle that puerperal sepsis was a surgical disease and demanded surgical treatment.

The Ointment Useful in Mild Puerperal Sepsis.—Dr. Boldt said that he had had some experience with the Credé ointment. It was necessary to differentiate carefully between true, acute puerperal sepsis and the milder forms which are amenable to many methods of treatment. Soon after Credé's publication on the subject of his ointment, the speaker said, he had had occasion to try it on a very severe class of cases of puerperal sepsis, and all of these persons had died very promptly. Since then he had used it in some milder cases, and had been impressed with the fact that in these more chronic forms of puerperal sepsis it exerted a beneficent influence. In these five or six cases the rapid fall of the temperature was quite noticeable.

Objects to Wholesale Hysterectomy.—Dr. Mundé said that if we followed Dr. Vineberg's lead we must assume that the majority of cases of puerperal sepsis required surgical treatment, even the removal of the puerperal uterus in the severer forms. He was afraid that this would lead to the haphazard extirpation of uteri simply because no definite cause for the sepsis could be discovered. He agreed substantially with Dr. Vineberg in his contention, but his statement was so sweeping that one was inclined to believe that he would have all uteri extirpated which were the seat of puerperal sepsis. Multiple abscesses in a puerperal uterus often could not be diagnosticated by any one until the uterus was out of the body and under the knife. Of course, a probable diagnosis might be made in some instances by inference or exclusion. But there was a class of cases in which removal of the uterus did not seem to be indicated—the class referred to by the reader of the paper. All would hail with joy a remedy which would act in these cases like an antitoxin. These were the cases in which no cause for the sepsis could be discovered, and yet the septic process had extended beyond the uterus and the pulse and temperature ranged high. These were the patients who became suspiciously comfortable after a time, and who died happy—the euthanasia in these cases was perfect. If the Credé ointment, or any other remedy, was capable of checking the downward course of these unfortunates, let us welcome it by all means.

The Ointment Worthy of Trial.—Dr. Marx said that it seemed to him that the silver treatment was similar to the old mercurial treatment—the introduction into the system of the metal for the purpose of antagonizing the sepsis. Every puerperal patient for whom he had tried the antitoxin had died. For simple cases of puerperal fever neither antitoxin nor Credé's ointment was needed, for such cases yielded to simple and well-known measures. He believed that many of the reported successes from antitoxin in puerperal sepsis were dependent, not on the use of the antitoxin, but upon the coincident removal of the source of the sepsis. All remedies hitherto proposed for the desperate cases of puerperal sepsis, in which the cause could not be found, had failed most dismally, but in view of the truly remarkable result in Dr. Jones' case he would be glad to give the ointment a trial at the first opportunity.

Dr. Vineberg explained that he did not recommend removing the uterus of every woman suffering from puerperal sepsis—indeed, the fact that he had seen many cases of puerperal sepsis and had operated in this way in a very small number was a sufficient refutation of the implied charge in the criticisms of his position.

Dr. Jones closed the discussion. He said that he had been impressed by Dr. Vineberg's statements with the belief that he was prone to operate upon severe cases of puerperal sepsis. As he understood it, Dr. Vineberg would have operated upon the case reported in the paper, and yet the result obtained with the Credé ointment was certainly much to be preferred, as the patient was left with her sexual organs intact. Moreover, the fact should not be lost sight of, that the use of this ointment, by reducing the temperature and pulse, put the patient in a far better condition for

operation should this be required. He believed, with Credé, that after the use of this ointment in a favorable case the patient soon found herself rested and her appetite returning. This was totally different from the usual experience in septic cases, even when they were improving and were on the road to recovery. He was not a little proud to find that Cary Lea's investigation on allotropic silver was the foundation of this treatment advocated by Credé. Credé, and many others in Germany, had reported recoveries from this treatment, even in apparently desperate cases. It was to be particularly noted that in mixed infections of diphtheria and scarlet fever good results had been observed from the use of the silver ointment. The ointment was made near Dresden under Professor Credé's supervision. The ointment resembled mercurial ointment in appearance, but it was somewhat softer. It caused no irritation, but sometimes produced a peculiar tingling sensation in parts adjacent to the site of the inunction.

Surgical Suggestions.

A Syringe capable of overcoming any resistance, as in Schleich injections in the palm, sole, nail matrix, etc., has been invented by Dr. Wullenweber. A description can be found in the *Deutsche medicinische Wochenschrift*, December 2, 1897.

Tuberculous Testicle.—The removal of a tuberculous testicle exercises a beneficial influence both on the tuberculosis of the prostate and urinary organs, and also on the general condition of the patient.—KOENIG.

Cysts of the Broad Ligament.—The treatment of pedunculated cysts of the broad ligament is ligation of the pedicles and removal of the tumor. That of the embedded cysts is enucleation, preferably performed through the abdominal incision.—J. M. MONROE KERR.

Douching after Vaginal Hysterectomy.—I never employ douching after vaginal hysterectomy, as it is dangerous should the peritoneum not be completely shut off. Swabbing out the vagina daily with pledgets of wool steeped in corrosive sublimate is much more efficient.—F. J. MCCANN.

True Worth of the Appendix.—The eminent surgeon closed up his pocketbook with a snap on the $100 fee a wealthy patient had just paid him for a successful operation for appendicitis. "Tell me the appendix vermiformis is a useless organ."—*Public Health Journal.*

Epistaxis.—Gillette recommends the use of hydrogen dioxide. He uses a teaspoonful or more in full strength, injected by means of an ordinary syringe. Relief is immediate. In operations in the nasal cavity, when bleeding obscures the vision, inject hydrogen dioxide. Ask the patient to blow the nose, and the field is clear again.—*Canadian Practitioner.*

Vesical Calculi.—Suprapubic lithotomy is the operation that should be done by those who deal with stone in the bladder but occasionally. For old men, in whom stone is usually associated with enlarged prostate, suprapubic lithotomy is the operation. One should remember that in pelvic deformities, ankylosis of the hip-joint, etc., one may not be able to place the patient in the lithotomy position. The great advantage in the operation of litholapaxy is that it lessens the sojourn in bed, and the sequelæ of cutting operations are not present.—DR. J. B. DEAVER.

Sprains of the Ankle-Joint.—A German army surgeon states that in a large number of "sprains" of the ankle-joints the Roentgen ray showed that in the majority of cases there was actually either fracture or dislocation of some one or more of the small bones. The treatment should be fixation, in order to prevent false joints, exostoses, etc., leaving permanent impairment of functions.—*Medical Times*, November 1, 1898.

Movable Kidney.—Unless due to some disease in the organ itself, movable kidney is consequent to a peculiar fault in nutrition, and is always accompanied by some nervous symptoms. The treatment of movable kidney not due to any pathological change within itself must always be directed toward the correction of faulty nutrition and a regaining of at least the normal body weight.—J. A. LICHTY.

Secondary Attack of Appendicitis.—The danger to life from secondary attacks, according to these statistics and in my own experience, does not appear colossal; in fact, the subject of recurrence, except when multiple and more or less continuous, is a bugaboo, and in my opinion has received more consideration, as a factor hostile to life, than it deserves.—DR. SCHUYLER C. GRAVES, *Kansas Medical Journal.*

Tuberculous Fistula.—We are justified in operating on all those patients suffering from tuberculous fistula in its strictest sense, and also those who have a simple fistula with lung complications, provided the patient's general health will permit it. It is the condition of the patient at the time we are consulted that should decide this question, and not the fact that the patient may have a localized tuberculosis, either in the anal region, in the lungs, or in both.—GANT.

Transverse Fracture of the Patella.—The risk of opening the joint to wire the patella is due to entrance of septic organisms when the operation has been performed before the effused blood has been wholly or in greater part absorbed. The operation should therefore be performed immediately after the fracture has occurred only when the two following conditions can be observed together, namely, that blood has not begun to be effused, and that no direct violence has been applied to the part.—DR. PEYTON T. B. BEALE.

To Supplant Castration when necessity exists for sterility, Kehrer (Heidelberg) incises the anterior vaginal wall in the median line, from the tubercle found at the orifice of the urethra up to the os uteri; in this way gaining access to the vesico-uterine cavity, he draws the fundus of the uterus into the wound, and divides the ovarian tubes between ligatures and obliterates the stumps by means of catgut sutures. He then performs vaginal hysteropexy immediately above the inner orifice of the os uteri.

Local Anæsthesia.—Dr. Kofmann, of Odessa, recommends a modification of Oberst's method of local anæsthesia. He simply places a constriction band around the part, and does not operate until the tissue becomes blanched. No injection of cocaine is needed, since this procedure alone suffices to produce complete anæsthesia. He never applies a rubber constriction band to the fingers or toes, but always beyond the next joint, because he has had a case of pressure gangrene of the big toe resulting from such constriction.

Hemorrhoids.—Suturing the wound after excision of the pile is rarely satisfactory, since a submucous fistula is liable to follow, owing to the failure of complete union. Wounds of the mucosa, here as elsewhere, heal better by granulation; hence the objection to the plan by extirpation and suture, though otherwise a unique procedure.—BEACH.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

TROPICAL DISEASES—BRITISH PHARMACOPŒIA ADDENDUM—AORTIC ANEURISMS AND HYPERTROPHY OF VENTRICLE—INFANTILE VULVAR DISCHARGES—PERSONATING PRACTITIONERS—INQUESTS AND QUACKERY—RECENT DEATHS.

LONDON, January 20, 1899.

THE teaching of tropical medicine is attracting more attention. The costly scheme of establishing a complete school for the purpose at the Branch Seamen's Hospital is generally condemned, and it is hoped that this extravagance will not be carried out. The few cases that would be available there would be of so little use that it would be difficult to justify the extensive building at first contemplated, while Netley possesses every facility for teaching the subject, both from a clinical and laboratory point of view. Mr. Chamberlain has intimated that candidates for the colonial medical service who have received such bacteriological training as King's College or similar institutions may provide will have the preference, other things being equal. After they have been selected they will be required to attend the Branch of the Seamen's School. Probably other schools may be recognized in future, but so far it seems only one will have a chance of competing with Netley, if the authorities will arrange for that to be open to these accepted candidates. That one is Liverpool, for which Mr. A. L. Jones has furnished the funds of a school to be conducted by University College and the Southern Hospital conjointly. Liverpool has most of the trade with West Africa, and cases of tropical disease are accordingly constantly being brought to her hospitals.

The Medical Council, usually excessively timorous lest it should exceed the duties imposed on it by Parliament, has had the courage to appoint a committee to prepare an addendum to the British Pharmacopœia in order to adapt it to India and the colonies, with a view of eventually producing a pharmacopœia equally useful in every part of the empire. It is strange that no one uttered the old cry against going "outside the four corners of the act," a cry which has sufficed to stifle many a sensible suggestion. But the committee was appointed, and advance copies of the proposed addendum have been distributed to a few favored individuals. The labors of the committee have not been very severe, and the result is not much to boast of. A certain number of drugs in common use in India and the colonies are enumerated, and some of them are indicated as suitable substitutes for others which are in the British Pharmacopœia. But the list is by no means exhaustive. A cursory acquaintance with Hindu materia medica and the United States and foreign pharmacopœias would enable any one to make as good a selection. In fact, the drugs contained in the addendum are for the most part familiar to all interested in materia medica, and especially to American practitioners.

Dr. Oswald Browne, in a recent work on "Aneurisms of the Aorta," showed from an analysis of all the cases admitted into St. Bartholomew's Hospital during the last thirty years that this disease does not give rise to hypertrophy of the left ventricle, as many continue to teach. At the last meeting of the Medical and Chirurgical Society a paper on this subject was read by Dr. Calvert, who had found that in one hundred and twenty-four cases of aneurism of the arch, there was no hypertrophy in sixty-eight; in forty-seven there was hypertrophy, but it could be completely accounted for by other causes; in nine it could be probably explained otherwise. There is consequently no evidence, at any rate so far as the records of this hospital go, in favor of aortic aneurism being a cause of hypertrophy of the left ventricle.

Dr. Lazarus-Barlow thereupon stated that the records of St. George's Hospital for the last two years were equally significant; for out of thirteen cases in the ascending or transverse arch it is expressly recorded that there was no hypertrophy, and in five cases in which it was present it was accounted for by aortic regurgitation or granular kidney.

Dr. Seymour Taylor demurred to the conclusion, and thought he had seen hypertrophy as the result of aneurism, but this view obtained no other support; Drs. Morison, Turney, Page, Rolleston, Caley, Cantley, and Norman Moore all supporting the opposite. It was also mentioned that the late Dr. H. G. Sutton, than whom no more important authority could be cited, always taught that aortic aneurism did not cause ventricular hypertrophy.

After this discussion a case of aneurism of the aorta involving the spinal sensory nerve roots was related by Dr. Turney and Mr. Ballance. Laminectomy was eventually performed, when the body of the seventh dorsal vertebra was found to have disappeared and its place occupied by recent clot. The finger was passed into this and yet no hemorrhage followed. The operation was so far successful that the lower intercostal muscles, which had been paralyzed, resumed their function, but the patient died ten hours afterward. At the post-mortem the aneurism was found to arise from the descending aorta on its posterior surface, and to have destroyed the vertebræ and intervertebral discs from the sixth to the ninth dorsal.

Vulvar discharges in children have usually been regarded as due to various causes—or, at any rate, as not frequently gonorrhœal. Dr. Drummond Robinson has communicated to the Obstetrical Society the results of an investigation of fifty cases, which seem to point to a different inference. In forty-one (seventy-six per cent.) he found cocci which he could not distinguish from gonococci, and he drew the conclusion that they were gonorrhœal. This was dissented from by a number of other speakers on various grounds, such as that the disease has been met with when gonorrhœa could certainly be excluded; pain on micturition when present is not necessarily urethral; the glands are rarely enlarged; the disease does not spread to adjacent tissues, and it is mild and easily cured, while cases of infection by rape are much more severe. Here is an instance of clinical and bacteriological evidence being distinctly opposed. In view of medico-legal questions it is important that the character of the coccus should be further investigated and culture experiments carried out.

The man Rowland, who traded as Nugent on the diploma of the person of that name, has been sentenced to three years' imprisonment. It was urged on the prisoner's behalf that though the Defence Union challenged his right to the diploma or name of Nugent in 1895, still the General Medical Council had not seen fit to interfere. Could a more severe condemnation of the council be formulated? As I told you lately, the Union warned the council not to register any one as Nugent who might apply, but the warning was unheeded.

An inquest was held on Monday on the body of an old lady who had been visited and prescribed for by an unqualified dispenser, and then seen by his employer who was qualified. The jury added to their verdict that the doctor deserved censure for neglecting his patient, and also that "these dispensing halls are a big bogey and a fraud on the poor working-people." The coroner told the doctor who owned the hall in

question that he entirely agreed with the jury and should report the matter to the Medical Council. He thought the dispenser could be prosecuted by the Apothecaries' Company.

The exposure of quackery that is continually occurring does not seem to have much influence on the public. A man named Roberts was lately before a coroner's court in reference to the death of a man treated by him with powders which were proved to be merely common salt. The jury pronounced this "nothing but a fraud," and Roberts was cautioned by the coroner as to his future conduct. The caution will probably be of no effect unless followed up by prosecution. Perhaps the Defence Union may take up the case. At another inquest, it being shown that the deceased had suffered from consumption for a long time, one of the jury said he "would like to say a few words on consumption," and proceeded to assure the coroner that he could "cure consumption and spitting of blood as well." This juryman, who gave his occupation as a bootmaker, invited any one afflicted with consumption to apply to him for his remedy, the nature of which he would not state. It is curious that the coroner should have allowed his court to be thus abused by an ignorant quack.

Lieut.-Col. Robert Pringle, M.D., who retired from the Indian army in 1883, died on the 13th inst., aged sixty-six years. He was one of the few survivors of the Cawnpore massacre. Another retired officer, Surgeon-General Macbeth, died at Rome on the 3d inst., aged eighty-two years. Arthur Henry Wilson, surgeon to the Northern Hospital, Liverpool, died on the 15th, from infective endocarditis. Thomas Cole, M.D. Lond., F.R.S.P., senior physician to the Royal United Hospital, Bath, died also on the 15th, from rupture of a blood-vessel, in his fifty-fourth year. James Cappie, M.D., of Edinburgh, author of "The Causation of Sleep" and other essays, died on the 14th.

CONCERNING THE DELETION OF ARTICLES FROM AND THEIR ADDITION TO THE OFFICIAL LIST.

To the Editor of the Medical Record.

Sir: It is a matter of deep gratification with every one who understands the value and importance of the Pharmacopœia that it is now being made the subject of criticism by a much greater number of physicians than ever before. The nature of the criticisms is a matter of far less importance than the fact of their appearance. The Pharmacopœia is virtually a handbook of the materia medica, and the best and most important of its class. The utter neglect of the study of materia medica by physicians has been naturally followed by a wide incompetence in therapeutics, and the disregard of the Pharmacopœia has served merely as an indication of this state of affairs. Now that numerous criticisms of the Pharmacopœia by physicians are making their appearance, we find it an indication of what we know from other sources of information to be true, that there is a general awakening of interest on their part in the subject of materia medica.

It is unfortunate that these criticisms so generally fail to recognize the full scope of the considerations by which the committee of revision of the Pharmacopœia has to be guided.

It often seems as though the more learned and influential the critics, the more persistent they are in ignoring this necessity, and the more inclined to take a narrow ground of criticism concerning the official recognition of drugs. There is a continual disposition shown to force upon the Pharmacopœia the office of a therapeutical dictator, which is entirely foreign to it.

These reflections are excited afresh by certain features of a circular issued by the Committee on the United States Pharmacopœia of the Medical Society of the State of New York. Criticism of this circular, which is one of a series which has, as it was intended, done much to increase interest in the Pharmacopœia and to increase its usefulness, is not intended. The circular is only suggestive in a mild way of the tendency here under consideration. A question is proposed, "That all drugs and preparations not now prescribed to any extent by physicians be dismissed." This question is followed by a list of fifty-four drugs, now official, and correspondents are requested to check those which they think should be retained, the inference being that the committee proposing the list recommends the deletion of all of them. The question as proposed is not likely to secure a result in accordance with the principles governing the committee of revision in its selection of official drugs.

Of course the term "to any extent" is not to be taken literally, but the question arises how it is to be interpreted. The circular has not been mailed to all physicians in the State but only to the teaching portion of them, who are likely to be guided rather by questions as to the actual therapeutical value of the drugs than as to the extent of their use. Considerable experience in getting information in this way has shown that it is likely to be very misleading unless its sources are broad and general. These questions could not possibly yield reliable conclusions unless put to all the physicians in the State. It would even have been better to have distributed them to the pharmacists also. Even supposing that it had been so distributed, the results would still have shed light upon usage regarding only these fifty-four articles. Had any other body prepared the list, some of these articles would doubtless have been omitted, for the simple reason that they happened to be in favor with the compilers, while some others, which they were not accustomed to use, would have been included. As illustrations, let us consider a few of these articles. Within the last few months an amount of testimony regarding the exceptional virtues of apocynum has been published such as rarely applies to any drug, and which appears convincing not only as to its merit but as to its extensive use; yet here we find it recommended for deletion. Matricaria is doubtless of little therapeutic importance, yet it is considerably prescribed by foreign physicians among us. Cascarilla is a drug which apparently works especially well, as it is so commonly used, in the warmer districts. Within a week one of our most learned, advanced, judicious, and successful physicians has been heard to speak regretfully of the general ignorance of the valuable properties of asclepias. Considering upon the other hand the omissions from this list, we note that condurango, just at present extolled by high authority in this city, would have been recommended for deletion by much more than ninety-nine per cent. of the physicians of the United States. The omission of colchicum seeds, the corm being retained, would be acceptable to most persons, yet this is not queried. A very large and influential class advises the deletion of whiskey, brandy, and the wines, or of one or more of them. Although the present writer has publicly opposed this proposition, regarding it as an enthusiastic and ill-advised move of radical reformers, he has since been led to believe that these substances are actually prescribed to a very limited extent. If this probability shall be verified, he will be obliged to lend his support to the movement. In any case, this question has been made one of the most prominent of its kind, but it is not taken up in the present circular.

The important consideration in all questions of this class is a fact which unfortunately has not been stated

in the pages of the Pharmacopœia—namely, that its revisers reaffirmed, as the basis of their action in retaining, deleting, and adding articles, the principle which has always ruled, that the extent of use of any article upon physicians' prescriptions was the most important consideration determining its recognition, and that the recognition of an article should not be construed as an expression of judgment as to its merit nor its omission as an act of condemnation. Ignatia, on all accounts preferable to nux vomica, was dropped, merely because physicians refused to adopt it, an illustration of other similar cases. The function of the Pharmacopœia is not to determine therapeutics, but to guide and decide in matters of fact regarding drugs and their preparations. The undesirability of the use of a drug by physicians should not deprive the pharmaceutical contingent of the assistance of the Pharmacopœia in properly attending to prescriptions for certain articles, notwithstanding that such prescriptions are ill-advised. The pharmacist must of necessity give his attention to a large number of articles the use of which is opposed to good therapeutical judgment. As to what physicians should and should not prescribe, they must be educated outside of the pages of the Pharmacopœia. The trifling inconvenience which can be caused by the retention of ineffective drugs cannot weigh in importance against the injustice of refusing the benefits of the Pharmacopœia to any considerable portion of our people. It thus appears clearly improper for such questions to be decided by the small teaching portion of physicians in one section of the country.

Since the publication of the new British Pharmacopœia there seems to be an increased demand for wholesale deletions from our own work, evidently in imitation of the former. There is a vast difference between the application of these two works. Our territory differs from that of the British more in the heterogeneous character of its physicians than in its extent. The great variation in the character of the education given our physicians, in the character of the literature supplied them, and, above all, in the different State laws regulating medical practice, has given us a degree of variation in the practice of therapeutics which is quite unknown to the clientage of the British Pharmacopœia, and we cannot imitate it in this matter. It is even more significant that while the British Pharmacopœia is acting thus radically in the extent of its deletions, it is preparing a complemental work for use in those districts which are markedly different from the home country, a course which is not possible for us, our different classes of physicians not being limited to distinct territories.

It is an open question whether it would not be desirable for the Pharmacopœia to separate, in primary and secondary lists, drugs whose use it can unquestionably recommend from those which are described only under compulsion, and thus use its high influence in improving therapeutical practice. As matters stand, however, we should be liberal rather than narrow in our recognition of drugs.

A modification of the course pursued in the circular under discussion would secure reliable data for the guidance of the revision committee, and render it more efficient aid than could be afforded in any other way. This is the distribution to every physician and every pharmacist in every State of a complete list of the official drugs, with a request coming from a combination of influential sources that he check those never prescribed by him or for which he never received prescriptions. The list could also include the more important drugs proposed to be added. This action would place the revision committee, for the first time in the history of the Pharmacopœia, in a position to act intelligently in this important matter. The task is certainly an enormous one, but no greater than many other census inquiries which are successfully answered. It is likely that the United States census bureau would be willing to print such a communication. This could have the added indorsement of the United States Pharmacopœia revision committee, of the State Medical and Pharmaceutical associations, and of the medical and pharmaceutical journals. It could be circulated through the census bureau, and a committee appointed by the medical association of each State could compile the reports received from the physicians and pharmacists of that State under instructions from the United States Pharmacopœia revision committee, to which such reports could then be furnished.

H. H. Rusby, M.D.

New York City.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 4, 1899:

	Cases.	Deaths.
Tuberculosis	198	189
Typhoid fever	12	5
Scarlet fever	229	18
Measles	153	12
Diphtheria	182	40
Laryngeal diphtheria (croup)	14	9
Cerebro-spinal meningitis	0	4
Chicken-pox	35	0
Smallpox	1	0

A Psychiatric Society has sprung into existence at the university in Kiew. Prof. S. A. Ssikorski, psychiatrist, was elected president, Professor Obolenski vice-president, and Drs. Netschai and W. Sselezki secretaries. The new society at its first meeting elected a number of prominent psychiatrists to membership, among them Emeritus Professors Balinski and Mierzejewski of St. Petersburg, and from distant places Professors Lombroso, Krafft-Ebing, Kraepelin, Jolly, Flechsig, Ballet, and Magnan.

Red Spectacles for Seasickness.—Bright red spectacles accompanied by internal doses of calomel form a new German specific against seasickness. It is deduced from Epstein's investigations on the influence of color on the blood-vessels in the brain. Seasickness is due to lack of blood in the brain, while red sends blood to the brain with a rush. By looking at one point for some time through the red glasses the patient is cured radically.—*Scientific American.*

Lunacy in Great Britain.—The *Westminster Gazette* for November says that a perusal of the latest report of the commission in lunacy leaves us with the impression that by a sum in compound proportion it is possible to foretell the time when England will be one vast madhouse. Report after report opens with the announcement that there is an increase in the number of lunatics over that of the preceding year. True, the commission, with that obstinate insistency which has hitherto characterized their attitude on this point, assure us that there is no real increase—that the whole thing is chimerical. The facts which they have formerly urged to prove their assertion no more appeal to our common sense now than in the past. Everywhere the word overcrowding catches our eye, and that notwithstanding the opening of four new asylums.

Conclusive proof, is it not, of the decrease or stationary position of insanity? The total number of lunatics on January 1, 1898, is, the report goes on to state, 101,972, being an increase of 2,607 over that of the preceding year. . . . From the year 1869 up to the present time there has been not only a steady increase in the ratio of total lunatics to that of general population, but also of pauper to general and pauper population. We can scarcely conceive that the greater tendency which now exists to send senile and imbecile cases to asylums accounts for this progressive increase, more especially when the ratio of total paupers to population has steadily diminished. We have not time to go into the number of patients discharged during this period, but it must be great, for in the past year it amounts to 9,215. . . . In 1886 there were 21,954 lunatics; in 1898, 101,972. These figures a tale unfold and speak for themselves.

Scientific Criticism of Proprietary Articles in France.—We learn from the *Annales d'Oculistique* that an important decision on this subject was given in March last by the civil tribunal of first instance of the Department of Seine-Inférieure, and, the time during which an appeal might be lodged having elapsed, has now become an expression of the French law upon the point. The question arose in an action for damages to the extent of 20,000 francs, brought by a firm of opticians against Dr. Javal, the director of the ophthalmological laboratory of the Sorbonne. The plaintiffs were the proprietors of a glass containing baryta, from which they manufactured spectacle lenses, which were described as "isometropic" and were extensively advertised as possessing special excellencies. Dr. Javal instructed two of his assistants to institute a careful examination of the glass and of the lenses made from it, and to report fully to him upon the subject. They carried out his instructions and reported that the difference between baryta glass and ordinary glass was insignificant, that they were not in favor of the former, and that the "isometropic" lenses did not offer any advantages to purchasers. Dr. Javal published this report by presenting it to the French Academy of Medicine; hence the action. The court decided that a scientific man might rightly examine and criticise on public grounds any manufactured article for which special merits were claimed, and it found for the defendant upon all issues, condemning the plaintiff in costs. This decision has been received with much satisfaction by the medical profession in France, and the liberty thus secured is likely to be employed with reference to many pharmaceutical preparations and alleged remedies, as well as to the wares of opticians.—*London Times.*

Dissensions in Edinburgh Royal Infirmary.—The *British Medical Journal* says that a considerable amount of friction has arisen over the arrangements to be made for the care of the patients and the carrying on of clinical teaching in the wards under the charge of Prof. T. R. Fraser during that gentleman's absence as president of the Indian Plague Commission. The medical faculty of the university suggested that Dr. John Wyllie, one of the consulting physicians and also one of the medical managers, should be appointed by the board of managers to act. On this a protest was sent in by Dr. R. W. Philip, who is the acting assistant physician in association with Professor Fraser. A similar protest was sent in by the assistant physicians. The bringing in of a member of the consulting staff was considered to be a bad precedent, a slur on the competency of the acting staff, an interference with that "use and wont" which they stated had hitherto prevailed whereby the assistant, in the absence of the chief, performed the duties and accepted the responsibilities. Instead of deciding at once the managers, at their meeting on November 7th, referred the question to the medical committee. That committee by a decisive majority decided to recommend the managers to carry out the suggestions of the medical faculty and appoint Dr. Wyllie. Sundry other memorials were sent in to the managers, one from a large majority of the staff in favor of the precedent of appointing the assistant physician and against the bringing in of one who had already had his full term as a physician and was now on the consulting staff. The great majority of the students who are members of the university class of clinical medicine, as well as the majority of those who are now acting as clinical clerks in Professor Fraser's wards, requested the managers to appoint Dr. John Wyllie. The matter finally came before the board on November 4th, when by a large majority Dr. Wyllie was asked to occupy Professor Fraser's place. Professor Fraser's formal leave of absence is for four months, but it is believed it will have to be extended to a much longer period.

The Limitations of High Buildings.—In the great fire which recently occurred in this city we have had a useful object lesson of the danger attaching to buildings of preposterous height. The *Sanitary Record*, referring to the same subject, says: "We have more than once had occasion to comment in these columns on the modern tendency of builders to pile story upon story in city blocks, until one wonders whether, like the builders of Babel of old, they are ambitious of scaling the very heavens. The idea had its origin in America, as usual, and quickly took root and germinated here, although on this side of the water we have never carried it to such absurd lengths as have our American cousins. Once started, however, there would have been no saying to what it might not have developed had it not been quickly checked. London led the way; now Glasgow has followed suit in a bill which is to be promoted in the coming session of Parliament. . . . Where the street does not exceed forty feet in width, the height of buildings is limited to the width of the streets; in streets of from forty to sixty feet in width, the height is not to exceed that width plus twenty per cent.; and in streets of over sixty feet wide, buildings may be erected to a height of eighty feet, which is fixed as the maximum, except where the corporation may consent to a greater height. It is hardly necessary to point out the necessity for such a measure. With the steady rise in value of city building sites, much may be said in favor of economizing building ground by building higher, but there must be a certain limit. And the notion of warehouses from one hundred to one hundred and fifty feet in height being erected without check in narrow streets, is clearly preposterous. The Heddon Street conflagration illustrated the dangers of lofty warehouses in narrow thoroughfares in the event of an outburst of fire, and from the sanitary point of view it is manifest that such structures simply shut out light and air from the streets, where air and light can ill be afforded. We wish our streets to be wide and open—not tunnels enclosed by sky-scraping walls."

Malaria Suppressed by the Use of Lime.—A correspondent, a resident of the southwestern part of the Delaware and Maryland peninsula, having written to the *Scientific American* to the effect that malaria had been abolished from a portion of that district by the use of lime, asked if Cuba could not be cleansed of this disease by similar methods. The *Scientific American* communicated with the Department of Agriculture and asked it to pass an opinion on the matter. In reply a somewhat lengthy letter was received, the pith of which was contained in the last and following par-

agraph: "I think, therefore, that the liberal application of lime to all centres of infection would prove of immense benefit by promoting the vigorous development of nitrifying organisms, thus securing a rapid destruction of organic matter and the conversion of the nitrogenous part thereof into nitric acid or nitrates. Thus indirectly lime might prove very valuable in disinfecting and destroying the germs of malaria in general and yellow fever in particular. I can express no opinion in regard to the amount of lime which would be required to disinfect the island of Cuba, but it probably would be so enormous that the application of it would have to be confined to localities where the greatest infection existed.—W. WILEY, *Chief of Chemical Department.*"

Influence of Race and Climate in Leprosy and Tuberculosis in Japan.—The following extract is from the pen of a Japanese physician and contains some important facts: "Among the classes backward in development leprosy still preserves its sway. In Japan the population may be divided into three classes. In the rich, noble class, almost pure Indonesian blood, in-breeding of four families for twelve hundred years, leprosy is very rare. In the great middle class it is more frequent. Among the outcasts, the Eta, the negroid element, is rampant. In the first class tuberculosis makes numerous victims, more than in either of the others; in the second class syphilis is the prevailing scourge, and has been so for thirteen hundred years; the third, as before said, is a prey to leprosy. These three different bacilli seem to have picked out their grounds during thirteen hundred years, in which the closely hemmed in and isolated empire has been preyed upon by them. By changing the environment congenial to the microbe one can change his characteristics. A change in the conditions of the lower class in Japan to the higher plane would probably produce a corresponding change in the bacillus. Two factors are necessary for the prevention of leprosy: obstacles to inoculation, that is, isolation and improvement of the human class preferred by the bacillus. The Ainos of Japan, who have been always isolated from the Japanese, have never contracted leprosy. Yet they are the greatest salt-eaters on the earth. This might be considered as an isolation of the healthy. It is our desire to have the whole human race isolated in the Aino manner. We do not know, of course, whether the Ainos have ever been inoculated. One individual would have acted as a nucleus for the disease. It is very probable that in the course of twenty centuries one or more Ainos were inoculated, however well isolated they were. Although shunned by the Japanese because of their hairiness, as the country was after all a leper centre, some individuals were contaminated. Some poor Aino must at some time have joined the company of some outcasts in the Eta village. The inoculation is certainly probable; and the absence of the disease among the Ainos is certain. We assume, therefore, that the Aino has immunity or that the bacillus does not prosper in Aino flesh. Now here is a curious remark: 'There has always been a suspicion that fish diet has something to do with leprosy. Now the leprous Japanese eats a great deal of fish and no meat, while the Aino feeds on bear meat and is not very fond of fish; he is, in fact, a nomad, consequently a hunter.'"—HUTCHINSON'S "Archives of Surgery."

Smallpox and Sanitation.—The statement so persistently made by some of the opponents of vaccination, that the decline of smallpox during this century is due to improved sanitation has attracted much attention and has been much relied on by those outside medical circles to prove that vaccination has had nothing to do with the improved condition of affairs. It is important then to observe, as is ably shown by Walter Lloyd in the *Westminster Review*, that if, instead of comparing the present state of affairs with that which held good at the beginning of the century, we enter into a more detailed examination of the different periods, we find that during the middle period the sanitary condition of London underwent great deterioration in consequence of the rapid growth of the population, and that during this period both the general and zymotic mortality were considerably increased; in fact the general death rate became "at least twenty-five per cent. higher than it was between 1820 and 1830." Yet during this insanitary period the smallpox mortality continued to decline, showing how little insanitation has had to do with the prevalence of the disease.—*The Hospital.*

A Series of Views of the city of Toronto is a feature of the December number of the *Canadian Journal of Medicine and Surgery* which gives to this issue a rather festive and holiday appearance.

David Gruby, the eccentric Hungarian physician who recently died in Paris, will be remembered as the discoverer of a ringworm fungus in 1842 at a time when the microscope was in its infancy. The recent researches into the multiplicity of ringworm fungus by Sabouraud in France have shown the real value of these early investigations. To Gruby likewise we are indebted for the microsporon Audouini, as well as for other fungi of the same class, as well as for a considerable amount of scientific writings.

Health Reports.—The following cases of smallpox, yellow fever, plague and cholera have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending February 4, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Clarke	January 27th	Present.	
Clay	January 27th	Present.	
Dallas	January 27th	Present.	
Greene	January 27th	Present.	
Hale	January 27th	Present.	
Lowndes	January 27th	Present.	
Marengo	January 27th	Present.	
Mobile	January 1st to 27th	7	
Randolph	January 1st to 27th	Present.	
Wilcox	January 1st to 27th	Present.	
Arkansas, Pulaski County	January 27th	*	1
Dist. of Columbia, Washington	January 14th to 21st	1	
Illinois, Cairo	January 27th	3†	
Indiana, Indianapolis	January 22d	3‡	
Kentucky, Louisville	January 23d	1	
Michigan, Detroit	January 7th to 14th	7	
Mississippi, Clay County	January 27th	Present.	
Jones County	January 27th	Present.	
Hattiesburg, Perry County	January 27th	17§	
Lauderdale County	January 27th	Present.	
Noxubee County	January 27th	Present.	
Tishomingo County	January 27th	Present.	
Nebraska, Omaha	January 17th to 23d	7	
New Jersey, Jersey City	January 15th to 22d	2	
New York, Dunkirk	January 14th to 21st	2	
Texas, Laredo	January 14th to 21st	37	8
Virginia, Alexandria	January 23d to 29th	47	
Portsmouth	January 27th	16	
Richmond	January 25th	1	

* Several cases. † Suspicious cases.
‡ Origin unknown. § In pest-house.

SMALLPOX—FOREIGN.

Belgium, Antwerp	January 1st to 7th	4	1
India, Bombay	December 20th to 27th	..	2
Mexico, Mexico City	January 15th to 22d	..	1
Nova Scotia, Halifax	January 28th	1*	
Russia, Moscow	December 24th to 31st	13	1
Moscow	December 31st to January 7th.	7	4
Odessa	January 1st to 7th	1	1
Turkey, Constantinople	January 2d to 9th	..	14
Smyrna	December 25th to January 7th.	..	2

* Among Russian immigrants.

YELLOW FEVER.

Columbia, Barranquilla	January 2d to 9th	1	1
Mexico, Vera Cruz	January 12th to 19th	..	2

PLAGUE.

China, Hongkong	December 10th to 17th	1	1

CHOLERA.

India, Bombay	December 20th to 27th	..	2
Calcutta	December 10th to 17th	..	16

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Original Articles.

PUERPERAL INSANITY—A CURSORY VIEW FOR THE GENERAL PRACTITIONER.[1]

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REALIZING the impossibility of presenting, *in extenso*, the subject which forms the title of this paper, within the time allotted to me, I have attempted to condense into a brief abstract such of its salient features as seemed to me would be of interest to the busy general practitioner, who, as a rule, has neither time nor opportunity to pursue systematically the study of insanity in all of its ramifications, although he is popularly supposed to do so.

A glance at the various text books and standard works on mental disease reveals a certain amount of looseness in the application of the term puerperal insanity, which has given rise to not a little confusion respecting this most interesting and important form of mental disorder. Some authors mention but one type of the disease which they designate puerperal mania, the term mania being used as equivalent to insanity, while others group under the head of puerperal insanity three distinct varieties of mental alienation—namely, insanity of pregnancy, insanity arising during the puerperal period proper, and insanity of lactation. That this restricted use of the term on the part of some, and its wide application by others, are inaccurate, unscientific, and misleading, as regards both the etiology and pathology of the malady under consideration, will, I believe, be conceded upon a moment's reflection.

In general terms it may be said that the puerperal state, or period, begins with delivery and terminates with the normal cessation of the lochia, the average duration being from four to six weeks. Hence by characterizing as puerperal insanity only those cases which arise during, and as a result of, the puerperal state proper, and excluding those of the first and third classes of some authors—they being less amenable to home treatment and consequently of less practical importance to the general practitioner—we shall find ourselves in accord with the best authorities of the present day, and also in possession of a more intelligent appreciation of an actual pathological state, a correct knowledge of the etiological limits of which will furnish a basis upon which we may hope to found a rational mode of treatment.

An analysis of sixty cases of puerperal insanity observed by Clouston, an eminent Scotch alienist, shows that a large majority, about eighty per cent., of cases occur within a fortnight after confinement. Only one case of the sixty occurred after the twenty-eighth day.

Regarding the period after parturition where we may draw the line between puerperal insanity proper and the insanity of lactation, Barker says, the former generally occurs between the second and sixth week. Bucknill and Tuke[1] draw the line roughly at sixty days, cautioning us, however, to bear in mind that "the distinction is somewhat vague, and each case on the border line must be judged on its own merits, as to whether it arises chiefly out of the puerperal state or the later period of established lactation." Batty Tuke records seventy-three cases, in all except two of which symptoms appeared within the month after confinement. Of sixty-six cases reported by the late Dr. James Macdonald, physician to the Bloomingdale Asylum, twenty-nine occurred within the first week, and fifteen during the succeeding three weeks, making forty-five cases within the month, while five cases occurred during the second month; thus confirming the general rule which has been laid down that the frequency of puerperal insanity diminishes in a ratio proportionate to the lapse of time post partum. It also occasionally occurs during labor.

Puerperal insanity, like other forms of mental disorder, may be classified for convenience of description in accordance with the predominant type of morbid mental manifestation present, namely, into mania, melancholia, and dementia, the latter, however, being rare, except as a terminal stage of the two former. In other words, the outward expression of the disease, on the mental side, will be our guide in determining to which class in the category a given case belongs; those cases that are marked by morbid mental exaltation or psychlampsia being designated as mania, those by morbid mental depression or psychalgia as melancholia, while cases that are marked by mental enfeeblement, or psychoparesis, may be classed as dementia. Thus we have three distinct types of insanity occurring during the puerperal period, namely, puerperal mania, puerperal melancholia, and puerperal dementia—the latter, however, being rare as a primary affection; so that, broadly speaking, puerperal insanity is mania or melancholia associated with the puerperal state. In making a differential diagnosis between these three forms in a large majority of cases no difficulty will be experienced if we simply bear in mind the essential mental symptoms of each: in other words, if we bear in mind that mania of whatever form is characterized by morbidly increased mental activity of an exalted type; melancholia by morbid mental depression, gloom, and despondency; and dementia by mental weakness or loss or impairment of mind.

The observations of some excellent authorities outside of hospitals for the insane—mostly obstetricians—tend to show that about ninety per cent. of the cases of puerperal insanity met with in practice assume the maniacal type and are of comparatively short duration; while the remaining ten per cent. exhibit a quiet, melancholic form and are more prolonged, a small proportion of them passing rapidly or gradually into irrecoverable dementia. My own belief, based on statistical information contained in the annual reports of the various insane hospitals of America and Great Britain, together with a somewhat extended clinical observation of cases, coincides with this estimate, although the statistics of institutions for the insane show

[1] Read before the Medical Society of the State of New York at its Ninety-third Annual Meeting at Albany, New York, January 31, 1899.

[1] "Psychological Medicine."

a smaller percentage of the maniacal, with a proportionate increase of the melancholic, type. This discrepancy as regards the mental type of cases observed in asylums compared with that of private practice is, I think, explained by the fact that of the maniacal type, which as before mentioned is usually of much shorter duration, a not inconsiderable number—Barker says one-half—recover at home; while, on the other hand, the usually obstinate and protracted character of the melancholic cases generally results in their commitment to a hospital for the insane. This, to my mind, fully accounts for the discrepancy between the observations made in institutions and those of private practice, and also shows that the hospital statistics, while correct so far as they go, fail to represent the number and variety of cases actually occurring.

Of the sixty cases reported by Clouston, who regards puerperal insanity as the most acute of all forms of mental disease, forty-three were of a very acute type as regards the mental symptoms, the remaining seventeen being mild and without acute, that is, maniacal, symptoms.

Of twenty-nine cases which came under my own observation in the Kings County Lunatic Hospital, twenty-two were of the maniacal and seven of the melancholic type. These form a group of acute cases occurring within the puerperal month, and varying from three to six weeks in duration at the time they came under observation.

Elliot, in his "Obstetric Clinic," refers to the frequency of puerperal mania—evidently using the term synonymously with puerperal insanity—in Bellevue Hospital, which he attributes to the fact that a large proportion of the women confined there are unmarried primiparæ, "and because others of the poorest classes, who cannot be controlled at home, are sent to the hospital." Clouston also says that primiparæ are most subject to the disease, a fact which accords with my own observations. Fordyce Barker[1] estimates the ratio of puerperal insanity to the whole number of cases of labor, in Bellevue Hospital, to be one in eighty. This ratio is greatly in excess of that in lying-in hospitals of Great Britain and the Continent of Europe, where, according to statistics, it ranges from one in fourteen hundred and eighty-seven to one in one hundred and eighty-two. Clouston says it occurs in one in four hundred labors. As regards the proportion of puerperal insanity to insanity from other causes, the statistics of European insane hospitals show it to average about seven and one-half per cent.; but this, of course, does not include a considerable number of cases that recover without hospital treatment.

The causes of puerperal insanity, as of all other forms, are properly divided into predisposing and exciting, or remote and immediate; and these are subdivided into moral and physical. Undoubtedly the most frequent of all the predisposing causes is heredity. In a large proportion of cases, an inherited psychotic or neurotic taint, if carefully sought for, will be found, though efforts in this direction are liable to be thwarted through the proneness of friends of patients to deny the existence of insanity in the ancestry, hence we are not to place too much reliance on the statements of friends upon this point. Some are induced to conceal the fact on account of the stigma which, unfortunately and unjustly, attaches to the victim of mental disease; while others do not attach any importance, hereditarily, to senile dementia nor to various neuroses which play an important part in the production of insanity. The existence of mental disease in collateral and distant branches of the family is also apt to be considered unworthy of mention, if special inquiry in this direction be omitted. Moreover, it should be borne in mind that an insane diathesis may be inherited from epileptic, choreic, weak-minded, intemperate, or hypochondriacal ancestors—in fact, from any of the neuroses pre-existing in the progenitors; and here we have a very prolific source of hereditary influence and one which is generally entirely overlooked by the laity. Among the other important predisposing causes may be mentioned prolonged anxiety during pregnancy, especially in unmarried women; desertion of husband, tedious and complicated labor, severe post-partum hemorrhage resulting in death of the child, cerebral anæmia, non-elimination from the blood of effete materials, general ill-health, etc.

Prominent among the exciting causes stands fright, or shock to the nervous system, sometimes induced by fear, or the sight of a still-born child. Barker thinks that emotional disturbance is by far the most frequent of the exciting causes. Great loss of blood during childbirth is also sufficient to cause an outbreak of insanity in one who is predisposed thereto, and we all know how especially active in the production of nervous diseases are the effects of reflex action in affections of the uterus and its appendages. Sir James Simpson regarded toxæmia as the most frequent exciting cause, especially when connected with albuminuria. Some writers claim that there is a form of puerperal insanity of renal origin, a claim which receives at least partial confirmation in the puerperal cases reported by Bondurant of the Alabama hospital for the insane, in every one of which albumin was found in the urine. Whether albuminuria be a cause or not, it is frequently found associated with puerperal insanity. Savage says that cases of puerperal insanity which depend solely on septic causes are rarely met with.[1] The writer, however, has frequently met with cases in which sepsis was clearly the exciting etiological factor. It has also been claimed that the peculiar post-partum condition of the sexual system is frequently an active cause, but this would seem to be doubtful, as otherwise the disease ought to be of more frequent occurrence. Again, it may be, and doubtless often is, produced by a combination of causes, any one of which operating alone would be insufficient. We also meet with cases in which no cause can be found, cases in which there is no ascertainable hereditary taint, and in which the labor and all the conditions connected therewith have been perfectly normal; and these cases we are obliged, in the present state of our knowledge, to classify etiologically as "unascertained."

Finally, as regards causation, it may be said of this as of substantially all forms of insanity proper—vesanias—that the immediate and direct cause is a condition of cerebral malnutrition, no matter what the underlying conditions may be.

There is probably no disease, and certainly no other form of insanity, in which an early recognition of its symptoms is more important than in the malady under consideration. Says Clouston: "I do not know any event that can occur in a family, short of death, that is so great a shock to all who have to do with it as for a new-made mother of a first-born child to become suddenly maniacal and require to be sent to an asylum. One of the most joyous times of life is made full of fearful anxiety, and the strongest affection on earth is then often suddenly by disease turned into an antipathy; for the mother not only 'forgets her sucking child,' but often becomes dangerous to its life. And few things are more pleasant than to see the restoration of the mother back to all that makes her life worth having." Such being the case, it is clearly the duty of every physician attending obstetric cases to familiarize himself with the phenomena which indicate an impending attack of puerperal insanity, as

[1] "The Puerperal Diseases," p. 161.

[1] Tuke: "Dictionary of Psychological Medicine," p. 1,039.

by so doing he may be able to ward off the disease altogether, or, failing in this, he may hope to lessen its severity by prompt and judicious treatment, before the disease has become fairly established; and last, but not least in importance with reference to an early diagnosis, he may be instrumental in preventing a terrible calamity, by promptly removing the child, whose presence is often obnoxious to the mother, while at the same time placing his patient under proper control to prevent her from injuring herself or those about her.

In the prodromal stage of the disease the intellect is scarcely perceptibly involved, being in abeyance rather than deranged. This may be said to be the stage of alteration which, as in other forms of insanity, so frequently precedes the stage of actual aberration. The patient undergoes a marked change in disposition, either in the direction of exaltation or of depression. If the former, she appears to be unnaturally exhilarated, is emotional, loquacious, excited, and restless, like one in the onset stage of intoxication. If the tendency is toward depression, she becomes taciturn, gloomy, morose, abstracted, and dull; is indifferent to her surroundings, loses interest in those about her, especially her child, toward which she may exhibit a marked dislike or even hatred. Insomnia is an almost invariable accompaniment. This symptom occurring soon after confinement should always be regarded as a danger signal, especially if associated with constipation and a suppression of the lochia. The countenance undergoes a change somewhat akin to that observed in alcoholics with an impending attack of delirium tremens. The facial expression in the melancholic form is best described by the term psychalgia or mental pain.

Advancing in this way, the patient becomes irritable, suspicious, and distrustful of those about her, especially her husband and immediate friends, and frequently of her physician. She is averse to and annoyed by the presence of her child, and finally well-marked delusions, hallucinations, or both, are developed, the latter being usually of the visual and auditory type. The delusions are manifested by incessant talking upon one subject, such as imaginary wrongs done her by friends, or she is given to profane, erotic, and obscene language, holds conversations with imaginary persons, indulges in violent outbursts of anger, during which she may give utterance to the most awful oaths and imprecations, much to the astonishment of her friends, who perhaps have always known her to be a modest, refined, and exemplary woman. There is also frequently more or less mental confusion as indicated by loss of personal identity and failure to recognize friends.

Along with these painful phenomena are always to be found more or less physical disturbance. The extremities frequently present a livid, puffy appearance, their surfaces being cold and clammy; and when pressure is made upon a particular spot the pallid area thus produced remains for a comparatively long time, indicating a sluggish state of the capillary circulation. The pulse and temperature are generally slightly increased, but both may be subnormal. There is uterine tenderness on pressure. The lochia and milk are frequently either diminished or suppressed. The bowels are usually constipated and the urine is scanty and sometimes albuminous. The tongue is coated and tremulous, the mouth is dry and "pasty," and frequently the pupils are dilated. These conditions are often attended with violence, sleeplessness, and great motor restlessness and excitement—in fact, with all the characteristics of acute mania, in which, unfortunately, there is often a suicidal or homicidal tendency.

With this rapid and somewhat disjointed sketch of the signs and symptoms which mark the disease in its incipiency, and omitting as unnecessary a description of the later established stage, I pass to a brief consideration of the prognosis, that being an important question respecting which the physician is often consulted by anxious friends.

Dr. Gooch, in an excellent article on "Disorders of the Mind in Lying-in Women," published in 1831, says: "I remember the time when it was the prevalent belief among medical men that these diseases were never fatal." The same author also states "that Dr. Baillie, when consulted about a case, is said to have remarked that the question was not 'whether the woman was to get well,' but 'when she was to get well.'" The case terminated fatally within a week. Of course, at the present day we know that fatal cases, although not frequent, are by no means rare. Maudsley, in speaking of the favorable prognosis in hysterical insanity, says: "It is even more favorable in puerperal mania, and this though there may have been attacks in previous confinements." Bucknell and Tuke say that "puerperal insanity is very curable, unless it assumes a phrenitic type." Barker considers the prognosis generally favorable in uncomplicated cases. Of the twenty-nine cases previously mentioned as having come under my own observation, in twenty-two of which the form of insanity was that of mania, seventeen recovered. Of the remaining five, three died of exhaustion, a fourth passed into terminal dementia, and the fifth was considered a hopeful case when my connection with the institution ceased. Of the seven cases of melancholia, three recovered, one was lost sight of owing to her untimely removal by friends, and the remaining three were still in the asylum when I left it.

It may be laid down as a general rule that the prognosis, as regards life, is favorable except in cases which assume the acute delirious type, the so-called "delirium grave" which is apt to terminate fatally by rapid exhaustion. It is highly probable that the existence of complications which may of themselves prove fatal, such as peritonitis, peri-uterine cellulitis, and the like, is often overlooked, owing to their symptoms being masked by the mental disturbance, and the diminished sensibility to pain so often observed in the insane, especially in acute mania; and here the pulse comes in as an important aid to prognosis. When it remains below 100 or even 106, we are warranted in anticipating a favorable result, as regards life, even though a recovery of reason does not take place. A condition of pulse implied by the term "rapid pulse," *i.e.*, ranging considerably above the figure given, indicates gravity and should lead us to look out for complications, and also make us very circumspect in our prognosis.

In the treatment of puerperal insanity we cannot be guided by any fixed rules. In fact, there are no specifics in the therapeutics of mental disease; hence we must treat and manage each case on general principles, looking out for the functional indications, especially those relating to nutrition, sleep, and the excretions. One of the earliest symptoms is insomnia, and here we have an important indication for treatment. The writer believes that an impending attack of puerperal insanity may often be cut short by a timely and free administration of hypnotic remedies when the first obscure threatenings manifest themselves. Of this class of remedies, sulfonal, trional, and chloral hydrate, in liberal doses—twenty-five to thirty grains—*pro re nata*, are much to be preferred. Other remedies, such as opium, conium, cannabis indica, lupulin, ergot, hyoscyamus, etc., are sometimes useful as adjuvants in allaying nervous irritability and excitement, but latterly their use has been largely superseded by the hypnotics mentioned. Sulfonal is both hypnotic and sedative in its action, and may be given at inter-

vals during the day in doses of from ten to fifteen grains, to control motor restlessness and excitement. "Sulfonal," says Clouston, "is a safe and excellent hypnotic and sedative as well as motor depressant. It seems to have a larger field of application than almost any of this class of drugs in mental disease."

In puerperal melancholia, however, we possess an invaluable remedy in opium and its alkaloids, especially the deodorized tincture of opium in doses of fifteen to twenty minims thrice daily. In some cases excellent results have been obtained from the exhibition of thirty to sixty minims of Squibb's fluid extract of cannabis indica, especially when there are persistent hallucinations or where the existence of toxæmia is suspected and a diuretic effect is desired. Cannabis indica combined with bromide of potassium forms a most useful and harmless sedative mixture, being certain and lasting in its effect, and seldom interfering with the appetite and digestion. Moreover, it does not require to be increased after long-continued use. In cases supposedly due to auto-infection, naphthalin would, theoretically at least, be indicated, although the writer has had no experience in its use in this particular form of insanity. The fluid extract of ergot in drachm doses, thrice daily, will often prove useful, particularly when involution of the uterus is not complete. Lest some may think that the dosage of the various drugs recommended "smacks of the madhouse," it should be borne in mind that the insane bear and require relatively larger doses than the sane. Obviously, all lowering or depletive measures are to be avoided. The patient should have a nutritious, concentrated diet, and stimulants when required. Food should be given at regular intervals, and under no circumstances should a patient be allowed to abstain from food for more than twenty-four or thirty-six hours at a time. If food is refused, forced alimentation must be resorted to. Fortunately most patients take food voluntarily, even when violently excited; but sometimes in cases of resistive melancholia the nasal or stomach tube must be resorted to. Usually once feeding in this way is sufficient, owing to the discomfort which it produces, and the patient, not caring to have it repeated, will partake of food if urged to do so. In a certain proportion of cases, however, forced feeding must be continued for a considerable period.

It should be borne in mind that acute insanity is an exhausting disease, the successful treatment of which calls for an excess of highly nutritious food to supply the deficiency in the animal economy occasioned by the morbidly accelerated tissue waste incident to the disease.

By far the best form of nourishment—and this applies equally to the treatment of other acute insanities—is a combination of strictly fresh raw eggs and milk enriched with cream. A tumblerful of this mixture containing two to three raw eggs, well beaten, and six ounces of milk and cream given four or five times daily will sustain the patient's strength and nutrition for an indefinite time with the least possible tax upon the digestive and assimilative functions. This, with careful regulation of the bodily functions—especially those pertaining to sleep and the excretions—cheerful surroundings, intelligent nursing, and an abundance of fresh air, preferably out-of-doors, represents the essentials in the treatment of acute insanity. If there is constipation it should be promptly relieved by enemas or mild laxatives, as rhamnus frangula, cascara, etc. Active purgation is bad practice in puerperal insanity. The bladder must be carefully looked after, as patients frequently suffer from retention of urine without making any complaint. The child, whose life is often in great danger, should be removed at once. If the presence of friends is found to be a source of annoyance and irritation to the patient, as frequently happens, they should be excluded from the room. It is highly desirable, whenever means will admit, to employ trained nurses, preferably those skilled in nursing the insane.

Under a beneficent provision of the present "Insanity Law," which requires every State hospital for the insane to establish and maintain a training-school for nurses, it is now possible to procure the services of nurses experienced in mental disease whenever it is desired to undertake the treatment of patients in their own homes. These nurses, who may be had at comparatively reasonable rates on application to the superintendent of any State hospital, are far preferable in mental cases to the general-hospital trained nurse.

Everything in the room, even to pictures or pieces of furniture, which tend to disturb or annoy the patient, should be removed from her presence, and she should as far as possible be surrounded with kindly, soothing influences, her attendants watching her carefully without appearing to do so, and administering to her wants in a quiet, gentle, yet firm way, thus letting her see that she is to be controlled, but not ill-treated. In this way, even in families of moderate means, we may give the case a fair trial at home; but if at the end of a month there are no indications of improvement we may conclude that our treatment has ceased to be curative, and we should then consider the question of removal to a hospital for the insane.

NOTES ON ANÆSTHESIA.

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The subject of anæsthesia has always been of interest to every physician. All statistics carefully gathered and compiled and the investigations of the committee on anæsthesia appointed by the English government, have not settled this question to the full satisfaction of the medical world. Recent observations of physicians in India are in favor of chloroform, proving that the rate of mortality is as low as one to eight thousand and in some institutions less than one in twenty thousand cases. It seems that the warm atmosphere of India causes a rapid action and at the same time a rapid evaporation of the drug. I belive that on the same account the rate of mortality from chloroform is lower in the South than in the northern and eastern States of this country. In my practice extending over seven years in the South I have administered chloroform under the most varied circumstances, at all seasons and at different times of the day; I have given it to children and adults, women and men, white and colored people, sometimes keeping the patient under the influence of the drug more than one and two hours, and out of all these cases I can recollect only one instance—in a very fleshy negro boy, fourteen years of age—in which the respiration ceased to return after some manipulations. Yet the frequent reports of death due to chloroform have caused the medical world to look out for substitutes, as A. C. E. mixture and ether, which have, just like chloroform, their enthusiastic friends and opponents. Other operators have done away with general anæsthesia and claim better results from local anæsthesia by Schleich's infiltration method.

To be a successful anæsthetist it is not sufficient to know how to administer the anæsthetic. It is extremely to be regretted that the instruction the medical student receives on this point, as well in this country as abroad, is, as far as I know, limited to theoretical lectures or to a mere looking on; only a favored few have handled the cone before leaving the college. Besides the administration of the anæsthetic, there are a good many points which ought to be watched and ob-

served. It is unnecessary to go into details or to repeat well-known facts as to how to prepare the patient for the anæsthesia, that no solid nourishment should be given for at least twelve hours before the operation, and that nothing but some hot water or milk should be given a few hours previously. Before giving the anæsthetic the physician ought to make it a rule to examine the heart and pulse of the patient, to inquire about his general health, and, if possible, have an examination of the urine made. The existence of a nephritis, a bronchitis, an atheromatous condition of the blood-vessels, a weak heart, a fatty degeneration of the heart, an emphysema, will make it possible to decide whether an anæsthetic at all, and which, ought to be used. In all the conditions I mentioned ether is contraindicated, since ether increases the heart action and blood pressure and is liable to cause hemorrhage from weakened vessels. According to Porter, both ether and chloroform produce the anæsthetic state by shutting out the atmospheric air and causing a deoxygenated state of the blood. The rapid inhalation of ether then produces a rapid oxidation, exhausting the reflex respiratory irritability, thus aiding in suspending the respiration; the rapid inhalation of ether causes further an excessive flow of the bronchial mucus and in some instances pulmonary œdema and sometimes what has been called secondary pneumonia of ether anæsthesia. In a recent article Hinckel warns the profession against administering chloroform to patients of the so-called lymphatic temperament (enlarged glands of neck, excoriations around nose or ear, hypertrophied tonsils), and especially not to use it in operations on the throat for adenoid vegetations.

We see from the above-mentioned facts and observations that the anæsthetist should not have a special preference for either choloroform or ether, but should decide upon the one which will meet best the indications and will appear the safest for the patient. The anæsthesia ought best to be started in a room adjoining the operating-room. It is good policy to have either the attending physician or some other person in the room when the anæsthesia is started, to guard against emergencies and as a protection against criticisms and—damage suits. In regard to this subject I shall quote from the article of Porter, in the *American Medico-Surgical Bulletin:* "In all cases in which the urine gives evidence of a marked retrograde state of the system, liver, and kidneys (lactic acid, bile salts, urea) or where marked structural changes are detected in the lungs or heart, and where the operation is necessary, the written consent of the patient to be operated upon, or that of his friends, should be secured; they shall state that they will assume the risk and not attempt to hold the surgeon responsible in case of sudden death either upon the table or shortly after removal therefrom."

The anæsthetist should always use a fresh preparation, note the amount he has received, and the time when he started the narcosis. He should not permit any conversation in the room; the patient is more or less excited at the beginning of the narcosis, and any discussion of the physicians about the modus operandi, about similar cases, about deaths under narcosis, is entirely out of place. A very important but frequently too much neglected point is, not to allow the operator to commence before complete relaxation of the muscles has taken place; a serious shock and paralysis of the heart are quite often the consequence of this neglect or impatience of the operator.

During the operation it is the duty of the anæsthetist to watch the pulse, the respiration, and the pupils. He should not engage in talk or watch the operation, but strictly devote his attention to his patient, for whose life he is often more responsible than the operating surgeon. He should not pull the arm of the patient up to the head to feel the pulse, since this position interferes with the respiration, but watch the temporal or carotid arteries. A pale or a cyanosed face, a pinhead pupil or enormously dilated pupils are danger signals. A recent paper says: "If the patient keeps his eyes open or opens them when the anæsthetist tries to close them, look out for some trouble of respiration or collapse." The anæsthetic should be given slowly; it should not be crowded, and the cone should not be pressed too tight to the face, especially not in the beginning, when the patient struggles against the drug, but a liberal supply of air should always be given; if the respiration gets stertorous the narcosis should be stopped. To prevent the "falling of the tongue," some men use a tongue forceps, while others prefer a needle with thread or a safety pin. To avoid pressure, causing sometimes paralysis of the arm, the arms of the patient should not hang down over the edge of the table, and nobody should be permitted to put an arm on the chest of the patient, thus interfering with the respiration.

Just as the members of a fire department or ambulance surgeons are always ready for any emergency, so should the anæsthetist always be prepared to meet unexpected complications arising during the narcosis. Syringes with alcohol, strychnine, nitroglycerin, caffeine, or camphorated oil should be on hand; as soon as alarming symptoms appear the head of the patient is to be lowered, and subcutaneous injections of one of the above-mentioned drugs are to be given. The anæsthetist should know how to stretch the sphincter and how to induce artificial respiration. In France some physicians use the bastinado of the foot soles to arouse the patient, while rapid friction of the region of the heart and oxygen inhalations are recommended by others.

It is best not to use chloroform by gas-light; the free chlorine has not only killed the patient, but in a recent case also the attending physician and made two nurses very sick for some time; the same warning holds good for ether, especially where there is a low fire in the stove. To lessen the danger from anæsthesia several things have been suggested: 1. Alcohol. This drug certainly tends to prevent early heart failure, but alcohol is rapidly oxidized, produces considerable reflex irritability, and thus prolongs the stage of excitement of anæsthesia. 2. Morphine. Porter recommends one-quarter of a grain of morphine hypodermically before the administration of ether. Rushmore, in the *Annals of Surgery*, says that he found the danger and disagreeable symptoms of ether anæsthesia materially lessened or even abolished by using six minims of Magendie's solution with $\frac{1}{120}$ gr. of atropine sulphate half an hour before the narcosis. He thinks the morphine quiets the nervous system, less ether is required, and a more easy recovery from the anæsthetic is insured, while the addition of atropine limits the amount of secretion from the respiratory tract, stimulates the heart, and prevents undue leakage from the skin, thus lessening or preventing shock. In a recent case of narcosis I was surprised at the quickness with which the choloroform acted, when the attenting physician told me that the patient had received one-quarter grain of morphine hypodermically before the narcosis. 3. Another writer suggests that the patient be made to snuff a ten-per-cent. cocaine powder while in the sitting position until anæsthesia is complete, thus preventing reflex action from the anæsthetic. 4. To prevent syncope under chloroform anæsthesia in patients suffering with heart disease a German physician, Dr. Schilling, recommends to begin a few days before the operation to administer an infusion of digitalis leaves (gr. xxx. to ℥ vi.) with half an ounce of syrup, in tablespoonful doses every two hours; and when an immediate operation under such condi-

tions is necessary, as in accidents, the hypodermic use of ♏ xv. of an infusion of gr. xv. digitalis leaves in ʒ iiss. of boiling water. The author states that with this precautionary measure the operations were completed without any accident, although some lasted more than two hours.

To relieve nausea after the narcosis, a cloth dipped in vinegar and put to the nose and mouth of the patient seems to be of decided benefit; to shorten the nervous depression after operation, the so-called surgical shock, oxygen inhalations are to be recommended; the feet of the patient are to be elevated, and the head is to be lowered; hot bottles should be applied to the extremities, and hot enemas are to be given.

WHAT TO DO TO BE SAVED, BEING THE CONCLUSION OF AN INQUIRY INTO THE CAUSES LEADING TO THE ABUSE OF MEDICAL CHARITY.[1]

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THE author of this paper recognizes the difficulties to be encountered, and the magnitude of the task he has undertaken to-day, in presenting a remedy for the abuse of medical charity as it exists in the community in which we reside.

This subject will be considered under four heads, and the responsibilities and obligations of these several heads will be dealt with as briefly as the importance of the subject will permit. The avenues for distribution and the four great channels through which medical charity finds its way to the public feed-trough are the hospitals, the colleges, the medical societies, and the charity department of the city government.

There are defects in system and gross mismanagement in all these avenues of charity distribution, and it is the purpose of the writer to point out these defects and suggest reforms that will bring no hardships to the worthy sick poor, while improving the moral and raising the social status of these several outlets of charity.

The Mission of the Hospital and the Measure of Its Usefulness.—The authorities controlling the hospital of to-day have forgotten the real mission of that institution—that its place is only as a dispenser and vender of medical charity; they have forgotten, too, that all the earthly possessions they have and own were obtained and acquired on the pretext of charity; the donations and bequests that have made them rich were all given and bestowed on the supposition and presumption of this charity.

Hospital Sunday in the churches, one day in the year; hospital Sunday outside the churches, every day in the year—an endless chain, to which is harnessed the chariot of charity. The perennial, perpetual, eternal beggar, infesting the haunts of civilized man, is the hospital, with hand outstretched forever for a dime, a dollar, or an endowment. Like his cousin, the professional mendicant on the avenue, who grows mendacious as he grows rich, the greater the amount contributed to his want the longer the prayer and the more certain the reward.

Now, this professional beggar must be reminded of his place in the community (a place valuable and important in its way, but one not absolutely indispensable to the public safety, were all to do their duty, and the profession aroused to recognize the obligation resting on it), so that he may not grow overbearing and step beyond his legitimate field to where the physician is laboring in the vineyard, with intent to swindle the latter out of the proceeds of that labor. It is desirable that we should remind this professional beggar, the hospital steward, of his lowly origin, his original purpose, the measure of his usefulness, and his mission here on earth, which is to cater to the wants of the sick poor—the sick rich doesn't need his aid, nor was it intended by the founders of hospital charity that he should get it. The rich man, they reasoned, could care for himself; the workingman they taught and admonished to do likewise.

The hospital, it was intended, should serve as a first aid to the injured; to be a hostelry and a domicile for the poor and needy in medical distress. It was to pick up the odds and ends of suffering humanity—waifs fallen by the wayside of life's highway, who were unnoticed by the crowd as they passed on their eager errand of business or pleasure; to care for these waifs was the object and purpose of the hospital, and its founders considered their purpose accomplished when they complied with these demands.

The hospital was not intended by its founders, wise men that they were, to be anything else than a simple dispenser of charity. It left to the noble profession who helped them create it all who were able to earn a living, refusing aid to such as illegitimate subjects of charity. This, they declared, was the doctor's birthright and heritage, and they bequeathed it to him, with the consent and acclamation of the people. Has the hospital stolen this birthright from the physician, or has he, by weakness and folly, permitted it to pass from his hands?

The Transformation of the Hospital from a Purveyor of Charity to a Colossal Corporation Controlling the Medical Market, and Freezing Out the General Practitioner.—Since the good old days when the word "doctor" expressed all that had any value in hospital purpose or intention, changes have come with a vengeance, and radical ones at that; since then the hospital has divorced itself from the doctor other than to make him a tool with which to accomplish its purpose and a stepping-stone to advance its interests. True, it has not exactly turned him out of doors, but, with a hospitality born of cunning and an eye to appearances, it has consented to retain him as an old servant, who is to render service for a home.

The governor, not satisfied to be a simple purveyor of charity, as his original charter intended he should be, set about to enlarge the sphere of his operations, and pulled down his barns to build bigger ones for the accommodation of all who crowded around him. To these he offered special inducements in soliciting their patronage; he told the people he was willing and ready to treat them for a dollar a month in advance, and give them a better class of medical goods for their money than they were able to procure from their family physicians, whom he advised them to dismiss as incapable, expensive, and unnecessary.

The governor has thrown precedence aside and tells the doctor any ethical law he may formulate is not binding on himself. This governor through his dollar-a-month annex has made a flank movement on the doctor, nonplussed and surprised him by selling medical talent that has not been paid for, at a ruinous sacrifice to the producer, who is the physician. This ruinous competition of the governor has compelled the physician to close his office door and the real estate agent to put up his legend, "Office to rent," which is read by the governor without comment or emotion as he takes his daily stroll for health or recreation in the shaded street away from the madding crowd.

The governor has despoiled the practitioner by selling services confided to his care, for a song, namely, a dollar a month in advance as the purchasing price; he has turned his dispensary annex into a salesroom, where three days in the week he is doling out through his servants medical talent he has not paid for, to all who apply at his counter.

[1] Read before the New York State Medical Association, October 20, 1898.

A dollar-a-month salesroom in proximity to his dispensary was a shrewd device to make a dollar, which device catered to a so-called middle class, floating with purpose between the millionaire and the pauper, each of whom in his sphere was already well provided for through the grace of the surgeon whom he hypnotized by passes and incarftations through the medium of charity.

The answer the governor made when questioned as to his motive in running a dollar-a-month annex in conjunction with his hospital plant, when he was aware that such a course on his part was sure to bring disrespect on the whole medical profession, and make the practitioner ridiculous and a laughing-stock for the people, was, that he needed ready cash—he had to have money; that a dollar a month helped him in his purpose to increase the capital and prestige of the hospital, which ultimately aimed to reach its millennium through the aid of this dollar-a-month annex and the palatial chambers prepared for the rich. He further said that he was determined that the interests of physicians should not count or swerve him from his purpose, obligingly adding that when the doctor got sick he was willing to care for him at his dispensary, or if hungry he would refer him to his friend, the superintendent of outdoor poor, who he was sure would furnish him with a meal, or a pass to the workhouse.

Selling medical services for which it pays not a sou, every day in the week, often including Sundays, has made the hospital corporation rich, domineering, and insolent, branching out as it has done from the simple hospital of old, whose function it was to shelter and care for the sick who were unable to pay for treatment or care for themselves, to a palace, fitted up with every modern improvement, with suites of rooms to suit the most fastidious taste—supplied with devices to allure the pauper from the alley, the workingman from his tenement, and the millionaire from his mansion.

The simple hospital of days gone by is transformed into a gigantic trust, operated by a board of governors, who have relays of physicians and surgeons at their beck and call to whom they pay nothing. Now the inflated hospital corporation, which has grown on the site of the simple unpretentious hospital of years ago, demands and receives the services of the best medical talent of the city, and it sells it for a dollar a month in its annex, and at the most advantageous terms it can, to the millionaire, whom on specious promises it has tempted from Fifth Avenue to be a partner in the profitable venture.

Now this plutocracy controlling the hospital has destroyed and despoiled a generous profession, bound it hand and foot, then cried exultantly, "The Philistines be upon thee, Samson."

By the establishment of his dollar-a-month downstairs for the delectation of the workingman, and palatial chambers upstairs for the rich man, the hospital, founded by the sovereigns of George III. and made wealthy by the free service of physicians under the pretext of charity, has struck a death-blow at the legitimate practice of medicine and openly insulted every self-respecting physician in the land. Behold the surgeon in the amphitheatre alleviating human misery, and the corporation autocrat in the governors' room scheming to deprive him of his livelihood—is it not a sight for the gods?

The Motive of the Surgeon in Working for Nothing for a Gigantic Business Concern.—Now, what motive must a surgeon have in working for a hospital without pay? Why does he give his services away, services he prizes so highly, and for which he charges so dearly outside the walls of the corporation plant for which he works for nothing? It is not to gain experience in the practice of his art, as he must have demonstrated ability in that art to commend himself to the consideration of the hospital authorities, who are known to look long and far among the crowd of eager applicants for this so-called honor before making a final choice of the man whom they wish to work for nothing for them, until it is their pleasure to discharge him for infraction of rules, or to put a younger man in his place when age creeps on his scalpel and twists his elbow with the rheumatics.

It is not sheer philanthropy and love of being engaged in a good work that prompts the surgeon to toil for nothing for the governor; for, as far as known, the surgeon is not more benevolently inclined or advanced in the work of doing good than other members of the profession out of which he emerged to enlist in the governor's service. Was it love of fame and the hope of reward indirectly here below, hallowed by the delusion of helping a so-called charitable institution forward in the work of getting rich?

We believe these were the motives prompting the surgeon to walk the wards of the hospital for the governor without compensation. If these were his motives, he has not realized much on his investment in the governor and charity, for the very means on which he counted to sustain himself while working for nothing for the hospital—the rich private patient—has been seized by the governor and appropriated to himself. It was a modest assumption that he be permitted to attend wealthy patients who solicited his services, without any interference from the governor, for whom he worked so faithfully and well for nothing in the amphitheatre on so-called charity patients, but some of whom owned real estate.

This assumption and request were denied by the governor, who found means in his palace to cater to the rich, thus impoverishing his benefactor as he had already beggared the practitioner by his dollar-a-month annex. The fame that came to the surgeon when he was decorated with the order of the corporation autocrat was short-lived; it wore itself threadbare very speedily, so rapidly indeed that now the poor surgeon is compelled to wear an outer garment to hide its effacements.

The glory of working for nothing for a corporation departs from the surgeon when confronted by hard facts, and becomes so irksome in the light of a strong common-sense that it makes him look tawdry and ridiculous.

The Situation as it is with the Governor in the Saddle, and the Volunteer Corps, the Visiting Staff, Sullen and Mutinous.—Few people are aware of the personal inconvenience suffered and the tremendous amount of professional labor accomplished by the painstaking, patient, and hard-working doctors comprising a hospital staff; too often these men are hard-pushed to make a respectable appearance and provide the necessaries of life for their families. They have immolated themselves and neglected those depending on them for support, because an old custom declared that it was noble and honorable to give their services in the cause of charity.

Now there is no further excuse for such sacrifice, since the corporation demanding it can better afford to pay them for their services than they can to give them away; while, as has been hinted, the surgeon is not animated altogether by disinterested motives and pure philanthropy in giving away his services to hospitals and dispensaries. It is beginning to be understood by him that the game of hunting for hospital appointment is not worth the candle, and that his anticipations of wealth and fame are far from realized after securing this prize.

The day the hospital reached its majority and set up a household of its own, it should have crowned its entrance into manhood by paying every man, in what-

ever capacity attached to the hospital, the market value of his services. "That the laborer is worthy of his hire" has been embalmed in divine story and made the keynote of legal proceedings among civilized communities; but we suppose, since the surgeon entered the employ of the governor for sweet charity's sake, his name is not covered by this sacred precept. If, as appears certain, the surgeon is eager and ready to take all he can get from his private patient in the way of fees, why, or in what manner, can he explain his readiness to work for a corporation without pay, which has money to invest in bonds and stocks and to loan on security?

The honor of giving medical services for nothing consists in the charity bestowed, if virtue is its own reward. Surely no person will have the temerity to assert that there is any charity in the methods of the hospital as conducted to-day. The surgeon is then justified in demanding salary from the governor, nor should he blush while making the demand. The governor should have taken the initiative, but he did not and he won't. We will take occasion to remind him that he is doing an injustice to his surgeon, to ask, or rather compel him to work for nothing, the circumstances of compulsion being known to others than the governor and his staff.

While working for nothing for the hospital the surgeon is unable to give his best labor to cases coming to his hands, from the fact that he is weary and worn by his efforts at the hospital for the governor; for be it remembered a surgeon's capacity for usefulness has its limitations; so has a steam boiler's, so has the driving-wheel of a locomotive. To be perfect they must have periods of inactivity; to do their best work they must have intervals of repose to restore molecular displacements incidental to activity.

There is at this moment deep-rooted and widespread dissatisfaction among physicians and surgeons on hospital and dispensary staffs, that custom and pride have so far warped their judgment and shaped their destinies that they should have to drudge and toil for the best years of their lives, and when overtaken by age and compelled to lay down the burden, the only earthly reward they receive is honorary mention by their master, the governor, as faithful servants.

While the echoes of these plaudits are resounding through the corridors of the hospital new men are installed in their places, who beam with mirthful glee at the anticipation of feats to be accomplished and victories to be won under the benign influence and patronizing smile of the governor. Later, when the collar of the corporation begins to tighten around their necks, they look askance at their patron; later still, they recognize that they have been euchred by the governor, who held the bowers and joker.

The Immorality and Unjustness of Hospitals and Dispensaries in Looking for Free Services from Physicians, who Themselves have no Other than their Profession as a Means of Support. — There was a show of reason in asking the surgeon to work for nothing in other days; then the hospital was in swaddling-clothes and a minor, struggling to make ends meet. It asked, and rightly received, aid from humane and kindly disposed persons, among whom was the physician. Things went very well then. At that time the hospital practically consisted of the medical staff, the governor, not the autocrat of to-day, superintendent and auxiliaries, who were of his creation. Since then things have changed—changed for the worse. Now the hospital has pulled away from and broken faith with its benefactor and founder, to the extent that he has nothing whatever to say in its councils or its management. This man, the doctor, who was so instrumental in making the hospital an institution of importance, is practically put under restraint, and told that if he is not satisfied with the rules and regulations of a board who know little or nothing about medical matters, he can go about his business—is dismissed. True, his dismissal is couched in guarded and diplomatic language, but the inference nevertheless is plain, that because he has not done better he must go, to make room for one who will.

Cautious business methods and the service of high-class medical talent for nothing have made the hospitals rich, and have provided them with facilities to go into the medical farming business on an extensive scale, hiring out medical talent by job lots to suit the occasion or the customer. Now, what have they done with the immense accumulation accruing through the generosity of the surgeon and the dollar-a-month annex? They have simply extended their operations by further building and equipping palaces, called private rooms, to attract him who has large sums of money to spend, and who will spend it on the specious pretext of the governor that he offers him more superior facilities than his own private physician on Fifth Avenue, who charged him an exorbitant fee for an operation for appendicitis which he could have had done at a very modest sum at his, the governor's, hospital, and while sojourning in a palace.

This surplus the governor has accumulated through the generosity of the medical staff, who walk his wards every day in the year without a nickel from the governor's pocket for their valuable services. Has the governor, the factotum of the hospital and its spirit and genius, expressed appreciation of their constant and faithful services by presenting them with a part of the money he was able to save through their kind and generous efforts? No, nothing of the kind; but, on the contrary, he was an active agent in organizing forces to cripple and disable them.

The Injury the Free Service Has Wrought to the Private Patient, Who is Able and Willing to Pay for Medical Services, as well as to the Pauper in the Dispensary Ward.—Since it has been proved that the surgeon on a hospital staff cannot give his best work to a hospital corporation patient and his private patient at the same time, one of these two must suffer. The writer will assume that they both suffer, as the hand of the overworked surgeon will lose its cunning and the tired brain the judgment necessary to guide that hand.

Now, why do two human beings suffer? and why are they victims of inferior surgical work? Simply because the surgeon has not time to give each case the care and attention necessary for the requirements of that special case. He is in a hurry and must move on; the patient in the hospital must wait until the afternoon. The telephone will fix that with the governor.

The surgeon returns in the evening. The patient who desired his aid is in the autopsy room. The pathologist wants to know, forsooth, something irrelevant to the immediate facts of the case, so he is there with his knife and his notebook for a specimen and a precept. The surgeon has injured that man because he was not prompt in the morning to take steps to save his life, as he has injured his private patient by going to his bedside at midnight with nerves unstrung, after high tension an hour before while performing an operation for the governor in the amphitheatre. There he exhausted his energy and shattered his nerves, perhaps unconsciously in the glare of the electric light and the presence of keen and discerning critics—the house-staff and nurses. He hastened to the bedside of his patient at midnight, with the prestige of the hospital heralding his coming; but he got there a tired man, and not at all able to cope with that case, as he had exhausted his energies for the governor in the evening in the amphitheatre.

The hospital authorities were morally wrong in looking for free service from that surgeon, and he made a mistake in giving his service to them. He made the mistake of the man who went to the fair to sell his donkey: on his way there he tried to please everybody whom he met, but failed signally in his purpose, and lost his donkey in the bargain. It is certain the surgeon doesn't always please the governor by his hasty exit from the hospital ward and his failure to appear always on schedule time in the staff room. It is also certain he has not pleased his private patient by requiring him to wait hours, often hours of suffering, until he completed his task for the governor, which probably meant three or four capital operations that day. It is conceded the surgeon had a legal right to bestow his professional efforts wherever and whenever he saw fit, but the morality of this right is questioned when it is known that the exercise of it has injured, and is daily injuring, a number of sick outside as well as inside the hospital. He has particularly injured his private patient by depriving him of what he was entitled to get—the best work that the surgeon was capable of performing; and he doubtless did get the best that the surgeon could offer, but nevertheless not of as good quality as that which he bestowed on the governor's patient in the amphitheatre, where the lights were brilliant, the steel was glittering, and spirits was high.

Working for Nothing Often Not Profitable to Either the Giver or Receiver.—Thirty or more years ago, we recollect it well, the city of New York had what was known as a volunteer fire department. The men constituting that department were brave men and true, who were ever ready to risk their lives in the service of the city. For this service the city paid them nothing, only granted a few minor privileges, as freedom from jury and militia duty. It appears the city pleaded poverty, as the hospital does now, and apologized, as the hospital has not, because it was unable to give the men cash equivalent for services rendered. The brave men toiled on, as the hospital surgeons do now, animated by pride, patriotism, and charity; but it came to be known that these men imposed on themselves a task too great for them to bear, namely, working for the city for nothing, and at the same time endeavoring to raise families depending on them for support. The result of this noble effort on the part of these men was, that they were unable to do these two things well—working for the city for nothing, and supporting their families. The fireman was unable to occupy two places at the same time, so he failed to protect the city and his family.

The city was slow to recognize these facts, but finally concluded to pay him a salary, such as it pays to its judges and janitors, with the result now that his family is better protected and so are the interests of the city. Previous to this the city was only half protected from fire, as the hospital is now only half protected from disease and injury by the kind of medical service wrung from the visiting staff by their master and ostensible patron, the governor.

Retrospection with the Illusion Vanished and the Situation Recognized.—The old notion, that surgeons and physicians should work for nothing for rich corporations styling themselves hospitals, and wearing the trademark of charity to beguile the unwary, is about exploded. Able surgeons are now refusing to be cat's-paws for these hospital corporations, to draw their chestnuts out of the fire. This work of chestnut-roasting for the governors has occupied a large part of the time of our ablest medical men for years past, at a great sacrifice to themselves, their families, and their friends. Now they have found out that the honor of being in the governor's service and working in the cause of quondam charity has not recompensed them for their slim bank accounts and broken-down health, when they retire or are turned out of the corporation's employment.

At the parting the governor gave him no money when we saw him retire because of old age, and heard the governor bid him good-by, call him a faithful servant, and point to a reward in another and better world for his fidelity to the hospital corporation in this. Now these words are smooth and flowery, but they have no purchasing power for the retiring physician who needs money, for he is poor; their market value wouldn't buy a package of toothpicks. The governor's smooth talk is all right and good enough in its way, but it does not cut any ice, now that the medical profession have cut their eye-teeth, and recognize exactly where their interests lie as well as the governor does his. Already, a noted surgeon, Dr. Gerster, of this city, has thrown down the gauntlet and bearded the lion in his den, in an able article in a recent issue of the MEDICAL RECORD. He has exposed the methods of the governor, and the miserable mess he has made of hospital service in his efforts to operate a gigantic mercantile plant like the modern hospital on a charity basis. In this article the imposture is apparent and inference plain, that the governor has done a grievous wrong not only to his visiting staff but his patients in the ward as well.

According to this very careful observer three things are to be noted in the hospital service of to-day: that the patients are neglected and often ill-used by being compelled to wait hours for the coming of a member of the surgical staff, while suffering from injuries, when immediate treatment is of the first importance; that young men called house surgeons undertake too often to perform operations that would better be left to the judgment and skill of the visiting surgeon; that in the face of these facts, and while loud and constant protests are daily made by the press and public, the governor is impassive, serene, and happy. No doubt his happiness will vanish when he realizes the situation which confronts him.

The Handwriting on the Wall and the Peril to the Governor.—To-day the hospital staff are all but in mutiny because of their treatment at the hands of the man they confided in, and so implicitly trusted. They recognize that he sold their labor, which was understood would be given free only to the worthy poor and those in immediate need, for a paltry sum in an establishment specially fitted up for that purpose and known as the dollar-a-month annex. In the annex the hospital governor and his customers, who surged around him to purchase medical treatment for a dollar a month, entered into a conspiracy to rob and humiliate the physicians who were working for nothing, in the cause of charity, on those very patients whose money the governor had in his pocket, or which reposed in the cashier's safe. The chicanery and hypocrisy of the hospital governor are apparent to all in this, his new rôle, to make money out of charity.

This governor promised to be the custodian and guardian of their labor, that none but the poor should be the recipients of their charity. He has broken his promise, and is unfaithful in his stewardship and unfair in his methods of distribution of this magnificent bequest. Now come the strain on the cords that bind him to his staff, and the parting of the ways. The retrospection for the surgeon is pregnant with unhappy memories; he is sorry now he consented to work for nothing for the governor, and would gladly leave service to-morrow if he was certain that his place would not be filled by another who was a victim of ambition and the charity fever, like himself. He recollects that he has not lifted his finger or made a call on a private patient where he did not have a reasonable expectation of a reward for his services. He recol-

lects, too, and with poignancy, that he was not willing to turn on his heel without a fee for services to be rendered outside the walls of the corporation plant, to which he dedicated himself, without first making inquiry as to what was in it for him, nor was he willing to consult with a brother practitioner professionally without demanding a fee, often beyond the means of the family to pay. While his brain is on fire with these unhappy reminiscences, he is goaded and stung to recollect further cases in which a family hurried and scurried to meet his exorbitant demand or no operation would be performed, to the consternation of the patient who was suffering and the discomfiture of the family doctor, who stood by, wondering why he, the surgeon, toiled and labored with a tireless industry for a rich corporation for nothing, and drove such a hard bargain here, with a family in distress, and who were willing to give him their all. He was not satisfied with this all; he wanted more and more.

The cup of his bitterness is filled, and the season of discontent is on him as he ruminates on these reminiscences and tries to reconcile the past with his conscience; but how can he, who for years gave professional services away to a corporation which did not need them, while he refused a crumb of professional effort to the suffering man who offered him his all? The story of the good Samaritan now flashes through his mind and overwhelms him in a whirlwind of despair. The agony is over, the resolution is taken and written in ink that will not fade, that from now and forever he will treat his private patient with more candor and concern, be more prompt and lenient in his consultation with brother physicians, and that he will use his best efforts and endeavors to compel the hospital corporation to pay for professional services rendered, as do less pretentious but well-disposed and law-abiding citizens.

The Attitude of the College Professors Not Favorable to the Interests of the General Practitioner.—The indifferent attitude of the colleges to the welfare of the general practitioner is well known, and the cause recognized; but surprise is manifested that no writer has heretofore taken them to task for their listlessness in this matter, for of all men in the world the college professors should be foremost to assist him by wise counsel and, if need be, personal effort. Such course would appear to be a wise one from many points of view, since it is apparent that the success of the general practitioner means more raw material for the college to work into medical timber, and consequently more money on the credit side of the college ledger.

The colleges of to-day, however, aim to depart from the traditions of their founders, and this aim can be accomplished by one of two ways, or, better, a combination of both—to make the college a State institution with salaried professorships, independent of both student and practitioner, and by exalted expectations and haughty and aristocratic demeanor to attract the notice of the millionaire, who is looking around for relaxation and diversion by exploiting himself in a new field. Now, as his hunger for dollars is satisfied, he is possessed with a new ambition—to be the patron of the arts and sciences, and go down on the records as one of the immortals.

The profession has looked on with regret and astonishment to see the leading medical colleges in this country squabble and fight among themselves for the patronage of the millionaire who, really more for notoriety and the amusement it brings him than to benefit society, announces through his friend, the dean of the faculty, a favorite who is apt to be his family physician, that he is prepared to endow a particular college if the terms he imposes are complied with. Of course any programme he sees fit to announce will be acceptable to the college, which will go on all fours and in haste to embrace this millionaire—the caliph and expounder of the gospel of dollars.

Gentlemen of this society, it makes one's heart sink, and beads of cold perspiration stand out on one's brow, to see medical institutions to-day scrambling for the favors and coquetting for the smile of the man of money; to see the gray-haired and patriarchal professor run through the thoroughfare after the equipage of him who has just endowed a college and exacted his conditions, that he may continue him in office and condescend to take him under his patronizing wing, being now dictator in the kingdom of art and letters, though knowing nothing about either, as he has long been master in the domain of finance. Deans suave and courtly, with the aid and co-operation of their colleagues, enter into an alliance with the millionaire, ostensibly for the promotion of higher education, when they could not be unaware that such an alliance is distasteful to the great body of the medical profession, who augur that no good can come from it. It is thought politic and essential that the college should hold itself aloof from the rich man, as the State remains separate from the Church. We have seen and yet see the baleful influence the alliance of Church and State has on millions of human beings in Oriental and so-called Christian countries, and it is reserved for us, and soon, to see the blight the shadow of the millionaire will cast on all things pertaining to the practice of medicine. We see it now in dispensaries so numerous and in full blast and, with open arms, inviting all to come and be healed.

Here in this city of New York, the metropolis of the western hemisphere, are palatial dispensaries, equipped at fabulous cost with every modern medical improvement, in which the millionaire is showing his teeth through the orders he is promulgating through his lieutenants, who are the college professors, and lashing the medical profession with the whip of a universal charity. His aim is to endow, and thus endowed to subordinate, the college; make the trustees and professors instruments of his will; organize a universal charity; be supreme in the world of letters, as he is already in that of finance.

Since the colleges and dispensaries are his creation, every one attached in whatever capacity thereto, be he professor, student, or janitor, must from the logic of facts be his creature and largely subsist on his generosity.

The endowers and founders of modern colleges, all millionaires, while ostensibly interested in a higher education, demand an open door for the distribution of their charity, and will soon demand an open Sunday to facilitate a further distribution.

These conditions have developed so rapidly along lines laid down by the givers of bequests that a moment's thought will convince any one of their truth. The college professors, fired with the enthusiasm of their patrons and imbued with the spirit of this new medical dispensation, have grown cold alike to the student and general practitioner, and have forgotten the mission of their institution, which is to instruct young men in the science and art of medicine, that they may go out into the world to seek fame and fortune with a reasonable hope of success through the knowledge they have acquired in the art of their profession, without being handicapped in every turn of the road with unnecessary dispensaries which have lately become the hobbies of millionaires and philanthropists.

From what has been said it is clear the colleges to-day are shaping the policy and setting the pace for a system of charity that will bring ruin to the firesides of thousands of medical men, not only in this town but throughout every city in the Union.

On Medical Societies, Their Number and Relation to Each Other, and How that Relation Contributes to the Abuse of Medical Charity.—At present, to be a member of a medical society brings no responsibility or care beyond signing the by-laws and the payment of a small sum as yearly dues. To do this, and keep aloof from undue notoriety, will insure him membership and prolong it indefinitely. Of course, his membership brings him no pecuniary reward, but it gives him what is known as a standing in the profession, with all that this implies.

Attendance at the monthly meetings is not necessary, nor indeed at all times desirable. In consequence of this liberal interpretation of the by-laws, the duties of a member are merely nominal. The societies are under the control of and run by a very few of its members; these few devote a great deal of time to that purpose; their chairs are seldom vacant on meeting night; they are known as leading members, with some reason, because they really lead, as nature and environments endow these men with qualities not possessed by the rank and file—temerity, intensity of application, and what is known as force of character; they may be lacking in many things, even in clinical experience, but their other qualities overshadow and dominate all. Occasionally a clique finds itself by intrigue and sharp practices in control of a society, and it is unscrupulous as to the means used to prolong its power.

From time to time these cliques turn up, for the elements of which they are composed are always latent in every society, and only wait for an opportunity to come to the front; these cliques exercise a power for evil in the society, and injure the profession at large, since they use their power to stamp out independent thought and to crush opposition. The men in the front rows are generally the hustlers and pushers, who have something to say in meeting and know how to say it; they are brave of heart and strong of nerve—lions of the house of Judah. In marked contrast to them are the timid men who sit on the back seats. It happens sometimes, though, that the timid man in the rear, who listens while he says nothing, can give cards and spades to the hustlers who run the meeting, and yet outpoint them on varied and valuable clinical experience; but, as a sheep before her shearers, he is dumb and opens not his mouth.

As a rule, the same set of officers control the societies year in and year out, in season and out of season, for long and often indefinite periods, occasionally for their natural lives. In consequence of this state of things the same old faces greet the visitor year by year, and the same old voices ring the changes; the same old officer, once a president, now a censor, and, in time to come, a treasurer. The monotony and regularity of this change are as remarkable as they are constant.

What Occupies the Society's Time during Its Monthly Deliberations.—The reading of the minutes, then perhaps a eulogy on a conspicuous dead brother, whose place it is so difficult to fill, but filled already, though so recently dead. Now comes the presentation of a pathological specimen by a scientific brother, of, he thinks, more than usual interest, or the exhibition of a new instrument of no particular value, but of curious design, by some young and ingenious inventor of the learned assembly; then an arid paper on some subject which has already been worked to death by other and previous explorers, by a brother who is sure he has light to shed and ideas to scatter in the crowd around him who are hungering for intellectual food, and eager for the banquet he has spread; then, again, another brother, charged to the neck with a laudable ambition to go down on the records as an investigator and laborer in the field of scientific thought, reels off something from the dry matter-of-fact web of clinical observation always on tap at these meetings, with an occasional new discovery thrown in to illuminate the personality of him who emerged from the fog of medical speculative philosophy. He came to the meeting, like Moses from the Mount, in awful, solemn grandeur, bearing his new discovery, not on tablets of stone, but sealed in a bottle or enclosed in an iron chest. On opening his precious burden before eager and jealous eyes, consumed by anticipation and the hope of a brother's discomfiture, his discovery evaporates into thin air, blasting his cherished hopes and dampening the pent-up enthusiasm of the gathered assembly.

After these matters are disposed of begins the real work of the session, which consists of papers, queries and answers about the public health—something to preserve that health and improve the hygienic conditions, to strengthen the heart and tone up the stomach, so that the people can live on to the centennial period. During these discussions excitement often runs high, and though a member should drop dead from exhaustion and heart failure, so interested is the august assembly in its work that it will not deign to take cognizance of the unfortunate event; its interest in the hygiene and longevity of the dear public is touching. We have the key here to why patients are so eager to pay their bills, and so punctual in meeting obligations, and why they never speak disparagingly of their physician when he was unsuccessful in his effort to accomplish an impossible task.

The Influence of the Medical Societies on the Practice of Medicine.—The medical societies exert only a meagre influence on medical practice. Contrary to what is generally thought, they neither shape the course nor control the policy of the medical fraternity either inside or outside the city. The general practitioner, even if he is a member of a society, can in a majority of cases snap his fingers at his society, and tell it to do its worst, as his offence is down in the by-laws as no offence at all, and that it must prove him guilty—a thing that it seldom tries to do—and if it does, almost always fails. It takes votes to reach a verdict, generally a two-thirds one at that, and on examination the offender is found to have sympathizers and friends in unexpected quarters. Then the authority of the societies is the smallest indeed, and it has the most nominal kind of suzerainty over the action of the physician. Again, the by-laws are so clumsy and intricate, in which loopholes are always found, that it is almost impossible to convict a delinquent of an offence. For this reason the societies are full of rebels and malcontents, who throw their influence from sheer cussedness on the side of an often flagrant offender.

One of the causes that render a society so negative in influence is, that there are too many of them, as instance about twenty-five or thirty medical societies in Greater New York, when one or two would answer all requirements, with, if necessary for accommodation, twenty-nine branches. Then influence would radiate from the centre to the circumference, whereas now it is reflected from several little centres to where the wind listeth. It might accidentally touch the desired point—chance is the only factor in the scale.

These twenty-five or thirty medical societies, all of which unfortunately are more or less jealous of and covertly hostile to each other, have not a common purpose; if they have anything in common, it is their antagonism to each other. They exist ostensibly to promote medical scientific investigation, watch over the public health, and benefit themselves as little as possible. The savage who mutilates his body to propitiate the gods, and the Hindoo who plunges into the Ganges for the same purpose, are as rational and logi-

cal in their deductions from the data at their hands as are our medical societies of to-day. It can be seen at a glance why so little can be accomplished by this multitude of little societies, the elements of which repel each other.

The Variety and Extent of So-Called Respectable Medical Advertising.—This subject we approach with some little hesitation, but our story would be incomplete if it was omitted. We refer to the system just come into vogue by young physicians emerging from hospital service, of sounding their own trumpets and advertising themselves as graduates of this or that hospital, alumni of class of such and such a year. This they have the bashfulness to print, with office hours, conspicuously in a medical directory of names and addresses, which circulates widely among the profession; the young physician gazettes himself in this book, and says modestly, that after he graduated he entered service in a hospital for further instruction in the practice of his profession.

Now, what object had this physician in proclaiming himself grandiloquently, about his hospital course? Most undoubtedly to convey the impression that he was better qualified to engage in the practice of his profession than some other medical brother, presumably one who had not the benefit of such a course as his. As a matter of fact, he may be more skilful and better equipped to wrestle with disease than his room-mate and class-mate at college, who had not the benefit of such a course, but it is bad taste for him to say so, and savors a little of quackery; he would better stop the practice at once. If he has superior attainments he will outstrip his room-mate, who lacked his advantages, long before the home-stretch is reached, and keep the lead to the end.

If this young man, who so proudly gazetted himself as alumnus of a hospital, embraced the opportunities for acquiring knowledge which that institution offered him, he was lucky in his first and infantile step toward standing alone on the threshold of perhaps a successful career. While taking a pride in his success, he should remember that there are vast fields for clinical observation outside the walls of the hospital, and these fields may have furnished material for his room-mate as they did for him. His teachers and professors whom he idolizes, for want of a wider field for his mental vision and other pabulum than the nursing-bottle of his alumni, acquired most of the clinical knowledge they possess through subjects furnished from tenement districts—a land teeming with every form of human infirmity, and ever ready to furnish choice specimens of the various stages of development of any given disease.

Now what is to hinder the alumnus of the crowded tenement district, who sees four times the number of sick every day of his life that is seen by the young man confined to his hospital ward, if he makes proper use of the material at his hand, from being as apt in diagnosis and as competent to anticipate a case of scarlatina, diphtheria, or variola from prodromic symptoms as the alumnus of Mount Carmel, Mount Kisco, or some other hospital? We know of nothing. If a young man is naturally dull and slow of comprehension, and possibly he may be both, and after all pass a successful examination for admission to a hospital, as a retentive memory and a season of cramming are the prime essentials in this examination race, he will exhibit these characteristics inside as well as outside of his medical protectory.

After one looks at this subject without prejudice and with an honest desire to ascertain the facts in the case by sifting the mass of rubbish that generally hampers every form of investigation, since human nature is prone to follow the direction of old landmarks and flow through old channels, and to see only what it wishes to verify, he is forced to the conclusion that doctors are not made in medical schools or graduated from hospitals, but to the manner born. No matter what care and grooming are given to a truck horse he will not develop into a fast trotter; that characteristic exists in the matrix or cell. The protoplasm must contain or propel the energy which may be hereditary or transmitted at the period of copulation.

About the Craze of the Medical Profession to Affix Titles to their Names.—This must be a subject of deep concern to all who have the interest of the medical profession at heart. The craze of the doctor of to-day to have himself dubbed as a professor or lecturer somewhere or other—any place is better than none, if it were only to go in and lecture to dry bones in a graveyard or to trees in a forest—the name of lecturer, only the name. It will give him an opportunity to write about something he does not understand, and have people read it, by prefixing professor or lecturer. If it could be professor of practice or professor of surgery, so much the better; but, as was said before, professor of anything is better than nothing. We really must make him professor of something or other, somewhere, anywhere, to a Barren, a Blackwell, or some other island, otherwise he will pine away and die.

Once upon a time, travelling in Kentucky or the Carolinas, about every second man one met on the highway was a colonel or a brigadier-general. To-day in the City of New York, and doubtless other cities of the Republic, every other doctor one meets in the streets or the sick-room is a professor or lecturer in some hospital, infirmary, or dispensary. It may be further observed in looking around and visiting the haunts of the doctor, that the younger the physician the more likely is he to be a professor. Take up a journal, a provincial one preferred, in which it can be seen that most of the articles are decorated at the top with professorships, honorary degrees, etc. This rider the writer displays at the head of his article probably because it has no other merit to recommend itself to the reader, or he may wish by it to draw away the reader's attention from the neighboring article by some medical man who makes no pretension to be anything more than a plain doctor—a recorder of facts and experiences as they present themselves to him.

It is foreign to the writer's intention to do anybody a wrong, or to strike at honorable and manly efforts on the part of every member of the profession to which he belongs. It should be their ambition, as it is their privilege and their right, to lead in their chosen calling and run in the race for honors in the greatest of all professions, and no man has a right to ask them to desist from such honorable purpose; but he does object, and very decidedly too, to hippodroming and the back-door entrance, and other underhanded and crooked work in the race for place in the grand medical handicap to which we are all subscribers, and so few of us beneficiaries.

The Policy that Should be Pursued by the City Authorities Through their Commissioners of Charities and Correction.—It is doubtful if there is any department of the city government more important than the commissioners of charities and correction, but it is, and always has been, for some reason, accounted of minor importance by the city authorities, and is handed over by the victorious political party to some man who knows little or nothing of the duties of the office he is called on to administer. In consequence of this mistakes are very likely to occur, and do occur, in his official administration of the office; no matter how honest and well-intentioned he may be, it will not affect the situation, as he has to look for guidance to others who may be interested parties. With this state of affairs the situation is not improved.

The problem of charity can be simplified, however, and brought within very narrow limits. Only the needy should be recognized as objects of medical charity. The simple fact that they are in need can be considered, and their immediate wants supplied, while the most rigid examination is being made as to the person's fitness and right to make a claim on the appropriations that the city, in the fulness of its heart, has dedicated to charity.

No private institution or hospital should be allowed one dollar from this appropriation for charity. Private hospitals and private charity schools have no right to ask for money from such appropriation. It appears they do so on the plea that they help the city authorities solve the problem of charity. If they wish to maintain hospitals and schools of medical charity, let them do so on their own resources and individual efforts.

It appears also that these so-called semicharitable concerns have to comply with certain conditions and restrictions before becoming eligible as beneficiaries of the city funds. The city should never have entered into an alliance or compact of any kind with any institution over which it did not have exclusive jurisdiction. The spectacle of hospitals and petty so-called charitable concerns, running around, lobbying and intriguing for funds, and angling for appropriations, each for its own special institution, is not pleasant or inspiring. The arguments so sententiously and ingeniously made, that they are taking a load from the city's shoulders by their special efforts to maintain these hybrid institutions, have been proved time and again to be illogical and illusive.

These institutions, existing under the plea of charity, are often run for personal motives, or to satisfy the spite or ambition of some self-constituted faculty of medicine, or the morbid and unhealthy amblings of the board of guardians of some school or dispensary, the existence of which was not a public blessing, and the extinction of which would not be a public calamity. An instance was seen only recently when an institution of the type just mentioned made frantic efforts to satisfy some condition imposed in order to qualify and be deemed worthy of a city appropriation.

A thousand examples of the squabbles and intrigues of people masquerading in the garb of charity, but eager to feed at the public crib, could be cited here if time and place permitted. The importunities and impositions of these hypocrites should cease, and would, if the city withdrew its aid altogether. It should never be lost sight of by the authorities that they are the servants of the people—honored public servants. The assumption of their fitness and honesty was conceded in their election.

It is the duty of these servants to consider well the interests of the people who place them in power; to throw away the money of taxpayers by supporting institutions that have demonstrated their inability and unfitness to be vehicles and conduits in the distribution of public charity is not a good way to recompense the people for the honor they conferred in calling them to high station.

More circumspection and keen inquiry must be made in the future by the board of public charity to determine the fitness of those applying for alms, and this inquiry must not be made behind closed doors, but in the clear light of open day and under the gaze of an enlightened public opinion. Men or women applying to any public institution for charity in the way of food or medical treatment should not be ashamed to let the fact of their necessity be known to the general public. Any secrecy in this matter is prudish and can benefit nobody, but, on the contrary, can injure not a few.

The policy to distinguish the worthy from the unworthy and sift the wheat from the chaff should receive the sanction and approbation of all. The worthy seekers of any form of charity, especially medical charity, should not be ashamed to insert their names in a book of record, kept at the desk of the dispensary or hospital whose aid is solicited. If they are not able to read or write their names in this book their mark should be acceptable, while all the information possible should be carefully gleaned and chronicled as to their previous positions, habits, and character. This list of paupers should be published every week officially in some daily paper selected for that purpose. The city hospitals should be compelled by law to pursue this course; by so doing they would protect the worthy poor and the long-suffering taxpayer also. No fair-minded person will complain of a system like this: certainly there will be some croaking by cranks and interested parties about hurting people's pride and publishing one's business affairs to the world, but of this it may be said that pride and poverty make poor roommates; and it may further be said with candor that a person applying for charity has no business affairs.

This simple mode of procedure will drive off the unworthy, for only they will be affected by its application; then professional mendicants and persons with bank accounts who apply for medical charity will find their efforts frustrated, and will be compelled to live by honest methods and pursue practices more in consonance with justice and humanity. Those mendicants will be prevented from taking advantage of charitable institutions by soliciting alms and selling the same forthwith, and placing the net proceeds on the credit account of their bank books. It will also relieve the congested condition of the diamond dispensaries and give the overworked, for no pay, doctors employed there a chance to recuperate from the chronic dyspepsia which these unfortunates have contracted by eating a hasty bite, under the delusion that they are in the service of charity, while in reality in many instances they are only the creatures of a mendacious constituency and the bondsmen of a set of men constituting a corporation who operate in the name of charity; but whether their motives are selfish or otherwise is altogether immaterial just now, as it is certain they are sapping the industry of the nation and paralyzing the business interests of the community at large.

By pursuing the course pointed out, the bank president will be compelled to bid good-by to the diamond dispensary and go back for treatment to his family physician; and the wily, but often well-to-do denizens of the tenements may pay up arrears to the physicians in their neighborhood when confronted by publicity, and their signature in the book of record kept at every dispensary and clinic will be published weekly for the information and inspection of the people and taxpayers.

Summary of Medical Abuses and the Means to be Employed to Abate or Remove Them.—From what we have learned of the methods of the hospital governor we know he will not budge one inch from the position of covert hostility and underhanded dealings that have made him stand the governor day by day, providing himself with means to handicap and impoverish the physician, and what makes it worse still, he has the temerity and hardihood to use his visiting staff as this means; in fact, he has made it a bludgeon to beat the physician into abject submission and unconditional surrender. The staff itself would rebel at the use to which it is being put, did it not desire to avoid an issue which it was certain would be disastrous to itself in its present condition of unpreparedness.

We see the governor hallooing to the rich invalid through the medium of his spacious apartments so elaborately prepared, as we see him also bidding for the dollar of the workingman through the agency of his dollar-a-month annex in close contact and touch,

but more sumptuous than his dispensary, which he artfully employs as a feeder to this now notorious annex.

This move of the hospital authorities to make money out of charity was a blow that should have been resented, and would, were the visiting staff sure of the support of the profession as a whole; but there was no guarantee of such support, on account of the hostile attitude of a portion of them—an inconsiderable portion, it is true, but enough to make an issue, thereby precluding the possibility of success.

If the hospitals can be compelled to pay their visiting staffs salaries commensurate with the valuable services rendered, the rich private patient upstairs and the dollar-a-month establishment downstairs will speedily become subjects of the past. With a state of affairs like this the hospital would not be loser, as those who now refuse to contribute even a quarter would open wide their pockets, since the injustice and want of good faith to its staff, a thing which not an inconsiderable number of the people resented, would be removed.

The College Authorities' Neglect or Faithlessness.—The colleges were found to be apathetic and indifferent about their distribution of charity; true, it is desirable they should have material for clinical observation, as the student has his cadaver for anatomical purposes, but they should invite and choose the needy and deserving, of which there are not a few, in preference to the wealthy and well-to-do, who now seem to be in the majority at college clinics. The preference for so-called respectable people at their clinics is of itself sufficient to encourage the very form of abuse of which complaint is made. These various hospital clinics are established ostensibly for the benefit of the outdoor sick poor, but a peculiar feature of the case is, that no poor are to be seen there; they are ashamed to come, so marked are they in contrast to those who are in the habit of patronizing the consultation rooms of these college clinics.

It appears from facts gleaned in reliable quarters that the poor are not wanted there, as their presence might drive away the rich, to whom the professors and chiefs of clinics have become so attached. The rouge and fragrant perfume of well-dressed ladies, and the debonair and patronizing air of the gentlemen who throng the halls of their clinic, are more acceptable to the eye and agreeable to the olfactories of the professors and their contingency of assistants than the rags of the poor woman and the malodor of the perspiring sick laborer out of work.

It is difficult to reach the doors of the clinic of one of these colleges. Sometimes among the jam of equipages ranged around the building one can see colored liveries, caparisoned steeds with armorial crests caper and prance, while their occupants are inside consulting about their ailments; and it is most remarkable with what courtesy and polite bows these patients are welcomed by the professors and their aids.

It was noticed, when one or two poor people summoned courage to edge their way through the well-dressed throng, that they were received with frigidity by the professor, a cold formality by the chief of clinic, and with indifference, mingled with disdain, by the assistants standing around; so marked was this, that the poor people felt their position keenly, and determined never to go back.

This noted or notorious dispensary clinic was well nicknamed the diamond dispensary. Now where do the poor, who are not welcome at this diamond dispensary, go to for treatment? They are crowded back on the tenement districts and department of city charity; there is an overflow, where will it go? To the medical sharks and guerillas of Dean Goodenough's College, thirty-five per cent. of the graduates of which went wrong, because he, the dean, and his college associates were remiss in their teachings. The thirty-five per cent. of the dean's class which went astray are prepared to accommodate the poor, who were turned out of the diamond dispensary clinic because they were not well dressed, did not wear diamonds, nor smell of fragrant perfumes.

These medical vagabonds, Ishmaelites of our cloth, are, as was remarked, graduates of Dean Goodenough's college, and it is not creditable to him that their hands are raised against every honest practice and their faces set in the direction of rapid and unscrupulous advancement, that they have axes to grind and pennies to collect, and do both with the aid and enthusiastic indorsement of the good pastor who in a number of cases lends the mountebank his study for an office and his Sunday-school room for an out-patient clinic, through the delusion that he is aiding a charitable project.

The Want of Cohesion in Medical Societies Prolific of Evil; Singleness of Purpose and Unity of Action the Hope of the Future.—We see the physicians of Greater New York cut up into numerous little societies, ranged in irregular lines and pulling against each other, one watching the other and casting furtive glances of disapproval over his shoulder at the apparent advantage of his neighbor. These little societies throw away great opportunities while wrangling between themselves about, after all, questions of really little moment, thus affording an easy prey to interested parties outside, who slip in and carry off all the honors and emoluments. Among those who benefit by these dissensions might be mentioned conspicuously the hospital governor and the medical gorillas of Dean Goodenough's celebrated medical college.

The money a practitioner invests in five or six of these medical societies to which he often belongs is practically thrown away. The sum is small, to be sure, and would not buy a railroad ticket to Chicago and back, but, nevertheless how small, it is money lost, for really it brings him nothing in return. If he runs foul of the law and gets into trouble, which sometimes happens to the best-intentioned and most circumspect physician, the societies to which he pays his money will coldly turn their backs on him, prejudge and condemn him before trial. The member of his society who shook his hand so heartily only yesterday, to-day chuckles and laughs slyly at the prospect of a spicy trial, and takes pleasure in bandying around gossipy bits of news that have no foundation in fact, but which seriously affect the reputation of his fellow-member and physician, whose hand he shook so warmly yesterday. This physician, who is a member of six societies, is now forsaken by all; no meeting is hastily summoned to help a brother in distress; there is no word of kindness to lighten the gloom that has covered this man's character like a shroud—no, nothing of that kind. He is left to himself to sink or swim, and often would sink were it not for the helping hand of the Samaritan, who haply by chance passed by.

At their meetings we see the medical societies deeply interested in topics of a clinical nature, and talking by the hour on subjects that have small practical value. Since its members cannot always live on manna and wild honey, the question of other support is sometimes brought before their meetings, but it is quickly suppressed by the gavel and ruled out of order and side-tracked as irrelevant to the object of the meeting.

Other learned professions, among which may be mentioned law and art, have features in marked contrast to ours; their natural leanings are to a common centre and a blending of interests. They have solidarity of interests and homogeneity of purpose foreign to us. They are not ashamed to let the world

know that they have stomachs, and that they can work better when the needs of these stomachs are supplied; they don't blush, as do the members of our picayune societies, when some hungry brother brings up in meeting the bread-and-butter question. This unfortunate brother is voted out of order because he had the hardihood to turn that august and scientific assemblage into a vulgar question of appetite, by men some of whom had not the price of a bed and breakfast, but who yet were true and a willing sacrifice to the pangs of hunger, while advocating an obsolete and now ridiculous feature of old-fashioned medical etiquette.

Those other learned bodies, while entertaining others, have one thought firmly fixed in their minds, and that is, how to devise ways and means to maintain themselves while introducing and unfolding the high possibilities of their art or profession. Our medical societies have no such thought; each of them has ideas positive, and is unwilling to relinquish them for the benefit of the whole. No rule of equity, business, or etiquette is applicable to all, no guiding hand to point the way to common interests; each member and society is so weakly assertive as to preclude such possibility.

A significant fact that may be mentioned here is, that the Bar Association of this city, a society of lawyers, wielding immense power and wide influence, is the mouthpiece of the legal fraternity within a wide area. When that oracle speaks it speaks with authority, and is listened to with respect and deference by all. The voice of this association shapes the laws in our legislative halls and admonishes the judges in high place to administer them with intelligence and fairness. What is the secret of its power? Simply this, that it represents the intelligence of the United Legal Brotherhood of the city. It is a piece of perfect mechanism, composed of an infinity of parts. These parts comprise the individual memberships which fit into each other with such mathematical nicety that the result is a perfect whole.

Under the guidance and influence of this association, sanctioned by its legislative and executive governmental departments, the city provides legal counsel for the poor man when his life or liberty is at stake; but the Bar Association sees to it that law schools have no charity clinics where is given away legal advice to whomsoever comes along with a pretence that he is poor, since, before any notice is taken of such application, it must be accompanied by proof of the most positive kind that the subject seeking aid is just what he claims to be.

If the lawyers were divided up into cliques and small societies without common aim and with no purpose, they would be just in the same pitiable plight to-day as the medical profession is, but this humiliation has been spared them because they have but one pilot. He gives the sailing-master his steering orders, treacherous shoals are avoided, and the port is reached in safety. Sad for our profession it is that we have on board of our majestic ship about thirty pilots who are all eager to take the helm, and in the scramble to get it the ship drifts with the current and wide of her course. This scramble of the pilots has continued so long that the ship is now on dangerous shoals, and it can be saved only if the pilots are thrown overboard and a navigator be found among the crew—a thing possible and probable, as they are intelligent and now recognize the danger ahead.

The twenty-five or thirty societies of Greater New York with their captains and pilots must box their compasses and range themselves in single file under the lead of one man, that man at the head of a united profession; such a society would wield the same influence in medicine that the Bar Association does in law. This one medical society would be a terror to evil-doers and a power for good in the medical world. It would enlist under its banners all the recruits who were worthy to bear arms, leaving only pretenders and impudent quacks, who alone would be available for the governor if he further persisted in demanding free service from physicians and surgeons at his hospital and dispensary clinics.

Away, then, with the little societies, most of which were born into the world to be spinning-tops and playthings for medical chums to amuse themselves with. The hope of the future in medicine is the gathering together, in one representative body, of the respective elements of which it is composed. Then common interests will be protected, injustice punished, and faithfulness and true worth receive a fit reward.

51 Charlton Street.

THE USE OF QUININE IN MALARIA.

By P. L. BELLENGER, M.D.,

Waterproof, La.

I have spent my life in a malaria country, both as a student of medicine and as a practitioner, and feel in a measure able to give a few facts regarding to quinine and its uses in malarial troubles. Malaria, as we all know, belongs almost exclusively to the low southern lands, and dampness and decaying vegetation are both factors in its development, and in this particular district we have both in large quantities, for the river (Mississippi) often overflows its banks and levees and spreads itself over miles of country (mostly swamps), and thus remains sometimes for months, thus giving us the best possible chance for contracting malarial trouble in all of its stages and forms. Each year I am called upon to treat malarial trouble in all of its manifestations, and in the treatment of these cases nothing answers but quinine, and then often not until after large and repeated doses of calomel have been given. Calomel is looked upon as an abortive remedy, and I attribute my good health to its timely use, for the majority of malarial troubles are preluded by a feeling of languor, with headache, vertigo, fetid breath, coated tongue, and constipation, which if treated at once with calomel are relieved, but if allowed to go on unmolested a spell of malarial trouble is sure to follow. Malarial troubles here are so prevalent and the mortality is so small that they have been deprived of the attention and study due them by the profession; but there is one type of malarial trouble which possesses all the gravity and danger one would care to contend with, viz., hæmaturia or "swamp fever." There are two striking features about swamp fever: it has a predilection for locality and an aversion to the negro race, the latter being in a measure immune.

Now, that quinine is a causative factor in the production of malarial hæmaturia or swamp fever, I must deny, for in a series of years, after treating hundreds of cases of malarial troubles, I have yet to find a case, well defined, in which quinine was the cause. That quinine will in some cases produce a flow of blood, I admit, but this I attribute to the idiosyncrasy of the patient rather than to the direct action of the drug in question. I have two cases in point, which I shall cite as follows:

The first patient, a white girl, aged thirteen, suffered for three years from chills and fever (as commonly called). At the time I first saw her, menstruation had just begun, it having been probably somewhat retarded by her ill health, as her sister menstruated at an earlier age. Quinine in this case was given, but every time it produced a flow of blood from the womb, giving rise to such depression and debility that it was discontinued, and a vegetable compound was substituted with good results. This patient is now twenty-four

years old (married), and takes quinine without any trouble, and with good results. I have given her five-grain doses every three hours for eight doses, with no bad effects whatever.

The second case would probably be called one of quinine poisoning, or bloody urine, without the following facts: J. L——, a white man, aged twenty-four, recently moved from Lake St. Joseph only a few miles distant (and swamp fever is always prevalent there), and was taken with "chills and fever." He began on quinine, taking five-grain doses every two hours during the day for one week, after which he began to pass bloody urine. I was summoned. His residence was then at a sawmill some six miles from town, in a low, flat country. His drinking-water was obtained from a muddy bayou, and he was subjected to all manner of exposure and hardship. I found him in a large, open room, cold and alone, suffering from almost complete suppression of urine. After an illness of eight days he died.

The mill-crew was composed of a colony of men, all white, some fifteen or twenty in number, all except one exposed to the same influences, namely, that they had lived at the mill for some years. Every one of them had been stricken down with malarial fever in some one of its forms. Each one of them I treated with large and repeated doses of quinine without a single death or the occurrence of bloody urine. One case in particular I would call attention to was that of a Northern man, to whom I gave large doses of quinine for over two weeks without a single complication, and who is now well and at work at the mill.

The conclusions are: First, that quinine acts best in malarial troubles only after calomel has been given. Second, that quinine is not a cause of bloody urine, but aggravates it. Third, that it should be left out of the category of drugs used in the treatment of swamp fever.

It is possibly presumption on my part to take issue with so eminent a man and writer as Prof. H. A. Hare of Philadelphia, but I have yet to see a case of bloody urine in which quinine was indicated, or a case of malaria other than the hemorrhagic variety in which albumin was present in the urine.

Hereditary Œdematous Dystrophy.—In a recent contribution to the *Presse Médicale*, Dr. Meige relates a family history of œdema of the legs. In a girl of seventeen years a firm, progressive œdema had existed in one extremity for three years, giving to the limb an elephantiasic aspect. A sister presented the same condition affecting both legs, which began at the age of thirteen and was still present at the age of twenty-one. The mother, forty years of age, had begun to suffer similarly at about the same age as the daughters, and in a son of thirteen years the œdema has begun to show itself. She relates that her two brothers, her mother, and her grandfather all had the same affection, making eight individuals in the family. Desnos has called attention to a chronic rheumatic pseudo-elephantiasis which he considers hereditary. Milroyc found twenty-two instances scattered through six generations of a family numbering ninety-seven individuals in which the œdema was characterized by (1) being congenital and developing slowly with increase of age; (2) by remaining limited to the lower extremities, at times unilateral, at times double; (3) by being permanent; (4) by being attended with no local or general subjective manifestations. The author concludes that we must admit an hereditary family œdema, which is painless, without fever, chronic and permanent, not affecting the health, and which can persist into old age.

Progress of Medical Science.

On the Absorption of Iron.—Quite in contrast to many of the later writers on the subject of the absorption of iron into the body, who for the most part state that this substance is absorbed in the duodenum alone, P. Hari has demonstrated, in dogs at least, that the cells of the mucous membrane of the stomach, as shown by microscopical findings, contain iron.—*Archiv f. Verdauungskrankheiten*, vol. 4, 1898, part 2.

Indications for the Use of Sand Baths.—Dr. Julian Marcuse, of Mannheim (*Wiener medizinische Blätter*, January 12, 1899), mentions the following uses of sand baths: (1) For the relief of dropsical conditions which are result of diseases of the heart, kidney, or liver; in organic diseases of the heart with or without valvular changes the results are excellent. (2) For the resorption of exudates in cavities or joints. (3) For the treatment of chronic arthritis. (4) For neuralgic affections, particularly sciatica. (5) For acute and chronic muscular rheumatism. (6) For chronic constitutional diseases, such as rachitis and scrofula. In these infantile disturbances the excellent results of this method have long been known.

Two New Symptoms of Chlorosis.—Splenalgia and osteomyelalgia are the names given by M. Golouboff (*La Médecine Moderne*, 1898, No. 39) to two symptoms in chlorosis to which he believes he is the first to call attention. The first consists of sharp pains in the left side directly over the spleen, usually thought to be due to the pressure of corsets. That this symptom is associated with the usual hypertrophy of the spleen would appear evident. The other symptom consists of pains in the ends of the long bones, particularly the tibia, which are brought out by percussion or pressure. The pains are similar in character to those found in the infectious diseases.

On Argyria.—Eugen Kraus, in the *Allg. Wiener med. Zeitung*, 1898, No. 29, reports two cases of argyria, in one of which but little silver nitrate had been used. In the first case there appeared a number of brownish flecks about the size of a half-dollar on the back and sides of the neck. This coloration followed twenty applications of a one-per-cent. solution of silver nitrate to the vocal cords. The second case was more severe and the amount of silver taken greater. This occurred in a man of sixty-three years of age, who for ten years had painted his pharynx twice a day with a one-per-cent. solution of this salt. The head and neck were a dark steel-gray, the lips a grayish violet. The mouth was stained, especially about the gums, which were a pale gray. It is interesting to note that the place of direct application was free from pigmentation.

Syphilophobia.—Syphilophobia is sometimes included among the manifestations of syphilis, but I do not believe that it is directly due to this disease. It is quite as often met with in patients affected only with gleet, prostatorrhœa, or who have nothing in the world the matter with them except their own disordered imaginations. Moreover, in truly syphilitic cases the fear of syphilis often increases in proportion as the specific symptoms disappear. Syphilitic patients will sometimes state that they have resolved to give up their business and devote their time to the cure of their disease. Such a course should always be discouraged, since it favors mental depression, interferes with the general health, and thus retards the effect of remedies, and may lead to confirmed hypochondria or syphilophobia.—Dr. Robert W. Taylor.

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GEORGE F. SHRADY, A.M., M.D. EDITOR.

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THE INVESTIGATING COMMITTEE'S REPORT.

THE report of the war investigating committee on the conduct of the medical department of the army brings to light certain deficiencies in organization which deserve consideration in spite of the transparently apologetic explanations offered for their existence. The suggestions for improvements are, however, eminently sound and deserve thoughtful consideration. The burden of excuse for shortcomings is placed upon the hurry and confusion incident to the formation of a large army of raw recruits for which no adequate provisions could be made owing to the existence of previously restricting regulations. The only thing left to be done under the circumstances was to make the best use of the means at hand. To meet emergencies and overcome obstacles prove the existence and exercise of the highest executive capacity. On the latter point the committee is not only ominously silent, but is inclined impliedly to blame the medical department for the lack of proper inspections and reports, and for the consequent unsanitary condition of the camps.

Complaint is justly made, however, that the nursing during the months of May, June, and July was neither ample nor efficient. It is difficult to explain this on any other grounds than the active opposition which was made by the surgeon-general to any form of organized or volunteer nursing service that was freely offered to him at the commencement of the war. It was confidently asserted that the department could take care of itself without outside help, and offers of aid were firmly and imperatively declined. There was no lack of nurses at any time. In fact there were hundreds of trained women from different organizations that were eager to enlist for the smallest pay and at the shortest notice for readiness to start. It was not until necessity overwhelmed official opposition that the nurses in question were enabled to vindicate their right and fitness to serve the soldier in camp and hospital. So strong, indeed, is the conviction of the value of female nurses that the recommendation is made that a reserve corps of selected ones be held in readiness for war service, subject to call from an official register.

The lack of a suitable hospital corps was certainly a very serious drawback to the efficiency of the medical department in camp and field, and the recommendation that Congress make proper provisions for strengthening this very efficient arm of the medical service is eminently wise and proper.

The recommendation that there should be a larger corps of regular commissioned officers will doubtless remedy one of the greatest evils of administration in the recent war. It was apparent to all that the regular army officer had no chance alongside of the incompetent civilian with a political backing. Old army surgeons were outranked by consequential medical volunteers who were always ready to assume responsible duties and stretch the privileges of a temporary and provisional rank beyond the conception of the most exacting martinet. This system did more harm to the medical department than all other causes combined. By all means give us in future trained army men for army work. Such are the ones who are fitted for the real responsible positions where high executive skill is required, and where a knowledge of the necessities of a given situation is of the most vital importance. What does it avail a regular medical officer of the army if, after a long life of faithful service, he is outranked by a medical civilian, and that, too, at the only time when he has the opportunity of crowning his career by proving his real fitness for the important work in hand?

The medical supply question also receives its share of attention. There are certainly strong arguments in favor of having a large stock of non-perishable materials for ready use in emergencies. The melancholy experiences in our recent campaigns add more than common force to this suggestion of the commission. The same may be said in favor of increased facilities of transportation of medical supplies by empowering the surgeon-general to do his own transportation, and thus to guarantee prompt deliveries. If such a system had been possible during the war, much of the suffering of the soldiers would have been prevented, and many of the charges against the department would have been unnecessary and groundless.

In view of the results of experience brought about by the recent war, we have learned a great deal in a very short time. Let us now profit by it, while we join in the congratulations of the commission that in spite of the many mistakes committed the mortality was exceedingly low, and the sick rate was by no means above an average that might have been reasonably expected with such bad camp management and notoriously bad climatic conditions.

AMATEUR DOCTORS AND QUACK MEDICINES.

THE life of the ordinary medical practitioner nowadays is not exactly "strewn with roses." The difficulties with which he has to contend in order to gain an honest livelihood, or rather in too many instances to procure a bare subsistence, are varied and manifold.

It is not only with Christian scientists and persons of that ilk that he has to fight for his daily bread, but

with amateur doctors and with the proprietors of the numerous and wonderful remedies for every disease under the sun, from toothache to cancer. The fact is unfortunately too notorious to be denied, that ministers, and especially country ministers, have a sneaking kindness for quacks and frequently throw their ægis over quackery, and even practise it themselves, reckless of all consequences.

Among a large portion of the population there seem to exist a distrust of the qualified medical man, and a correspondingly strong belief with some weak-minded persons in the advice of the well-meaning but misguided friend, who upon all occasions of sickness invariably knows from personal experience exactly the particular medicine that will bring about the speedy cure. A writer in the January number of the *Westminster Review* discourses upon the "Fallacies of Amateur Medicine" in the following amusing strain:

"The first doctor was an amateur, and the race is still with us. The irresponsible prescriber confronts us everywhere—in the street, at the club, in the drawing-room, on board ship. Go where we will, we cannot escape him. Indeed, it is one of the penalties of ill health that we have to listen with courtesy to the medical suggestions of our friends, also, alas! sometimes to pretend that the suggestions have been followed." The writer, after remarking that the amateur doctor is drawn from every class, points out that the country clergy and ministers of every denomination are the worst offenders, as shown by their readiness to give testimonials in favor of proprietary medicines. Speaking of quack medicines the case is put in these emphatic terms:

"It may be urged that there can be no objection to the employment of a proprietary medicine which has proved repeatedly efficacious for a given disease. The risk is very great, for the composition of such remedies is secret, and even if one constituent is suitable another may be harmful. The writer is informed by a trade expert that to be remunerative the actual materials for each shilling (25 cents) bottle of patent medicine should not cost more than twopence (four cents). If the same amount be allowed for advertising, the result obtained is that for every £7,000 ($35,000) so spent 1,000,000 bottles (plus some at a higher price) will be sold, and some nostrums have £10,000 ($50,000) a year spent on them. It would be strange indeed if out of the multitude of cases cures never resulted. Coincidence alone would account for a considerable number, and the failures are not advertised. The fact is that these medicines are in almost all cases made from a physician's prescription, which originally was designed for a special phase of a special complaint in a special patient, and which was no doubt accompanied by directions as to diet and mode of life of hardly less importance than the drugs themselves. By a perversion of reasoning, that which proved successful in a case presenting certain peculiarities is henceforth proclaimed from the housetops as infallible in all cases of disease. In practice, however, it will prove successful only in cases which reproduce the characteristics special to the patient for whom it was first prescribed." The article ends thus:

"If a man with no one dependent on him choose deliberately to incur the risk of self-medication for any but the simplest of maladies, he has a perfect right to do so; but if he must prescribe for others, let it be for his enemies and not for his friends." *The Lancet* a few months ago made some remarks, warning the general public of the dangers incurred by the indiscriminate use of secret remedies. If, however, it is considered necessary in England to warn the unwary of the perils appertaining to the promiscuous consumption of patent medicines, how much more so must it be in the United States! Probably there would be little or no exaggeration if the assertion was advanced that in this country as much patent medicine is swallowed in a year as in all the remainder of the world. This is in truth the land *par excellence* of secret remedies and the happy hunting-ground of the owners and venders of concoctions, composed of no one knows what, but warranted with the most unblushing effrontery infallibly to cure every and all the maladies incidental to the human race. It is, we fear, as the voice of one calling in the wilderness to protest against this state of affairs, but at least we have the bare satisfaction of unburdening our mind on the matter. There is little doubt that if the American people would take greater care of their digestions and nerves, and would, when these get out of order, instead of flying for relief to one of the many cure-alls, consult a medical man, and be guided by his advice, dyspepsia and nervous complaints would be much less frequent than is now the case.

A REFORM CALLED FOR IN THE PRESENT METHODS OF COLLECTING MORTALITY STATISTICS.

THE *Michigan Monthly Bulletin of Vital Statistics* has again brought forward the question of the importance of a thorough change in the present methods of collecting the mortality statistics of this country being insisted upon. In the MEDICAL RECORD of a few weeks ago an article in the *Michigan Journal* advocating a uniform system of vital statistics throughout the world was favorably commented on. The *Bulletin* in its December issue touches upon the legislation of the federal census on vital statistics, and points out that both the Senate Bill and House Bill which were referred to committee do not as at present constituted meet the difficulty, and that they are, in fact, practically useless. After remarking that "it is a matter of immediate practical importance to every public-health worker in this country that reliable mortality statistics shall be collected by the approaching federal census, and that they shall be presented at a time and in such a manner that they may be of the greatest possible service to sanitary officials in their daily work of restricting disease," the *Bulletin* asserts that "it is perfectly practicable to collect such statistics, but that it will require a radical change from the thoroughly obsolete and discredited methods which have been employed in all of the United States censuses for this purpose up to the present time, and which there seems some pros-

pect—to the everlasting discredit of American statistics—that the untrustworthy advisers who learn no lessons from repeated failures in the past may fasten upon the census of 1900. Congress is slow, and very properly so, to vary methods that have been previously employed; but when a record of fifty years of failure to accomplish the object of collecting reliable vital statistics under the census is presented, it is surely time to demand a change." If the statement made by the *Bulletin*, that it is perfectly feasible to bring into use in the United States modern methods of registration—and if other nations were able to do so, why should not this country?—then no time should be lost in bringing the necessary pressure to bear upon Congress to attain the long-needed reforms. The matter, as has been repeatedly urged, is not one that concerns the United States alone, but is of paramount interest to the whole civilized world.

News of the Week.

The Army Medical Department. — The following are the conclusions in respect of the medical department contained in the report of the commission appointed by the President to investigate the conduct of the war: "(1) At the outbreak of the war the medical department was, in men and materials, altogether unprepared to meet the necessities of the army called out. (2) As a result of the action through a generation of contracted and contracting methods of administration, it was impossible for the department to operate largely, entirely and without undue regard to cost. (3) In the absence of a special corps of inspectors, and the apparent infrequency of inspections by chief surgeons, and of official reports of the state of things in camps and hospitals, there was not such investigation of the sanitary conditions of the army as is the first duty imposed upon the department by the regulations. (4) The nursing force during the months of May, June, and July was neither ample nor efficient, reasons for which may be found in the lack of a proper volunteer hospital corps, due to the failure of Congress to authorize its establishment, and to the non-recognition in the beginning of the value of women nurses and the extent to which their services could be secured. (5) The demand made upon the resources of the department in the care of sick and wounded was very much greater than had been anticipated, and consequently, in the proportion, these demands were imperfectly met. (6) Powerless as the department was to have supplies transferred from point to point except through the intermediation of the quartermaster's department, it was seriously crippled in its efforts to fulfil the regulation duty of furnishing all medical and hospital supplies. (7) The shortcomings in administration and operation may justly be attributed in large measure to the hurry and confusion incident to the assembling of an army of untrained officers and men ten times larger than before, for which no preparations in advance had been or could be made because of existing rules and regulations. (8) Notwithstanding all the manifest errors of omission rather than of commission, a vast deal of good work was done by medical officers, high and low, regular and volunteer, and there were unusually few deaths among the wounded and the sick." In regard to suggestions concerning the management of the medical department in the future, the commission says that what is needed is: "(1) A larger force of commissioned medical officers. (2) Authority to establish in time of war a proper volunteer hospital corps. (3) A reserve corps of selected, trained women nurses, ready to serve when necessity shall arise, but, under ordinary circumstances owing no duty to the war department, except to report residence at determined intervals. (4) A year's supply, for an army of at least four times the actual strength, of all such medicines, hospital furniture, and stores as are not materially damaged by keeping, to be held constantly on hand in the medical supply depots. (5) The charge of transportation to such extent as will secure prompt shipment and ready delivery of all medical supplies. (6) The simplification of administrative 'paper work,' so that medical officers may be able to more thoroughly discharge their sanitary and strictly medical duties. (7) The securing of such legislation as will authorize all surgeons in medical charge of troops, hospitals, transports, trains, and independent commands to draw from the subsistence department funds for the purchase of such articles of diet as may be necessary to the proper treatment of soldiers too sick to use the army ration. This to take the place of all commutation of rations of the sick now authorized. Convalescent soldiers travelling on furlough should be furnished transportation, sleeping berths or state-rooms, and $1.50 per diem for subsistence in lieu of rations, the soldier not to be held accountable or chargeable for this amount."

Dr. Augustus A. Eshner, of Philadelphia, formerly assistant editor of the *Philadelphia Medical Journal*, severed his connection with that journal on January 31st.

An Increase in the Number of Sanitary Policemen in New York.—The police commissioners have increased the force of the sanitary squad attached to the health department from fifty to ninety-two officers, pursuant to a request of the health board.

The Plague has broken out in southern Formosa. There have been several deaths in the city of Tainan, where it is spreading fast. In Bombay there were sixteen hundred deaths from the disease during the week ending February 9th.

Shorter Hours for Drug Clerks.—There is considerable opposition to the bill now before the New York Assembly providing for shorter hours of labor for drug clerks in New York City. The measure prohibits the employment of a drug clerk for more than ten hours daily except on Saturday, when he may be required to work twelve hours. A number of pharmacists of New York City recently appeared before the committee on

public health in opposition to the bill. They urge that shorter hours for drug clerks mean the employment of more men to do the work done by the present force of clerks, and that this extra expense will have to be made up by a reduction of the salaries of the clerks. It will also do away with the custom of allowing the clerks to have every other Sunday to themselves.

The Prince of Wales has consented to act as president of the British National Association for the Prevention of Consumption.

Influenza in Northern Europe.—In both Stockholm and Christiania influenza is prevailing in severe form. During the week ending February 12th there were reported 3,194 cases with 229 deaths in the former capital, and 2,342 cases with 198 deaths in the latter. In Berlin also the disease has attacked large numbers and has greatly reduced the attendance at the court balls and other official and social functions.

Yellow Fever has attacked the Two Hundred and Second New York Regiment in camp at Guanajay, Pinar del Rio, Cuba. Only five cases have been reported, however, and those were in a mild form, and it is not feared that there will be any spread of the disease at present, although great anxiety is felt concerning the health of the troops stationed in the coast cities during the approaching rainy season.

A Coroner's Jury on a "Christian Scientist."—A coroner's jury at White Plains, N. Y., which has been investigating the death of a man residing near that place, rendered a verdict to Coroner Birch on Saturday last, which is as follows: "Henry Reynolds came to his death from heart failure and a rupture of an hepatic abscess in the abdominal cavity, and we censure John L. Roberts, the Christian Scientist residing at the Omaha flats, at Sixty-fifth Street and Columbus Avenue, New York, for neglect to advise the family of the deceased to call a practising physician." The man died last week from an illness lasting several months. He refused to have a physician attend him, and the "Christian Scientist" made him believe he was not seriously ill, although he was in agony the greater part of his illness.

Lunatics Burned to Death.—Seventeen female patients in the State asylum at Yankton, S. D., were burned to death on Sunday last in a fire which destroyed one of the cottages on the asylum grounds. There were fifty-two persons in the building, forty patients and twelve attendants. The thermometer was 23° F. below zero when the fire started, and the flames were fanned by a strong wind from the prairies. As soon as the alarm was given the attendants made every effort to save the patients. There was no time to dress, and, rushing out into the snow in their nightclothes, the women suffered terribly from the cold. As quickly as possible those who got out of the cottage were hurried into the main building. The fire spread so rapidly that before all the inmates could be got out the attendants had to rush from the building to save themselves. It was then found that seventeen women had been left in the building and had perished. Of the twelve female attendants in the building not one saved any clothing. None, however, was injured. A fire in 1882 destroyed the main building of this asylum, and five lives were lost at that time.

Pennsylvania Hospital.—Dr. Henry W. Cattell has been elected director of the Ayer Clinical Laboratory, which is nearing completion. Dr. Henry M. Fisher has resigned as pathologist.

The Palmar Arch of Cleveland.—The annual banquet and election of officers of the Palmar Arch of Cleveland, Ohio, occurred Wednesday evening, February 1st. Dr. L. E. Siegelstein was elected president, Dr. W. H. Gifford vice-president, Dr. Lester E. Siemon secretary-treasurer. The Palmar Arch is a fraternal organization of licensed practitioners of medicine, and meets semimonthly for the discussion of cases and social enjoyment.

Dr. John S. Sanvalle, of this city, met with a painful accident on Saturday last. A fire occurred in his house in the morning while he was still in bed, and before the firemen arrived the flames had reached his bedroom and were pouring toward the window whither he had fled to obtain air. Just as he was overcome with the smoke and heat and had fallen back into the room, the engines arrived, a ladder was thrown up to the third-story window, and a fireman mounted it and brought out the unconscious physician. He was taken, at his own request, in a New York Hospital ambulance, to the French Benevolent Society Hospital, on West Thirty-fourth Street, where he is a visiting physician. He was badly burned about the head, face, and hands.

Legislation against Diploma Mills in Illinois.—An amendment has been proposed to the Illinois act concerning corporations, in which it is provided that "the secretary of State shall not issue charters to persons, associations, or corporations for the purpose of conferring degrees, diplomas, or other certificate of qualification in the science of medicine, pharmacy, or dentistry unless the application therefor is approved by the State board of health, the State board of pharmacy, or the State board of dental examiners, respectively. And, further, That the secretary of State is hereby empowered, and it shall be his duty, to revoke charters issued to persons, associations, or corporations which authorize such persons, associations, or corporations to confer degrees, diplomas, or other certificate of qualification in the science of medicine, pharmacy, or dentistry, upon the recommendation of the State board of health, the State board of pharmacy, or the State board of dental examiners, respectively; such recommendation to be accompanied by proof that the said persons, associations, or corporations are conducting a fraudulent business, or violating the terms of their charter. And, further, that this act shall apply to schools, colleges, or universities which now are or may hereafter be licensed in this State, notwithstanding any provisions that may exist in their charters." It is confidently expected that this amendment will be passed by the legislature.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 11, 1899. February 3d.—Surgeon C. G. Herndon detached from the *Columbia*, when put out of commission, and ordered home to wait orders. Surgeon N. H. Drake detached from the *Minneapolis*, when put out of commission, and ordered home to wait orders. Surgeon J. C. Byrnes detached from the *Puritan*, when put out of commission, and ordered to continue duty at the Norfolk navy yard. Assistant Surgeon J. Stepp detached from the *Justin*, when put out of commission, and ordered immediately to the *Independence*. February 4th.—Assistant Surgeon E. M. Blackwell detached from the *Franklin* and ordered to the *Abarenda* immediately. Assistant Surgeon D. F. Sughrue detached from the *Abarenda* and ordered home. February 7th. —Passed Assistant Surgeon T. A. Berryhill detached from the *New York* and ordered to the *Panther* by steamer of February 15th. Passed Assistant Surgeon C. E. Riggs detached from the *Topeka* and ordered to the *New York* immediately. Assistant Surgeon F. E. McCullough detached from the naval hospital, Mare Island, Cal., and ordered to the *Nero* immediately. Assistant Surgeon J. Stepp detached from the *Independence* and ordered to the naval hospital, Mare Island, Cal., temporarily. February 8th.—Surgeon A. R. Wentworth, relative rank of lieutenant, from October 9, 1898. Assistant Surgeon D. F. Sughrue, order of February 4th, detaching from the *Abarenda* and ordering home, modified; ordered to temporary duty on the *Topeka*, and when that vessel arrives at Boston, detached and ordered home. February 9th.— Surgeon C. G. Herndon ordered to temporary duty on the *Richmond*. Assistant Surgeon F. M. Bogan detached from the *Sterling*, when put out of commission, and ordered to temporary duty on the *Wabash*. The following order was issued from the headquarters of the army, February 4th: Surgeon John W. Ross, U.S.N., retired, having been assigned to duty under the War Department, will proceed from Clarksville, Tenn., to Havana, and report in person to the commanding general, division of Cuba, for assignment to duty.

"The Annals of Ophthalmology."—Dr. H. V. Würdemann, of Milwaukee, who has been associate editor of the *Annals of Ophthalmology*, in charge of the department of German literature, has accepted the position of editor-in-chief vice Dr. Casey A. Wood, of Chicago, resigned. Dr. Wood will retain an interest in the *Annals of Ophthalmology*, and will remain in charge of the department of Italian literature.

Memorial Home for Nurses.—Mr. J. Renwick Hogg, a trustee of the Presbyterian Hospital of Philadelphia, will build and donate to the hospital a home for nurses in memory of his father, Mr. James Hogg, a trustee from the foundation of the hospital to the time of his death. The building will be fifty-two by one hundred and twenty-three feet in size, three stories high, of brown stone and brick, with a basement, and beside reception-rooms, library, parlors, dining-rooms, and kitchen, will contain twenty-five single and two double rooms, with accommodations for a total of seventy-six nurses. Of the single rooms none will be less than nine by thirteen feet in size, and ample bath, lavatory, and toilet accommodations will be provided. An elevator will run from the basement to the third floor, and the building will be finished in natural wood.

Dr. John V. Shoemaker has been appointed by Governor Stone surgeon-general of the National Guard of the State of Pennsylvania.

"The Southern Medical Journal" is the title of a new medical monthly published at La Grange, N. C., with Dr. J. W. P. Smithwick as editor.

Cigarette Papers Harmless.—A German chemist has made a careful analysis of many samples of cigarette papers, and says that dangerous substances, like copper, arsenic, and oxide of lead, are present in cigarette paper in such infinitesimal quantities that the average smoker would in twenty-five years inhale only one gram of them.

When Doctors had to Disagree.—A Denver clergyman died a few days ago after a long illness following an attack of grippe. The papers say that he had had simultaneously or in rapid succession physicians of two schools, hypnotic healers, and Christian scientists, and nobody knew exactly who was treating the man. He died, at all events, and of course no one is willing to assume the responsibility of having been the last to have a go at him.

Medical Candidates for Political Honors.—Dr. Samuel Weiss and Dr. D. P. Gerberich, both of Lebanon, Pa., are contending candidates for the State senate. Dr. Granville Prizer, of Lionville, Pa., is a candidate for register of wills. Dr. H. B. Warren, of West Chester, Pa., is a candidate for economic zoologist. Dr. Jefferis, of Chester, Pa., is a candidate for mayor. Dr. James Patterson, of Bristol Township, Pa., has been appointed deputy internal revenue collector.

An Anti-Vaccination Congress.—The president of the English Anti-Vaccination League has given notice that an international anti-vaccination congress will be held in Berlin in June. In the mean time the German league has petitioned the Reichstag for the abolition of compulsory vaccination in Germany, but fortunately has not the slightest chance of succeeding. One of the apostles of the movement has just completed a two-months' tour of the United States for the purpose of conferring with the leaders of the lunacy in America. It is intended to send some American delegates to the Berlin conference.

The Centenary of the Russian Medical Military Academy.—On Thursday, December 29th, at St. Petersburg, the celebration of the centenary of the Russian Medical Military Academy was opened by a religious service. The prize distribution to the successful students of the year then took place in the presence of the Grand Duke Constantine (the honorary president of the academy) and of the minister of war and other distinguished men, including the

bishop of Finland and other ecclesiastics. Early on Friday morning a grand requiem service was held in memory of past Russian emperors, patrons of the academy. The great function of the celebration took place afterward in the largest hall in St. Petersburg before a most distinguished company, presided over by the minister of war, the numerous decorations worn upon the brilliant uniforms of the officers and the bright coloring of the academic costumes of various nationalities giving much grandeur to the scene. Representatives from universities and scientific bodies were presented on the raised platform and offered congratulations from their respective societies.—*The Lancet.*

The Prince of Wales Hospital Fund.—The sum of £32,500 was distributed this year by the committee of the Prince of Wales Hospital fund to fifty-nine hospitals and convalescent homes in London. The benefactions were restricted to institutions lying within seven miles of Charing-cross.

Another of Koch's Discoveries.—Professor Koch having completed his studies on malaria has made a report on his latest investigation in Rome, and continues the announcement of his discoveries of facts known to everybody as long ago as the tuberculin era. One of his rediscovered facts, which has been cabled from Berlin, is that the city of Rome is free from malaria, although the disease prevails in the surrounding Campagna.

An International Congress on Tuberculosis and the methods for combating it will be held in Berlin from May 23 to 27, 1899. The imperial chancellor, Prince Hohenlohe, will preside, and will be supported by a committee, headed by the Duke of Ratibon and Professor von Leyden. Five subjects for general discussion have been agreed on: (1) propagation; (2) etiology; (3) prophylaxis; (4) therapeutics; (5) sanatoria. Membership of the congress is not limited to medical men, but any person interested in the crusade against tuberculosis can become a member simply by taking a ticket at the office of the central committee for lung sanatoria.

Alcohol in the Army.—The British authorities some time ago made a test of the alleged value of alcohol when men are subjected to unusual and exhausting labor. Experiments were made at different times and under varying conditions with three regiments from each of several brigades. In one every man was forbidden to drink any alcohol whatever while the test lasted; in the second, malt liquor only was taken; in the third a ration of whiskey was given to each man. The whiskey-drinkers manifested more dash at first, but generally in about four days showed signs of weakness and fatigue; those given malt liquor displayed less dash at first, but their endurance lasted somewhat longer; while the abstainers improved daily in alertness and staying powers. In the German army experiments are being made with sugar, which is claimed to have such great sustaining powers that it is proposed to serve it as an extra ration when unusual fatigues are to be borne.

New York State Medical Association.—The fifteenth annual meeting of the fifth district branch of the New York State Medical Association will be held in Brooklyn on Tuesday, May 23, 1899. The president of the branch is Dr. J. D. Bryant, of Manhattan, and the secretary is Dr. E. H. Squibb, P. O. Box 760, Brooklyn.

Energetic First Aid.—At the annual collective examination held in Natal, in a paper on health and temperance the question occurred, "Write out some simple directions to be followed in cases of convulsions in infants." One answer ran thus: "Put the infant quickly into a bath of boiling water up to the neck. Put ice on its head. Then give him a mild epidemic, followed by a teaspoonful of castor oil."—*The Lancet.*

Photographing the Interior of the Stomach.—Dr. Johannes Horowitz, writing to the New York *Times* from Vienna, says that Drs. Lange and Melzing have succeeded in taking photographs of the mucous membrane of the stomach in the living subject. A stomach tube, sixty-six centimetres long, with a diameter of eleven millimetres, is introduced, having at the lower end an electric lamp and at the upper end a camera. The stomach is first emptied and washed and then distended with air. Then fifty pictures can be taken in rapid succession in from ten to fifteen minutes. By turning the apparatus on its own axis all parts of the mucous membrane can be pictured. The photographs are about the size of a cherry-stone, but of course they can be enlarged to any extent.

The Samuel D. Gross Prize.—The second quinquennial prize of $1,000 under the will of the late Samuel D. Gross, M.D., will be awarded January 1, 1900. The conditions annexed by the testator are that the prize shall be awarded every five years to the writer of the best original essay, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations. The candidates for the prize must be American citizens. The successful competitor must publish his essay in book form, and deposit one copy of the work in the Samuel D. Gross library of the Philadelphia Academy of Surgery. Each essay must be written by a single author, in the English language, and should be sent to Dr. J. Ewing Mears, 1429 Walnut Street, Philadelphia, before January 1, 1900. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed within one year.

Medical Journalism in the Northwest.—Three months ago there was but one medical journal in the State of Minnesota, and, in fact, but one throughout the whole Northwest, between Milwaukee and Portland, Ore. That one journal occupied a territory which could be cut up into several good-sized empires, and which boasted a population very considerable in numbers, although somewhat scattered in its distribu-

tion. Within a few weeks, preceding the epidemic of la grippe, there has broken out an epidemic of medical journals in Minnesota, and to-day there are four published within the limits of the State.—*The Northwestern Lancet.*

The Syracuse Milk Supply.—The board of health of Syracuse has determined that hereafter all the herds whence the milk supply of the city is derived shall be kept under municipal supervision, and that all dairy animals shall be examined by a physician at least twice a year. A round aluminum tag is fastened to the ears of the healthy animals, and an oblong tag to those of the diseased ones. The latter are placed in fields and barns separate from the unaffected cattle, and the owners are warned, under threat of penalty, not to sell the milk from such cows. The board has also ordered that the milk-dealers must use metallic milk-tickets or furnish new paper tickets at each sale, the purpose being to lessen the likelihood of the spread of contagion.

The Sanitary Regeneration of Santiago.—Reports from Santiago de Cuba state that since the cleaning of the city the vultures are starving, for there is no scavenging work left for them to do. For five days at the end of January there was but one death in the entire city. In Havana the authorities are digging out the filth as rapidly as they can, but there is little hope that, hampered as they are by the indifference of the secretary of war, any great improvement will be brought about before the rainy season sets in. It is not the streets alone that were dirty, but even the public buildings, where the Spanish officials transacted the work of misgovernment, were so filthy that the muck had to be broken up with picks and shovelled out.

The Late Dr. T. J. McGillicuddy.—At a special meeting of the corps of professors of the New York School of Clinical Medicine, held on January 20, 1899, the following resolutions were unanimously adopted:

Whereas, It becomes our sad duty to chronicle the death of our late esteemed colleague, Dr. T. J. McGillicuddy, which untoward event occurred on the seventeenth day of January, 1899; therefore be it

Resolved, That, while recognizing in this sudden and unexpected dispensation the hand of an all-wise Providence, we nevertheless appreciate the importance to the institution of the loss of one of its devoted friends.

Resolved, That we, his associates, express deep regret at the loss of our esteemed colleague, whose interest in all that pertained to the advancement of medical science won our esteem and admiration.

Resolved, That the death of Dr. McGillicuddy deprives this community of one of its most useful citizens, and the medical profession of a representative who always labored earnestly to uphold its best interests.

Resolved, That a copy of these resolutions be sent to his family and to the medical press of this city.

Committee: J. J. E. MAHER, M.D., *Chairman;* J. J. MORRISSEY, M.D., *Secretary.*

A Washington Cheap Medical Club.—The *Maryland Medical Journal* says that a club called the "Alpha Medical Association" has been organized to treat the people of the District of Columbia for $5 a year. Five dollars is the fee for the head of the family, and twenty-five cents is added for each member of the family. The company "will employ the best physicians of both schools, homœopathic and allopathic," and "the best medicines and appliances will be used." If the subjects of this company die, they will have to bury themselves.

Dipping of Cattle Discontinued.—The bureau of animal industry has ordered that the dipping of cattle to prevent the spread of Texas fever be discontinued. This action, it is said, was taken because of the many complaints of deaths of cattle at the dipping vats. The bureau has not given up the idea that dipping will prevent Texas fever, but has simply concluded to carry the experiment further. The dip in use now is composed of lubricating oil, known as dynamo oil, from which the paraffin has been extracted, and to this is added one and one-half per cent. of sulphur.

Obituary Notes.—DR. HARRY A. YOUNG, of Salt Lake City, who was killed and his body shockingly mutilated by the natives in the fighting near Manila on February 8th, was a graduate of the medical department of Columbia University, in this city, in the class of 1893. Immediately upon graduating he entered the hospital at Providence, R. I., and served there for two years. He then returned to Salt Lake City and entered upon the practice of his profession. Upon the breaking out of the war he enlisted in the Utah Light Artillery and was made sergeant in Battery A. He was a nephew of Brigham Young, who was, during his life, the president of the Mormon Church. He was about thirty years old at the time of his death.—DR. JAMES HENRY ETHERIDGE, of Chicago, professor of obstetrics and gynæcology at Rush Medical College, died suddenly at his home in that city, of disease of the heart, on February 10th. He was born at St. Johnsville, N. Y., on March 20, 1844, and was graduated in medicine from the Rush Medical College in 1869.—DR. JAMES EDWARD KEEGAN died at his home in Jersey City, on February 10th, of pneumonia. He was twenty-seven years old, and had practised in Jersey City about four years.—DR. EDWARD NORTH, of Hammonton, N. J., was killed on February 11th, his sleigh being struck by a railway train. He was a graduate of the Jefferson Medical College of Philadelphia, in the class of 1868. He was president of the board of health. He leaves a wife and three children.—DR. A. CLARK DEAKYNE died at Philadelphia on February 5th, at the age of sixty-six years. He was born in Newcastle County, Delaware, and was graduated from the Pennsylvania Medical College in 1853.—DR. ROBERT C. STEWART, of Shippensburg, Pa., was found dead in bed on February 10th as a result, it is thought, of accidental poisoning with illuminating gas. He was a graduate of the medical department of the University of Pennsylvania in the class of 1872.

Reviews and Notices.

BLACKBOARD HEADINGS USED IN THE LECTURES ON SURGERY. By ROBERT F. WEIR, M.D., Professor of Surgery in the College of Physicians and Surgeons of Columbia University. Edited by Drs. A. L. Wolbarst and G. A. Saxe. New York. 1898.

THIS little book, consisting of seventy-two pages, is interleaved so that numerous notes can be added. It is intended to aid students, and is well adapted for the purpose.

LA SUTURE INTESTINALE. HISTOIRE DES DIFFÉRENTS PROCÉDÉS D'ENTERORRHAPIE. Par FELIX TERRIER et M. BAUDOUIN. Cours de Médecine opératoire, Leçons Professées pendant le Semestre d'Été 1898. Avec 587 Figures dans le texte. Paris: Institut de Bibliographie Scientifique. 1898.

THIS work is a complete book of reference for all the various methods of intestinal suture and anastomosis which have been suggested, and in addition there is an interesting historical sketch. The illustrations are many and excellent for the purpose, but the publishers might at least have put a cheap board binding upon the volume instead of the miserable paper so common on European publications. The authors are to be congratulated upon the excellence and completeness of their work.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Volume XVI. Edited by DE FOREST WILLARD, A.M., M.D., Ph.D., Recorder of the Association. Philadelphia: William J. Dornan. 1898.

AMONG the many excellent essays are those on the Etiology and Classification of Cystitis, by Dr. N. Senn; Fracture of the Patella, by Dr. C. A. Powers; Adenocarcinomata of the Breast, by Dr. W. S. Halsted; The Etiology of Cancer, by Dr. B. Park; Appendicitis, by Dr. W. W. Keen. An excellent steel-plate portrait of Dr. Agnew makes a most fitting frontispiece. The usual excellence of print is still a matter for congratulation.

DESCRIPTIVE CATALOGUE OF THE ANATOMICAL AND PATHOLOGICAL SPECIMENS IN THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH. By CHARLES W. CATHCART. Edinburgh. 1898.

THIS second volume completes (as we understand it) the list of specimens to be described. It is not a mere enumeration of the preserved preparations, but many of the tumors, etc., are described at length, and in many instances there is appended a short clinical history of the case from which the growth or abnormality was removed. This makes the work one of interest even to the reader at a distance who may never have the good fortune to visit Edinburgh's Royal College.

THE PHONENDOSCOPE AND ITS PRACTICAL APPLICATIONS. By AURELIO BIANCHI, M.D. With 37 Illustrations. Translated by A. GEORGE BAKER, A.M., M.D. Philadelphia: George P. Piling & Son. 1898.

FOR a good practical guide in the use of this instrument the above brochure is to be recommended. In five chapters the following subjects are discussed: The Phonendoscope and its Practical Applications; Phonendoscopy and Outlines of the Various Organs, with thirteen illustrations; the Relations between the Outlines of the Internal Organs of the Body as determined by the x-Rays and the Phonendoscope; and the Mechanical Description of the Phonendoscope. To this there are added two chapters on the phonendoscope in digestion and in pregnancy.

ORIGIN AND PROGRESS OF RENAL SURGERY, ETC. Being the Hunterian Lectures for 1898; together with a Critical Examination of Subparietal Injuries of the Ureter. By HENRY MORRIS, M.A., M.B., P.R.C.S. London, Senior Surgeon Middlesex Hospital, etc. Philadelphia: P. Blakiston's Son & Co. 1898.

THE volume contains a series of lectures by an experienced surgeon upon a very important branch of surgery. There are four lectures, and the author has really given us a historical epitome of the subject and a large amount of clinical statistical material. The third lecture should be read by every surgeon, especially that part devoted to obstructive anuria. In the chapter on injuries to the ureter, there is also much interesting matter. The second half of the book contains a tabulated report of two hundred and sixty-seven renal operations by the author, and forty-nine collected cases in which operation was done for calculous anuria. This section serves to show that even when drawing only from his own experience the author's opinions are worth noting.

ANATOMY, PHYSIOLOGY AND HYGIENE. By E. FRANKLIN SMITH, M.D., Lecturer on Anatomy, Physiology, and Hygiene, New York Preparatory School; Member of the New York Academy of Medicine, etc. First Edition. New York: William R. Jenkins.

THIS little work of two hundred pages, illustrated with sixty-four drawings, has been prepared by the author largely from his personal lecture notes, which have been amplified to meet the requirements of those coming up for examination before the State board of regents. The subjects covered are those upon which examinations are held by this board. It is a work designed for high schools, academies, and preparatory schools, and covers the ground of Anatomy, Physiology, and Hygiene; Emergencies, Stimulants and Narcotics; Contagious and Zymotic Diseases, and Sanitation. A glossary containing all the technical words which occur in the substance of the work, with their definition, is appended. Then follows a system of questions, each referring back to the page on which the subject has been discussed. In a way it is a unique publication and covers in a brief manner a wide field of useful knowledge.

DEGENERACY: ITS CAUSES, SIGNS, AND RESULTS. By EUGENE S. TALBOT, M.D., D.D.S., Fellow of the Chicago Academy of Medicine; Member of the Chicago Academy of Sciences, Honorary Member of the Berlin Odontologischen Gesellschaft, and the Association générale des Dentistes de France; Professor of Dental and Oral Surgery, Woman's Medical School, Northwestern University, U.S.A. London: Walter S. Scott, Contemporary Science Series. 1898.

DR. TALBOT has given us an extremely instructive and readable treatise. In some eighteen chapters he discusses the following topics: The Stigmata of Degeneracy, Heredity and Atavism, Consanguineous and Neurotic Intermarriages, Intermixture of Races, Toxic Agents, Contagious and Infectious Diseases, Climate, Soil and Food, School Strain; The Degenerate Cranium, The Degenerate Face and Nose; Degeneracy of the Lip, Palate, Eye and Ear; The Degenerate Teeth and Jaws, Degeneracy of the Body, Degeneracy in Reversional Tendencies, Degeneracy of the Brain, Degeneracy of Mentality and Morality, and Conclusions. The book is marked throughout by wide reading, and on the whole by a certain amount of critical judgment in the use of the evidence, though in this latter regard there are many lapses. Reasons drawn from analogy rather than from homology are frequently used to prop up an argument, and the say-so of many men, some of whose statements would not be believed under oath, is frequently used to point a moral or adorn a tale.

DISEASES OF THE HEART AND THE AORTA. By GEORGE ALEXANDER GIBSON, M.D., D.Sc., F.R.C.P. Ed., F.R.S.E., Senior Assistant Physician to the Royal Infirmary; Consulting Physician to the Deaconess Hospital; Lecturer on Medicine at the Minto House, and on Clinical Medicine at the Royal Infirmary, Edinburgh. Edinburgh and London: Young J. Pentland. 1899.

WE have had occasion to commend very warmly the work of Balfour on the Heart, and it is with a special pleasure that we review the work of the pupil Gibson. In these treatises we have two classics, one of the old and one of the new schools, both masterpieces in their way, and both illustrative of the status of thought of their respective periods. The work of the pupil is destined, we believe, to supplant that of the master. The subject matter of the volume is treated of in some sixteen chapters. The morphology, physiology, and pathology of the circulatory apparatus are first taken up and are treated in as thorough a manner as could be wished, almost Germanic in its monographic completeness, and yet not wearying in the details. Chapters IV. and V. are occupied with the symptomatology and the therapeutics of heart disease in general. The following chapters discuss seriatim the different affections of the heart muscle, valves, and the aorta: Congenital Heart Disease, Diseases of the Pericardium, Diseases of the Endocardium, Chronic Affections of

the Orifices and the Valves, Affections of the Aortic Orifice, Affections of the Mitral Orifice, Affections of the Pulmonary Orifice, Affections of the Tricuspid Orifice, Affections of the Myocardium, Complex Sensory and Motor Affections, and Diseases of the Aorta. There is an article on Radiography, and an excellent and complete bibliography in appendices to the volume.

Therapeutic Hints.

Quinine Chlorohydrosulphate dissolves in its own weight of water, and is readily absorbed by the tissues. —GRIMAUX.

Infant's First Bath.—The first bath should not be given to infants until after healing of the navel wound.—NEUMANN, *Cincinnati Lancet-Clinic.*

Itching Eye.—The itching eye, so common in childhood and less frequent in adult life, is often the result of uricacidæmia.—DR. JOHN DUNN.

Oil as an Excipient for remedies by injection presents the double advantage of being a food and one readily digested.

Delirium Tremens.—Sulphate of atropine, one-sixtieth of a grain administered hypodermatically, in all cases produced a quieting and deep sleep.—DR. TONVIME.

Ginseng, which is so highly prized by the Chinese as a cure for almost all ills, and in certain qualities an extremely expensive drug, is said to be used in a wholly empirical way. So far as one can judge from a scientific standpoint, it is without definite results, aside from those which arise through trust acting on the imagination.—DR. CHUNG KING-U.

Aneurismal Tracings.—The distinguishing points of an aneurismal tracing are (1) a sloping upstroke; (2) impairment or loss of the percussion wave; (3) obliteration of the secondary waves; (4) diminished volume of the curve; (5) vibratile waves; (6) a different blood tension.—DR. GARDNER.

Stammering in Hysteria differs from the ordinary forms in that the patient is able to repeat the first syllable of various words, and there is no true inability to pronounce words beginning with certain letters; nor are there facial contortions nor explosive utterances when the word is pronounced.—SINKLER.

Jorisenne's Sign of pregnancy is the absence of acceleration of the pulse rate noticed when the patient assumes the erect posture after resting for some time in the recumbent position; it is of doubtful accuracy. The cardiac symptoms are all more or less dependent upon the hydræmic condition of the blood.

Lumbago.—Typical lumbago arising suddenly during an effort, showing severe pain, increased by the slightest movement, is really a sprain of the sacro-vertebral articulation. It is best relieved by rest on the back, a hard pad under the joint, and exercises consisting of flexion and extension of the lower limbs on the trunk.—HELDENBERG.

Heroic Dosage.—While single-drug medication, aimed at securing definite physiologic effect, is to be preferred to the shotgun prescription, aimed at nothing and expected to hit the mark, still judicious combinations are often of the greatest value, one drug enhancing the effect of another. The smallest dose that will accomplish the result is always preferable. Heroic dosage is never to be withheld because it "savors of old-time physic." The fathers of medicine were not all fools.—DR. CHARLES W. ALLEN, *The Practitioner's Manual.*

Hemorrhagic Nephritis.—Methylene blue, 0.10 cgm., three times a day, caused the blood entirely to disappear in a case reported by Dr. Kramer in the *Petersburg med. Wochenschrift*, No. 30, 1898. The albumin was also reduced from one-half the volume to a mere trace. He claims the same results in three other cases.

Treatment of Enteric Fever.—I would suggest the internal administration of Peyer's glands taken from the sheep, in case of enteric fever. The method of preparation of such substances is, I understand, detailed in the new issue of the Pharmacopœia.—DR. M. D. O'CONNELL, *The Indian Medical Gazette*, November, 1898.

Sycosis of the Upper Lip.—There is here usually incessant reinfection from the nose, augmented by friction of the handkerchief. It is recommended to use as a wash for the nose a decoction of cinchona instead of using a handkerchief. Upon the lip is applied constantly an ointment, containing zinc oxide, sulphur, and possibly ichthyol, which is removed only when the washing is done. Epilation is rarely necessary.—UNNA, *La Sem. Méd.*, No. 280.

To Estimate the Solids in the Urine.—In order to estimate the number of grains of solids passed each twenty-four hours, measure accurately the number of ounces of urine passed during this period, record the same, and estimate by Haines' modification of Haeser's rule: Multiply the last two figures of the specific gravity of the urine by the number of ounces voided in twenty-four hours, and add ten per cent. to the product.—DR. JOHH A. ROBISON, *The North American Practitioner*, November, 1898.

Palatable Way to Take Cod-Liver Oil and Creosote. —When I tell you that I am a cod-liver-oil and creosote drinker of over seven years' standing, I am sure you will pardon my dogmatic language when I say that the best and the most palatable way to take these drugs is as follows: Pour two drachms of cod-liver oil on an ounce and a half of water, then add the required amount of creosote slowly drop by drop on different parts of the surface of the oil.—DR. W. FOWLER, *Intercolonial Medical Journal of Australasia*, October, 1898.

Aphonia and Dysphonia of Laryngitis.—For the relief of aphonia and dysphonia of laryngitis, no method equals the following: First mark approximately with a pencil on either side of the neck the point in the thyro-hyoid membrane where the internal laryngeal branch of the superior laryngeal, the nerve of sensation of the larynx, passes into the latter organ. Over the points marked with the pencil freeze with chloride of methyl or a spray of rhigolene. Freezing must be thorough. The relief in most instances is almost instantaneous, and phonation, which was before difficult or painful, can be performed with perfect freedom. —DR. ABRAMS, *Ther. Gazette.*

Milk in Typhoid Fever.—The initial error in the widespread and pernicious habit of filling up typhoid-fever patients with milk is in considering the latter a liquid food. While it does seem to have the form of liquid, yet as a food it is not liquid but solid. Bread and butter, mashed potatoes, nay, even pumpkin pie —none of these is capable of filling the small intestine with such immense, dense, indigestible boluses of substance as result from milk. Even uncooked fruits

could never pack the colon with such an impregnable, unassailable mass as we sometimes are obliged to scoop out from such of our typhoid-fever patients as have survived the earlier dangers of a milk diet. No! milk is not a liquid diet. It is a deceptive solid. Furthermore, it is a fine culture medium, and by no means fastidious in its preferences for germs. You keep your ice-box in prime order, the milk is put in sweet, and a passing thunderstorm turns out a milk so full of bacteria that it is marvellous how rapidly they have propagated. Evidently the culture medium is an admirable one. As for the typhoid bacillus, it is notorious that milk is a good vehicle. Outbreaks of typhoid set us nowadays to following the milkman's route. Such is milk.—Dr. Inglis, *The Medical Age*, December 10, 1898.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 2, 1899.

William H. Thomson, M.D., President.

The United States Army Ration, and Its Adaptability for Use in Tropical Climates.—Dr. Louis Livingston Seaman, major, surgeon United States volunteer engineers, read a paper with this title. He said that history had always shown a greater loss in armies from disease than on the battlefield. By insuring wholesome food, both solid and liquid, we could remove all sources of irritation from within. The experience of the English had been that much of the disease in the British army in India was the result of food, drink, and clothing which were not adapted to the climate. The meteorological records showed that the extreme variation in temperature within the limits of the United States was as much as 150° F. Our Government made certain distinctions between the uniforms for soldiers serving in the warmer and those in the colder portions of our country, but there had been apparently no official attention given to similar distinctions in the rations issued.

United States Army Ration.—The daily ration of the soldier in the United States army at the present time was as follows: Fresh meat, 20 ounces, or salt beef, 22 ounces, or pork or bacon, 12 ounces; bread or flour, 18 ounces; potatoes, 16 ounces; peas or beans, 2.40 ounces, or tinned tomatoes, 5.33 ounces; rice, 1.60 ounces; sugar, 2.40 ounces; coffee, 1.60 ounces; salt, 0.25 ounce. The "travel ration" was made up of the following: Hard bread (commonly called "hard tack"), one pound; beef, canned, 0.75 pound; baked beans, 0.33 pound; canned tomatoes, 0.33 pound; coffee, 0.08 pound; sugar, 0.15 pound. The regular ration, first given, was the ration for the soldiers in Alaska through the winter a year ago, and was essentially the same as that issued to the army in Cuba. According to Dr. Duncan, a high authority in questions of military hygiene, about one-sixth of the total income of food was expended as mechanical force and five-sixths for the production of heat. The general experience of inhabitants of warm climates was in favor of a diet which was chiefly vegetable. This afforded a sufficient supply of albuminates without giving an unnecessary amount of heat-producing ingredients. The food products of each zone would be found to be those peculiarly well adapted for those particular regions. The natural appetite instinctively inclined one to eat those articles of diet best suited to the particular zone in which one happened to be. In the ration of the British soldier in India the meat component was less by from four to six ounces than in the United States ration, and the rice was greater by 4.2 ounces. The British ration had been criticised chiefly on the ground that it was too liberal, as it was well known that a moderate quantity of food was most desirable in the tropics.

Experience in Cuba.—Dr. Seaman said that the health of the troops in his command was nearly perfect while they were at Peekskill. They left New York in August 1,144 strong. Of this number, 904 returned after about three months, 102 being convalescent and many others greatly reduced in weight and strength. Twelve men had died, 61 had been left behind in hospital, and 107 had been returned to the United States invalided or honorably discharged. Although the camp discipline was excellent and the medical supplies were liberal and of good quality, hundreds of cases of diarrhœa and various other ailments speedily developed. The diet consisted chiefly of fatty bacon, tinned beef, tomatoes which were often in a state of fermentation, and hard tack. The soldiers thus weakened became an easy prey to malarial and typhoid infection. The troops were fed chiefly on the travel ration for a period of three weeks, although this ration was intended for emergencies. The effect of this diet in the heat of midsummer was very bad, giving rise to an acute gastro-intestinal catarrh. The soldiers were compelled, much against their will, to live largely on fresh meat, and the speaker was of the opinion that had a more suitable article of diet been substituted there would have been comparatively little sickness. According to the hospital records, the best results in treatment were obtained, not by drugs, but by placing the patients on an exclusive milk diet. The post-mortem findings were quite uniform, the liver being almost invariably congested, the mucous membrane of the bowel covered with thick, tenacious mucus, and the intestinal glands atrophied. The defects of the present ration consisted chiefly in the slight provision for fresh vegetables, and in the large proportion of salt meats. It was observed that every issue of beans was followed by an increase in the number of cases of diarrhœa. The salt-pork ration should be issued not more than once a week in hot climates. The tinned tomatoes did not at all take the place of the fresh vegetable.

A Suitable Ration for the Tropics.—A ration to be well adapted for use in the tropics must be non-irritating, easily transported, and easily preserved. The beef component and the salt pork should be reduced one-half, farinaceous food being substituted therefor; salt meats should not be issued more than once or twice a week; fresh meat should be supplied when meat is needed. Of the cereals, one of the best was hominy, as the husks were removed in the process of manufacture. Equally valuable was rice, but it should be given in three times the present quantity. The white bean of this country should not be issued, but instead the red bean commonly found in the tropics. It broke up readily in cooking, was more digestible, and did not excite irritation. These beans and hominy formed the staple diet of the Mexican army. In addition to the above, apples and prunes should be added to the ration for the tropics. It should always be borne in mind that the best results could not be obtained, no matter how good the ration, unless the food was suitably cooked. This was such an important matter that there should be a school of instruction for camp cooks. It should be made possible to requisition the invaded country for the food required for feeding the invading troops, as well as those in garrison. The German soldier in the tropics got 5.33 ounces of fresh meat, or 4.4 ounces of salt bacon, while he received 79 ounces of vegetables including

potatoes. The Japanese soldier received as a ration 36 ounces of rice and an allowance of about six cents for his meats, tea, and other components. In view of the facts just considered, it seemed to the speaker amazing that the surgeon-general's commission, just returned, insisted that no improvement could be made in the diet of our soldiers.

Regulars and Volunteers Compared.—MAJOR J. MCG. WOODBURY indorsed most heartily the position taken by the reader of the paper. His statements were clear, accurate, and conservative. The changes suggested were thoroughly rational, and did not involve any special difficulties in the matter of transportation. If one could see what the American volunteer can turn a good government ration into, one would come to the conclusion that nothing short of a miracle could save the volunteers from destruction. The speaker then gave a vivid description of the utter lack of attention to cleanliness displayed in the volunteer camps, and especially in the camp kitchens, and compared them with the excellent state of affairs found among the regulars. This comparison was made simply to show that the regulars are, and the volunteers are not, soldiers. Dr. Woodbury said that about forty per cent. of all the disease among the soldiers in Porto Rico was the result of carelessness and ignorance in the preparation of the food. At a given time, when the regulars and the volunteers were supplied with the same ration, there were twelve per cent. of the regulars sick as against nearly 36 per cent. among the volunteers.

The Flexibility of the Army Ration.—COL. CHARLES WOODRUFF, of the commissary department, said that he could thoroughly indorse nearly every suggestion advanced in the paper—but we all love old friends, and the army ration had been an old friend of his for upward of thirty years. The meat component had been made large simply in deference to the taste of Americans. He had seen some of our soldiers marching in Montana when the temperature was 15° below zero, and others marching in a region where the temperature was 115° above zero, and yet at no time had he seen the soldiers refuse meat. But the ration should be more flexible. The invasion of a tropical climate in midsummer with a loss of only about two per cent. was something, in his opinion, of which the nation should be proud. Any company commander who desired to vary his ration, instead of drawing beans, for instance, might draw all rice, or all hominy, or peas, and instead of the quantity of potatoes he could draw a certain percentage in onions or other small vegetables. The salt meat could be sold back directly to the subsistence department at its full value, and in place of it could be taken anything of equal value. The United States soldier was, therefore, not compelled to live on an iron-clad ration; its flexibility was greater than that of the ration of any other country. If the standard ration was composed of a great many articles, there would result a great waste of food, hence the Government preferred the system of exchanges just described. The reason the Government did not handle the red bean was that its skin was so thin that it could not be transported readily, and it absorbed moisture so rapidly that it spoiled very much more rapidly than the white bean. He entirely agreed with the reader of the paper that in tropical climates the troops needed very much less meat and more rice, but he still thought it better to leave the ration just as it was and allow of changes being made in the manner he had indicated.

The Army Ration and the Personal Equation.—MAJ. H. S. KILBOURN said that he had so recently escaped from the army ration, as he saw it in Cuba, to the army ration as presented now by the newspapers, that he was in a confused state concerning it. The United States army ration had been modified according to climate for a great many years. The trouble with the ration in Cuba, as he saw it, was not one of quality but of quantity—they did not get enough. The first thing brought to the men who were investing Santiago was ammunition, and this they could not eat. The question there was entirely one of transportation, for there were no roads—merely quagmires which could be traversed only by pack-mules. After the surernder, July 17th, there was an abundance of food—not only the army ration, but additions from many other sources. The speaker said that he had a very good opinion of the present army ration, and believed it to be sufficiently flexible and adaptable. This matter of adaptability involved very largely the question of the personal equation.

DR. W. D. BELL said that the Seventy-first Regiment had lived for a considerable time on the travel ration, yet there had been very little sickness up to the middle of July. At this time the rainy season began, and with it came the sickness. The men craved the bacon, but it was handled and transported in such a way as to make it very filthy. He had not noticed any increase in enteric disease after fresh meat had been supplied to the troops, and the general condition of the men was certainly improved. He protested against the issue of green coffee to the men in the field, as this had decidedly augmented the diarrhœas. It seemed to him that too much coffee was taken, and that for a part of it tea should be substituted. The older soldiers filled their canteens with a mixture of two parts of vinegar and one of molasses, and they did much better on this than did those who drank coffee so immoderately. Although his regiment was a volunteer one, he had found by frequent inspections that the kitchen utensils were clean and creditable to the soldiers. The men would trade off almost any part of their ration in order to get rice, which they craved. Curry was a useful addition to the food in the tropics.

The Navy Ration.—DR. A. L. GIHON said that the ration that had been under discussion certainly was not the navy ration. The latter was very much more extensive, there being an immense number of alternates. The navy ration of to-day he believed to be perfection itself, but there must be a judicious selection to secure the best results. The particular food most suitable for each climate was within the reach of the men by commutation of rations. In his opinion, it was a great mistake to tinker with the excellent Government ration. It went without saying that the food must be of good quality and well cooked. The cooking in the navy at the present time was, as a rule, excellent. He recalled the fact that forty years ago the bread given out in the navy was of such poor quality that the men used to divide it into squares and bet on the number of weevils contained therein. According to his recollection, there were, on an average, two worms and twenty weevils to the square inch.

Hard Tack a Square Meal.—DR. ANDREW H. SMITH said that it was well known that the Esquimaux considered a tallow candle a very dainty article of food, which only emphasized the necessity for considering personal taste and habit as well as climatic conditions. It had seemed to him in his army experience that when the soldier needed most to be sustained he turned with avidity to his hard tack rather than to the meats.

Cooking and Common Sense.—An old army proverb was, "Beans kill more than bullets," but this, after all, was only another way of saying that bad cooking led to serious consequences. The different methods of cooking beans had been impressed upon him very forcibly by seeing them cooked not only by inexperienced soldiers, but by a certain group of men who had lived in a section of the country where the

people subsisted largely on beans. Beans were exceedingly nutritious, and could be cooked so as not to be irritating.

Dr. Charles H. Shepard, of Brooklyn, spoke of the great importance of the daily bath as a safeguard of health, especially in the tropics, and pointed out that this fact was fully appreciated by the old Roman soldiers. He inveighed against the reckless use in the army of quinine, tobacco, alcohol, and coffee. Regarding hard tack, he stated that as now made it was composed of fine wheat flour, mostly starch; if it was made of the entire wheat and was combined with cornmeal or a portion of nuts, it would be more nutritious. Olive oil was more desirable than pork fat, and would prove a good substitute for butter under certain circumstances.

Dr. Seaman closed the discussion.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

INFANTILE OPHTHALMIA AND ARTHRITIS—APPENDICITIS AND DIFFUSE PERITONITIS—IMPACTED STONE IN URETER—EPILEPSY AND MURDER—CRIMINAL ABORTION—SWINEY PRIZE—PRINCE OF WALES—GIFTS AND BEQUESTS—POST-GRADUATE COLLEGE—DEATHS OF PROFESSORS COATS AND NICHOLSON.

London, January 27, 1899.

On Tuesday evening the question of the connection of arthritis in infants with ophthalmia neonatorum was raised at the Medico-Chirurgical Society by Mr. Clement Lucas. He published in 1885 three cases which he believed had thus originated. Since then he had been able to collect twenty-three recorded cases, the majority from foreign sources. Upon these he based his present communication. The arthritis is seen in two forms: (1) very acute, with much swelling, redness, and tenderness, suggesting a tendency to suppurate; (2) subacute, with considerable effusion and pain on movement but not much redness of the surface. The joint affection usually comes on at the end of the second week or during the third week of the ophthalmia, which generally sets in about the third day after birth. The knees and wrists are most frequently attacked, especially on the left side, and it was suggested that these are more exposed to injury in the position in which the child is generally carried. The disease lasts from three to five weeks, and complete resolution usually occurs. In 1889 Darier found the gonococcus in the conjunctival secretion, and in 1890 Deutschmann found it in the secretion from a knee-joint, obtained by aspiration from an infant with ophthalmia. In two cases in which suppuration occurred the gonococcus had been found associated with another microbe—one with staphylococcus and the other with streptococcus. As to treatment, the indication evidently is to cure the ophthalmia.

Dr. Pye-Smith and Mr. Pearce Gould both accepted the cases as showing that the joint affection was due to infection by the gonococcus. The difference in severity between these and adult cases may perhaps be to some extent due to the little strain put on the joints in infancy. Mr. Barker could not think all cases could be thus accounted for, as a mixed infection was sometimes present, and in the more severe cases pyæmia would be the better term, and it would include those accompanied by suppuration in other parts, *e.g.*, otorrhœa. Mr. Hutchinson would still class gonorrhœal arthritis as a form of rheumatism.

On Monday Mr. Cuthbert Wallace related to the Medical Society three cases of appendicitis with diffuse peritonitis, on which he had operated. All three were successful, and Mr. Wallace was heartily congratulated on the result, which seems almost if not quite unprecedented. In two of the cases the peritonitis was general; in the third it was confined to the transverse mesocolon. In all he removed the appendix, turned out the intestines on to the abdominal surface, and flushed the abdominal cavity with sterilized water. In none of them did a bad symptom supervene. He made the incision through the rectus muscle, which suited for removing the appendix and washing out the abdomen.

Mr. Clutton thought that the plan of eventration might be revived with advantage, although formerly the results had been very bad. He mentioned that a solution of magnesium sulphate could be injected into the bowel high up with a hypodermic syringe. Mr. Stanley Boyd questioned the propriety of the term diffuse peritonitis in many recorded cases, and referred to the difficulty, or even impossibility, of perfectly cleansing the peritoneum. Much, he said, must depend on the powers of resistance of the patient. Mr. Bruce Clarke approved of the incision through the rectus and also of eventration. Mr. Battle commented on the variation of symptoms in these cases. Mr. Morgan approved the plan of eventration, though the return of the bowels was sometimes difficult.

In his reply Mr. Wallace said there was no distention in these cases and so no difficulty, but more recently he had had a case in which he was obliged to puncture and incise. He began his incision on the level of the anterior spine and carried it upward about six inches. The house surgeon held the intestines over to one side while the opposite loin was flushed and cleansed; then they were brought over to the other side. They were irrigated all the time with hot sterilized water, saline fluid not being available at the moment.

Mr. Freyer then related two recent cases of successful operation for impacted stone in the ureter. In one, on incising the kidney there was no stone, but he found it impacted four inches down the ureter, which he incised and took out the stone. Perfect recovery followed. In the other, a patient with multiple stricture, no stone was found by another surgeon in 1895. He re-explored the kidney with no better success. Subsequently he performed internal urethrotomy, without relief. Later on he detected with the cystoscope a stone projecting from the right ureter's orifice into the bladder, and delivered his patient from further trouble with a lithotrite.

Mr. Bruce Clarke said he had removed a stone impacted five inches down the ureter of a woman.

The plea of epilepsy was successful in a trial for murder this week. The accused shot a young girl in the presence of two of her companions just after they passed his door, and then turned the revolver on himself, but survived with the loss of sight of one eye. Dr. Davies, of Barming Asylum, who had examined the accused for the treasury, said that at both his interviews the prisoner appeared rational, and he had formed the opinion that he was acting under the influence of epilepsy at the time he committed the murder. The prisoner told him his mind was a perfect blank as to the day of the tragedy, that he loved the deceased and could not believe he had injured her. Dr. Hoar, the prison surgeon, concurred. The prisoner's brother said he had suffered from sleeplessness and fainting, but he never knew him to have a fit. Dr. Sterry had treated the accused for heart disease but never noticed any symptom of epilepsy. The judge left the jury to say whether the medical evidence was sufficiently conclusive. He felt bound to point out that there was

not a tittle of evidence that the prisoner had ever suffered from epilepsy. On the contrary, the doctor who attended him declared emphatically he had noticed no such symptoms. The jury after an hour's deliberation found that the prisoner was not responsible at the time he committed the murder. Accordingly, he goes to a criminal lunatic asylum.

Criminal abortion seems to have been in the air of late, perhaps because the police have been more active. If they would only make a few prosecutions against the newspapers which aid and abet the crime, or incite to it by selling their columns to criminal advertisers, more good might be done. Even unsuccessful prosecutions might shame some of these prints out of existence, but there is no need of failure. Many advertisements are such transparent incitements that no one could mistake their meaning, and proprietors who take them should pay the penalty. A few disgraceful journals the less, and the market for the abortionists' trade would soon be closed.

Dr. Dixon Mann's "Forensic Medicine and Toxicology" has been awarded the Swiney prize. Dr Swiney died on January 20, 1844, and the prize is awarded every year to the author of the best work on jurisprudence published during the quinquennium. It consists of a silver goblet and a sum of £100.

The Prince of Wales purposed to be present at the Hunterian lecture on February 14th. Sir W. MacCormac is the orator.

Mr. W. Vokins has bequeathed £50,000 to the Hospital Sunday fund, to be received on the death of his wife.

Mr. W. Cadge has presented a second donation of £10,000 to the Norwich Hospital.

Under the will of Mr. Evan Llewellyn a sum of more than £20,000 is to be handed to London magistrates to use the interest for the poor-boxes.

The Post-Graduate College and Polyclinic is now nearly organized. Dr. C. O. Hawthorne has been appointed medical superintendent. He was formerly assistant to Sir W. Gairdner in Glasgow University. There are more than three hundred subscribers, and in response to a circular issued a few days ago more are coming forward.

Prof. Joseph Coats, the eminent Glasgow pathologist, died on Tuesday, January 24th, aged fifty-three years, after a long illness. He had been unable to carry on his professorial work for the last two sessions. He edited the *Glasgow Medical Journal* for a number of years, and contributed to other papers his important pathological researches. Of course you know his "Manual of Pathology" and the work on "Tuberculous Disease," which he published jointly with Sir W. Gairdner.

The University of Aberdeen has lost one of its most distinguished and most highly appreciated teachers by the death of Dr Alleyne Nicholson, M.D., F.R.S., the professor of natural history, whose works on zoology and palæontology are standards. He died on the 19th instant, aged fifty-five years.

Operations in Nose and Mouth.—Operations about the nose and mouth are much more comfortably performed if the patient's head is allowed to hang in the hyperextended position over the end of the table. The sight for an onlooker is a rather horrifying one, because the blood runs over the patient's eyes and forehead and over his head, making indeed a gory spectacle; but no blood will enter the larynx, and little if any will be swallowed, so that the annoying postoperative nausea, with the vomiting of large quantities of blood, is in great measure avoided.—*Railway Surgeon.*

THE ROTHKRANZ HOME AND FEMALE HOSPITAL.

To the Editor of the Medical Record.

SIR: My attention was called to an article in your issue of December, 1898 (31st ult.), by E. T. Gerry, entitled, "Midwives as Illegal Practitioners," and in which my name appeared. Permit me to reply to the same, as an injustice has been done, unintentionally no doubt, by your paper in the said publication to clients of mine, notably the "Rothkranz Home and Female Hospital," a duly incorporated institution, in business at New York City from its incorporations in 1893. From his article Mr. Gerry appears more able as a Bible student than a lawyer. It is evident from the tone of his labored article that he seeks to legislate matters that will add to the expense of the taxpayer and the glory of Mr. Gerry. To adopt the course Mr. Gerry suggests would require a force of men large in number, and involve an expense in no way moderate. Mr. Gerry does not allude to his own society, which I understand is under fire of the State board of charities, the board desiring to discover the manner in which the society is conducted. Why does Mr. Gerry refuse to submit to the examination by the State board and advocate an enforced measure to affect others in that respect? It is easy to make charges, cause arrests, and fail to convict, as in the "Rothkranz" case quoted by Mr. Gerry in his article, but Mr. Gerry might have waited to hear the result of the trial before making literary efforts to show the guilt of the defendant. Upon the trial of the case quoted, it was held by the learned justices presiding, after hearing all the evidence in the matter, that the "Rothkranz Home and Female Hospital" was duly and lawfully incorporated, and there was no violation of the law by the defendant when persons were treated at the said place, and Mrs. Rothkranz was duly discharged.

Mr. Gerry should follow the teachings of his quoted reference, the Bible, and pluck the beam from his own eye before attempting optical operations upon his neighbors.

HENRY W. LEONARD,
Counsel for the Rothkranz Home and Female Hospital.

January 31, 1899.

MEDICAL PRACTICE IN KOREA.

(From our Special Correspondent.)

To the Editor of the Medical Record.

SIR: Korea is a land antipodal to your own not only in geographical situation, in language, religion, philosophy, costume, agriculture, and arts generally, but also in its conception of the human body in its anatomy, functions, diseases, etc. So fully do its inhabitants themselves realize this mental divergence that they commonly assert the foreign physician, however skilful in surgery and however accurate in his knowledge of the white man's anatomy, to be quite incapable of understanding that of an Oriental and therefore a dangerous person to trust themselves to. In the decade and a half since Korea opened her gates to Western civilization one only of her sons has acquired the medical diploma of a foreign institution, and he became an American citizen before returning to his native land. One young man and one young married woman are at present studying medicine in America. It is understood that neither any one of these nor yet of the foreign physicians domiciled in Korea has so far discovered a constant variation in so much as one detail of anatomy between this and other races. But then dissection and the practice of autopsies are alike abhorrent to those who look upon all unknown and mysterious things as sacred and the progress of enlightenment has not yet gone so far here as to brave this prejudice without strong cause.

Hitherto the Chinese theory has satisfied all requirements, furnishing a simple nosology under the five heads of wind diseases, earth diseases, fire diseases, water diseases, and wood diseases, according to the five elements of early philosophies; and for purposes of anatomical localization the external integument has been divided into regions and subregions, some two hundred in number, more or less, for pain in any one of which certain specified drugs are approved. For suffering in any region whatever the "chim" is a sovereign remedy, almost the only surgical procedure known to the native practitioner. It consists of a metal skewer some inches long, usually pointed at one end and with a handle at the other, which is plunged into the offending tissues, apparently with the idea of "letting out the humors." Subsequent introductions increase progressively in depth up to the limit of the instrument's length, and it is often superheated before introduction. As anæsthetics and asepsis are alike unknown to the Korean doctor, the effects of this treatment upon the mind and the ailment of the sufferer may be imagined. Plunged three inches deep into the abdomen, or between the bones of one of the large joints, septicæmia is the almost inevitable result, and the unwashed instrument is wrapped in dirty paper or silk till again required. No wonder every child in Korea dreads examination at the hands of the doctor. At the tenderest age they are often submitted to this barbarity, and the boy or girl of ten, whose body is not marked with the scars of old sores due to the "chim," is indeed a rarity. Bone necrosis and joint disease are exceedingly common in this country, and may almost invariably be traced, by careful questioning, to the introduction of the "chim."

Not every Korean physician, however, is a fool. I have enjoyed consulting with one who several times very neatly cauterized a carcinoma of the left tonsil and pharyngeal wall with a small silver instrument at a white heat. The case was too far advanced and the patient too reduced in general health for operation when I saw her, but the attendant seemed to me to have used most excellent judgment according to the means at his command, and had undoubtedly prolonged life by some months. Others I have found who had no little aptness for the profession of medicine and who might develop under instruction into capable practitioners. The Korean repertorium, too, probably contains some useful drugs of vegetable origin which have not come to the knowledge of your readers. For instance, in a case of general anasarca a native doctor succeeded in bringing the tissues to a normal appearance in a very brief period by the use of a diuretic, concerning which he refused all information. I hope some time to be able to write you something respecting the resources of their pharmacopœia.

In the list of diseases prevalent here and in the course usually followed by them, Korea differs widely from the United States. Notably is this the case in regard to the commoner infectious diseases, which are of decidedly infrequent occurrence, and which are almost invariably so mild in type as to have led some to declare they do not exist. Scarlet fever, for example, is not often met with and seems to possess but little power of contagion. Its symptoms, if carefully observed, are characteristic but exceedingly mild in type, a moderate soreness of the throat and some rise of temperature and malaise being the chief complaints. By the time the diagnosis is reached with certainty, and the physician thinks the disease well established and is preparing for a settled course of treatment, an apparent remission begins which proves to be final convalescence, and the attendant asks himself if after all he has not been misled. The duration does not commonly exceed two or three days of indisposition. Desquamation is seldom characteristic. Not long since, however, a case in one of the missionary schools here for girls ran a longer and severer course, and reached a fatal termination in consequence of a resultant acute nephritis.

Measles is much more common among the younger portion of the population, but is not usually severe enough to merit treatment, although in infants fatalities are frequent, owing to carelessness and resulting bronchial complications. Often the eruption has come and gone in the space of twenty-four hours or a little more; and this, as I have had full opportunity of observing, is quite as apt to be the case with the children of foreigners as with natives.

Diphtheria is much rarer than in America. During a residence in Seoul of nearly eight years I have seen only three cases of a pronounced character and learned of about as many more from other practitioners. But every physician here sees occasionally cases such as are so frequent at home, so closely resembling follicular tonsillitis as to be indistinguishable except on examination for bacteria. Sometimes a limited amount of membrane is discernible, more frequently none. In one or two instances paralysis has followed this ailment, if I may believe the statements of very ignorant persons who are wholly indifferent whether they inform or mislead me. Diphtheritic vaginitis and ophthalmitis too have been encountered.

Typhoid fever almost never runs among the native population its typical course. Five days of actual temperature rise seems to be its normal duration in Korea; and this period may furnish one continuous series of evening exacerbations, seldom higher than 103.5° F., and of morning remissions, or it may be broken by a return on the third or fourth day to the normal, later followed by some renewal of symptoms. The tympanites, iliac tenderness, and apparent general condition of the digestive tract are characteristic, as is the daily course of the temperature. So far as I know, recovery is universal. Between this and various regular or irregular fevers many intermediate types exist.

Smallpox may be considered endemic. At all seasons of the year, but particularly in the spring, children suffering or recovering from it may be seen playing about the streets of the capital. Until lately every one was expected to have it, and no Korean counted a child his own until it had recovered from smallpox. It is said that one-third of all children in Korea die from this scourge under the age of five years. Since foreigners came vaccination has gained favor, and even the government has sent out vaccinators. All types prevail, from the mildest to the most severe. The popular superstition interdicts any treatment whatever lest "mama," the spirit of the disease, be displeased and slay the unfortunate. For this reason instances are very few of a patient with this disease being brought for skilled treatment. Many permanent lesions remaining in those who have recovered from severe attacks bear testimony to this lack of care; among them large numbers of corneal opacities, nasal occlusions, and other deformities.

Among the commonest diseases in Korea is typhus fever, its well-known symptoms graduating off, like typhoid, into a large variety of febrile disturbances more or less serious. I have never seen in this country a case typical as to duration; perhaps some fatal on the fourth or fifth day would have proved so. As a rule no eruption appears, but in a few instances I have seen a most beautiful and general one, and in one case of a mild attack in a foreigner was able to confirm by this means a somewhat doubtful diagnosis. It was this disease which proved fatal to the lamented Dr. William J. Hall, "the pioneer medical missionary to Pyeng Yang," soon after the famous battle at that ancient city. Next to smallpox it is undoubtedly the

severest disease scourge of Korea, and neither has spared the foreign community.

A dozen years ago, in his "First Annual Report of the Korean Government Hospital," Dr. H. N. Allen, now American minister to Korea, gave the first known account, under the title of "relapsing fever," of what has since come to be a recognized form of disease among those practising here. His account, to which little remains to be added upon fuller acquaintance, is as follows:

"It commences with a few days of malaise, followed by a chill, which is succeeded by high fever and severe pains in the bones and joints. There is usually an evening exacerbation. The patient soon becomes quite delirious, which condition continues till the seventh day of the fever, when the crisis occurs. The crisis is ushered in by a very severe chill, followed by a profuse perspiration in the favorable cases. If this sweat is checked or fails to come on, the patient is apt to die. If in spite of the absence of the sweat he recovers, the delirium continues, with dyspnœa and rheumatic pains whenever the weather becomes damp.

"A return is expected in about seven days, but we could not get a clear history of further attacks. One attack, instead of giving immunity against others, rather favors their return.

"It comes on in the spring and autumn and is influenced by the severity of the rainy season, dampness being favorable to the outbreak of the disease.

"It affects all ages, and the poor suffer more from it than the well-to-do, probably because they are compelled to go apart by themselves, and, living in mere huts of straw, they cannot care for themselves well during the crisis. Not knowing what the disease was, when I first came here I treated a man for what I could only term contagious fever. I used quinine till the man became deaf, and made but little impression on the fever, without in the least checking the disease. I finally gave him spirits of Mindererus, and he was removed from my care by his friends.

"The Koreans give only such medicines as will bring on the perspiration, and endeavor to keep the patient warm. They say that sixty to seventy out of a hundred people have the disease and that it is not fatal if well cared for."

The "clear history of further attacks" has been gotten many times since then, and in some instance patients have testified that successive relapses, occurring at ten-day intervals and lasting each for one week, have covered a period of many months. No very satisfactory treatment has been arrived at, the guarded administration of antipyrin and the use of acids and sustaining measures being perhaps the most successful.

Another interesting febrile complaint not known to me until I came to Korea seems to be a malarial infection whose period is either seven or fifteen days. Not often marked by a chill, it is usually ushered in by severe malaise, frontal headache, and often nausea and vomiting, coming on suddenly after breakfast. The temperature may go as high as 106° F., and so continue most of the day, falling gradually to normal during a period of twenty-four or thirty-six hours. An indisposition to effort marks the next few days. In some cases severe diarrhœa accompanies these symptoms for a variable period, and has a tendency to become chronic dysentery. The attacks yield to rather large doses of quinine, but only complete change of surroundings seems to have a permanent effect in causing their cessation. Doctors in Korea are busy people, and microscopes and similar apparatuses are not plentiful, which may account for the fact that I know of no search being made for the plasmodium.

Korea is a country of but small surgical opportunity. The era of railroads and machinery only approaches its dawning. War has not in long cycles gone beyond petty squabbling. Firearms are not common outside the ranks of the army. The women as a rule are hardy, do their own washing the second or third day after childbirth, and make comparatively few complaints of gynæcological ailments. Tumors are less frequent than in Western lands. So that a scant range of accident, a multiplicity of abscesses, the ever-varying effects of the Korean "chim," the vast number of eye disorders, and a limited amount of personal violence, furnish the chief occasion for the use of the knife.

Among such surgical operations as have engaged professional interest here during recent months two may be thought worthy of wider publication. Both occurred in the service of Dr. O. R. Avison at the government hospital. A woman of twenty-three, after drinking lye by mistake for water, experienced a gradual occlusion of the œsophagus, which in the course of four months became so complete that no fluid whatever could be passed. Gastrostomy was performed in two operations at an interval of three days apart. Recovery was uninterrupted. Feeding of rice-water began as soon as the effects of the anæsthetic had passed; solid food was begun when the last sutures were removed on the sixth day; and the patient was discharged on the eleventh day, "able to swallow with fair freedom, but returned in about three days with throat closed." The tube was replaced and she was told to attend as an out-patient. She "did not return for six weeks and then came back strong and in good condition, still using the tube in her stomach, but with a good deal of surrounding ulceration. She said she had been at a Japanese doctor's trying to get a passage forced via œsophagus, but after trying in vain every day for six weeks, gave it up. A little care healed up the ulceration and she received a larger tube and a glass stopper for the gastric opening." I quote from the ward history of the case.

The second case referred to was that of a man of thirty-eight, who reported having been in fair health until eleven days before entering the hospital. When tired he had been accustomed to spitting small lumps of clotted blood. On examination there was found, according to his history sheets, "solidification of lower lobe of left lung, with many râles; great swelling with tenderness over liver." Two days later "increased fulness over liver with great œdema of abdominal walls; decreased signs in left lung; very little cough; liver dulness extends when lying down to level of lower border of fourth rib in nipple line." On the next day "swelling over liver rather less, but there is a decided bagging below and to right side, which fluctuates." On the eighth day he was "aspirated in front of axillary line and two inches below floating ribs, drawing off pus and dark-colored blood." On the tenth day in hospital, September 29th, there was "found much more extensive cavity in left lung and general condition worse; pulse, 100; cachexia more marked; bloody sputum more abundant. Chloroform was administered, ether being contraindicated by condition of lung. Made oblique incision two inches long, beginning about two inches below and one inch to right of apex of ensiform cartilage and continuing in a line with costal cartilages. Found peritoneum adherent and, passing aspirator into liver outward, upward, and backward, found pus cavity. Incised with knife and pus flowed freely. Found cavity probably ten inches in diameter every way. After some pus had come away there was a large flow of clear serum-like fluid, then same mixed with blood and more pus. There were large masses of partially broken-down material, almost all pus, which the operator broke down and brought away. Washed cavity out with hot water and inserted two large drainage tubes through

same opening. Bagging in lower right-hand side of abdomen decreased materially during flow of pus. The patient took the anæsthetic well and came out without marked shock and with no vomiting." Dr. E. H. Baldock, who examined a specimen of the discharge and also of the sputum, reported: "The pus was the chocolate-colored discharge so common in tropical liver abscess, and consisted of blood, pus cells, a large quantity of fatty débris, some bile pigment, and a very few micrococci. I could find no amœbæ. The expectorated matter was essentially the same, with mucus." Next day the amount of sputum expectorated greatly increased and the breathing became distressing. These symptoms, however, soon abated and the patient has progressed steadily toward recovery. At present, nearly ten weeks after the operation, he still wears the drainage tube, from which a small amount of thin discharge daily issues. Air is expelled also from the drainage tube, especially upon coughing, and air is probably occasionally drawn into the lung by the same channel. We have here then the case of a man with an abscess of the liver of enormous dimensions, which had effected an exit into the left lung before he presented himself for treatment; and in whom the channel between the liver and the lung still persists long after drainage of the abscess, supplying a direct passage through both of the large body cavities from the throat to the external abdominal wall.

C. C. VINTON, M.D.

SEOUL, KOREA, December 9, 1898.

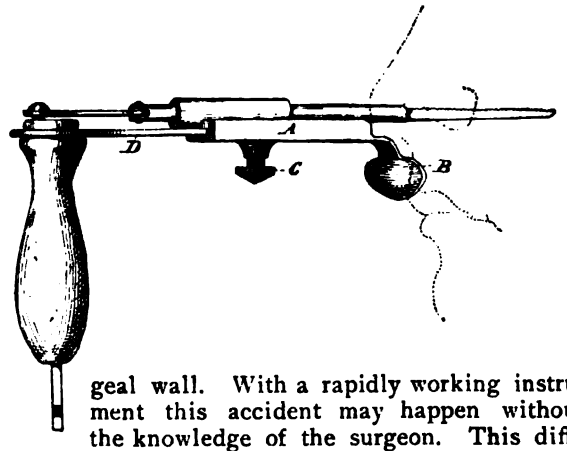
New Instruments.

A NEW SUPPORTING GAUGE FOR NASAL SAW.

BY ERNEST HALL, M.D.,

VICTORIA, B. C.

IN using the motor nasal saw I had found some difficulty in accurately determining the depth to which the saw penetrated, and occasionally allowed the point of the saw to impinge upon the upper posterior pharyngeal wall. With a rapidly working instrument this accident may happen without the knowledge of the surgeon. This difficulty I have overcome by the addition of a sliding gauge (*A*), which can be moved upon the supporting bar (*D*) and fastened by a set-screw (*C*), so that with the collar (*B*) placed against the upper lip of the patient, the saw can be adjusted to any required distance into the nostril. Thus all danger of wounding the back of the throat is avoided, while the bar also gives a satisfactory support for the saw, the latter being of no little importance when there is a heavy section to be made.

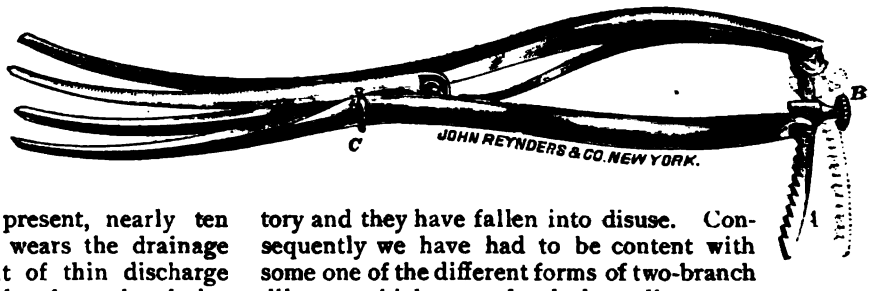


A NEW FOUR-BRANCHED DILATOR FOR THE CERVICAL CANAL.

BY AUGUSTIN H. GOELET, M.D.,

NEW YORK.

THE ideal cervical dilator is one that will expand in four directions; yet, strange to say, a satisfactory instrument of this kind has not heretofore been devised. Many attempts have been made with both three and four branches, but none of them has been satisfactory and they have fallen into disuse. Consequently we have had to be content with some one of the different forms of two-branch dilators, which expand only laterally.



After many unsuccessful efforts I have, with the assistance of Mr. Charles Reynders, finally produced an instrument which I can recommend as satisfactory. It seems impossible to construct a four-branch dilator for initial dilatation that will have sufficient strength; therefore this instrument can be used only in ordinary cases after some degree of dilatation has been brought about with the two-branch instrument, because it is too large to be introduced in a cervix of normal or abnormally small calibre. With it, however, by careful manipulation it is possible to effect sufficient dilatation for the introduction of the finger for exploration of the uterine cavity. But it is necessarily a strong, powerful, and dangerous instrument, and should be used with the greatest care, the extreme dilatation being accomplished slowly and the force being applied intermittently, one tooth at a time on the ratchet attached to the handle.

The instrument is represented most unsatisfactorily by the cut because the mechanism for expanding the anterior and posterior blades is not shown. The lateral blades are continuous with the handles and separate when these are brought together in the grasp of the hand. The anterior and posterior blades are expanded also by the same manœuvre simultaneously with the separation of the lateral blades. The anterior and posterior blades are continued a short distance below the lock or pivot *C*, upon which they play, and are flattened out laterally and perforated with fenestræ, one margin of which on each blade slants instead of being square. Forged on the inner side of each handle opposite these fenestræ and fitting into them is a wedge-shaped projection, which, being forced into the fenestra of each terminal by the approximation of the handles, brings the two together, separating the blades. Hence the approximation of the handles separates the four blades simultaneously.

A spring ratchet, *A*, has been attached to the handles to rest the hand and make the dilatation more gradual by equalizing the force applied. An adjustable stop, *B*, has been placed upon the ratchet to prevent too sudden and forcible approximation of the handles, which would certainly result in serious laceration. This stop is moved along and set two teeth at a time at first, and as the dilatation progresses it is set ahead only one tooth at a time. By exercising extreme care very considerable expansion of the cervix can be accomplished with this instrument without injury.

116 WEST SEVENTY-FOURTH STREET.

Don't Wash out the hypodermic syringe with alcohol which by dissolving out the oil permits the packing to dry and harden.

A NEW VULSELLUM NEEDLE.

By M. G. BARKER, M.S., M.D.,
CHICAGO, ILL.

FIG. 1 shows the needle one-half its actual size. The needle has two arms—needle arm and vulsellum arm. The eye of the needle commences at the centre of the spear point and extends through the centre of the needle arm longitudinally about one inch. In other words, the needle arm is hollow from the centre of the spear point back about one inch.

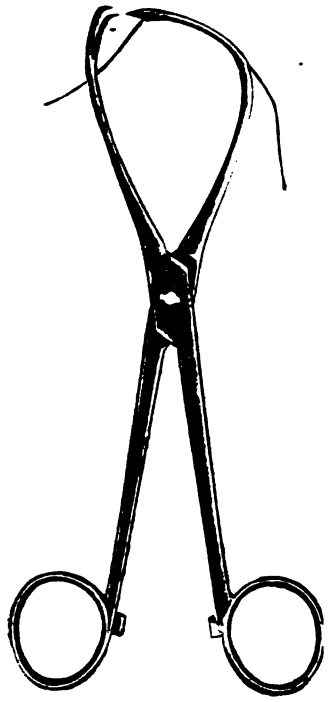


FIG. 1.—Barker's Vulsellum Needle.

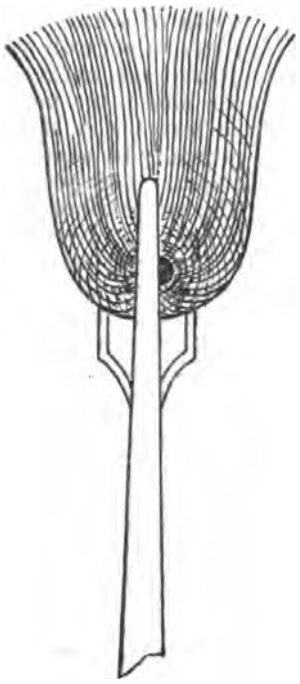


FIG. 2.—Needle Applied to Cervix High in Vagina.

A No. 12 silk is readily passed through the eye. In arming the needle with the guy rope the needle should be threaded toward the point, and the guy rope should be two feet long and passed half its length through the needle's eye, thus leaving the ends of the guy rope of equal length when in position.

It is with pleasure I introduce this instrument to the profession. Its chief value is in uterine work, for which it was designed. In placing a guy rope in the uterine cervix the vulsellum needle takes the place of the vulsellum forceps, needle-holder, and cervix needle—one instrument instead of three. It is as quickly applied as the vulsellum forceps; hence the time of preparing and manipulating the other two instruments is saved. In the usual way of placing the guy rope the finger is often wounded by the needle, and needles are frequently broken. With the use of the vulsellum needle both these troubles are eliminated. All realize the danger in being wounded by a needle, if the needle has passed through tissue poisoned with syphilis or malignant disease, and often the surgeon cannot know these things until after mischief has been done.

Manner of Application.—A speculum (we will say Sims', though any may be used; it is our custom to use the two fingers of the left hand) is introduced into the vagina, and the cervix brought in position for applying the needle. The needle, armed with guy rope and locked, is turned on its side and passed along the surface of the speculum or the fingers until the cervix is reached. This prevents the point of the needle being dulled on the speculum. When the cervix is reached the needle is turned, unlocked, and applied, as seen in Fig. 2. The posterior wall of the vagina is now depressed with the speculum or fingers. The cervix is brought to the anterior vaginal wall, and the uterus is drawn down as far as necessary and the cervix flexed anteriorly, as seen in Fig. 3. Thus the eye of the needle armed with the guy rope is brought plainly into view. The guy rope is now seized with a tenaculum and the end which passes through the needle is

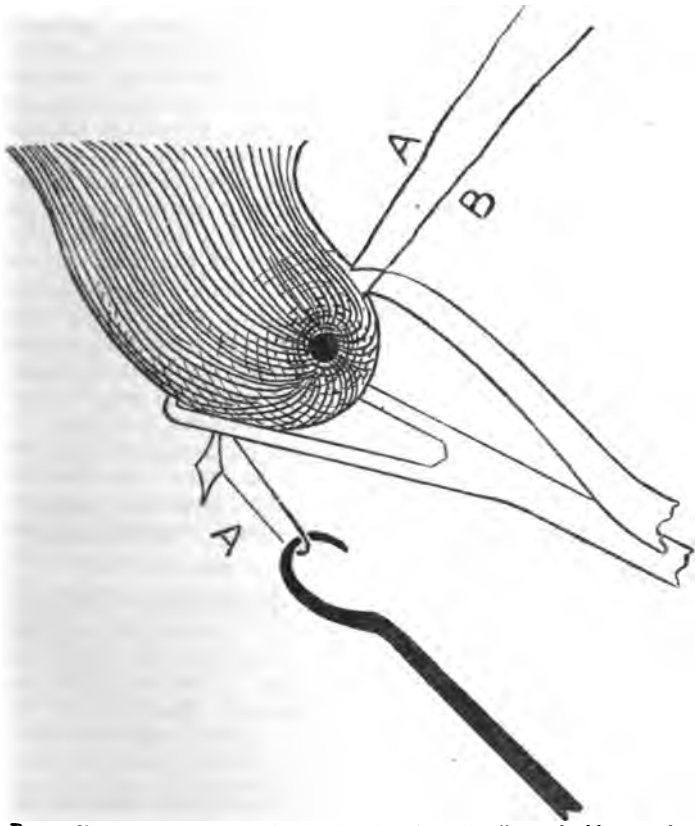


FIG. 3.—Uterus Drawn Down. Cervix flexed and needle disarmed with tenaculum; *AA*, being drawn through needle; *B*, remaining in tissue.

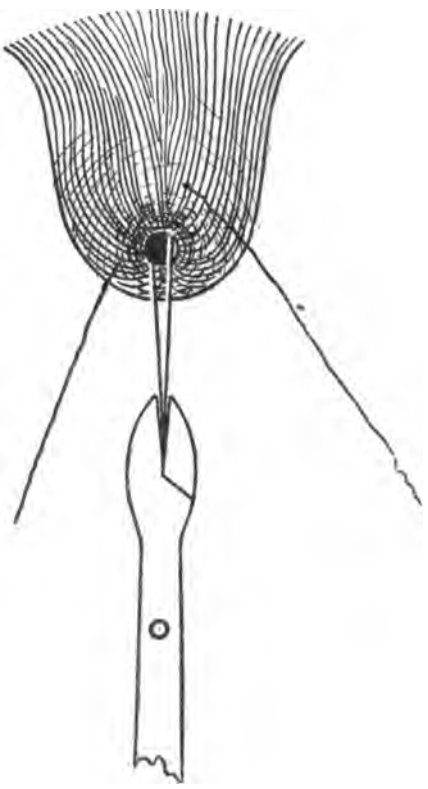


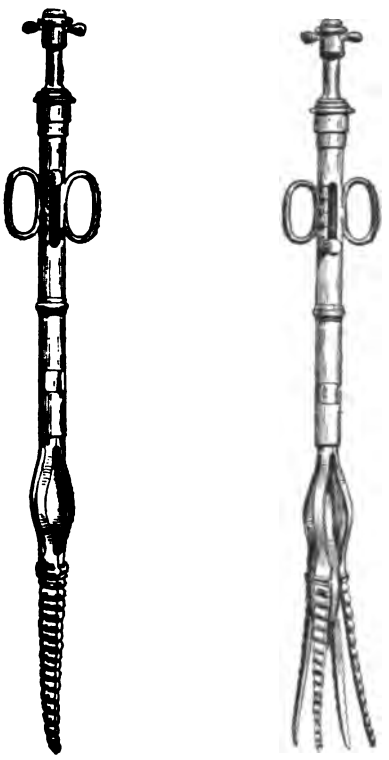
FIG. 4.—Drawing Guy Rope from Cervical Canal with Artery Forceps.

drawn out, thus disarming the needle (see Fig. 3). Both ends of the guy rope are now seized in the left hand, and the cervix is held while the needle is unlocked and removed. An artery forceps is now introduced into the cervical canal and made to grasp the guy rope (see Fig. 4). When the rope is drawn out sufficiently to make the anterior and posterior ends equal in length, the rope is cut, the anterior ends are tied, and also the posterior ends, thus completing the guy rope.

A MODIFIED CERVICAL DILATOR.

By A. BROTHERS, M.D.,
NEW YORK.

THE illustrations represent a dilator made by F. Eissner of this city, and which I have used during the past two years in probably a hundred cases requiring cervical dilatation. It is intended to dilate the cervical canal in four directions, approximately in a circular



manner. In doing so the projecting end-piece is rotated so that the central wedge slowly and gradually separates the blades which lie within the cervix. This slowness prevents the lacerations of the cervix which so frequently occur when the ordinary dilator is used. An index on the handle of the instrument marks off the degree of separation of the blades. The instrument has been constructed for aseptic work, so that with little difficulty it can be taken asunder, thoroughly cleansed, and put together again after each operation.

Ventilation and Warming of Churches.—The ventilation of churches, in which the worshippers are packed with an irreducible minimum of floor space which no excess of height can compensate, is notoriously defective, and indeed is worse in proportion to the thoroughness of the heating, since the higher the temperature within the building the more carefully are cold draughts excluded; and were congregations generally composed of the class of persons who throng the police and county courts, the state of the atmosphere would be wellnigh intolerably offensive.—*London Lancet.*

Medical Items.

Alcoholism.—A case of acute alcoholism may at the same time be one of apoplexy. One suffering from an apoplectic attack may have the smell of liquor on his breath and yet not be intoxicated. The breathing in a case of acute alcoholism, while it may be deep and heavy, is not truly stertorous nor of the Cheyne-Stokes variety, and examination will not reveal paralysis of one side of the body. Consciousness may appear to be lost, but it is not absolute, and the patient can generally be aroused, at least for a moment, from his stupor. The pupils are usually equal and dilated. The temperature may be two or three degrees below normal, but it does not show the successive variations of true apoplexy. Southey has recommended the injection into the rectum of a pint and a half of cold water with a tablespoonful of salt dissolved in it, which in his experience once restored to consciousness a case of extreme drunkenness.—DR. MILL, in "Text-book on Nervous Diseases."

Cause of Napoleon's Death.—Napoleon Bonaparte died at the age of fifty-two, of cancer of the stomach, in May, 1821. His father had died at the age of thirty-eight, of the same disease. Napoleon was the son of a very young mother. She was possibly not sixteen when he was born, and certainly not twenty. Cancer is, I believe, more common in the children of aged parents than of young ones. We must, however, here bear in mind the inheritance and also the depressing and annoying conditions under which Napoleon's last years were passed. There can be little doubt that mental depression disposes the tissues to cancerous changes.—HUTCHINSON'S "Archives of Surgery."

Tenacity of Life in the Jew.—*Appleton's Popular Science Monthly* for December contains an article by Prof. Z. Ripley, entitled "The Jews: a Sociological Study." Among other good things said in this article are some remarks on the vitality of the Jews, according to Professor Ripley. "It far exceeds, especially in the United States, that of any other known people. This we may illustrate by the following example: Suppose two groups of one hundred infants each—one Jewish, one of average American parentage (Massachusetts)—to be born on the same day. In spite of all the disparity of social conditions in favor of the latter the chances, determined by statistical means, are that one-half of the Americans will die within forty-seven years, while the first half of the Jews will not succumb to disease or accident before the expiration of seventy-one years. The death rate is really but little over half that of the average American population. This holds good in infancy as in middle age. Lombroso has put it in another way: Of one thousand Jews born, two hundred and seventeen die before the age of seven years; while four hundred and fifty-three Christians—more than twice as many—are likely to die within the same period. This remarkable tenacity of life is well illustrated by a most suggestive article by Hoffmann."

New Phases of Medical Journalism.—The strict and serious business of medical journalism is threatened with innovations which tend to bring it into line with other literature of the day. Time was when men read for the sake of instruction. Possibly they do now; but they far more frequently read for amusement and perhaps more frequently still to pass the time. Hence the demand for what is light, is piquant, and especially for what is short. As the result of some strange perversity it seems to have been laid down as

one of the canons of medical journalism that it must be technical, must deal with professional subjects in a professional manner, be addressed to professional readers only, and generally be so dull as not to be attractive to any one except those engaged in the practice of medicine. But for the misfortune that most of the doctors have long since forgotten their Latin no doubt the purists would have had their medical journals printed in that interesting language, lest perchance "the laity" should read their contents. In any case, it has long been held, and is still held officially, that to write on medical topics in papers which are addressed to the general public is something very bad indeed. It is then with some interest that we take up the prospectus of an association (limited) which is being formed for the floating of a monthly medical journal which is not only adequately to cover the field as a general medical magazine, but "at the same time, by the publication of suitable material, serve to promote the influence of the profession among the lay community." Along with this prospectus the association forwards a list of "patrons and contributors" in which Fellows of the Royal College of Surgeons stand as thick as gooseberries, even the respected president of that body being among them. What this new association means by a patron and contributor, of course, we do not know. Perhaps a contributor to its funds by the purchase of a copy may qualify a man as a "patron and contributor," and in that case we have nothing more to say. But if all the mighty men who figure in that list—men who largely rule the destinies of our profession—are really contributors in the ordinary sense of the term to a publication which, while posing as a professional organ, aims at being read by the lay community, then we think the smaller fry may fairly ask why they should he held with so tight a rein. It is not without amusement that we note another sign of that drift toward the interesting and the amusing which characterizes modern medical journalism—namely, the appearance of a "short story" in the *Practitioner*. The story is a very good one, it is written by a medical man, and it has a sufficiently medical flavor about it to make it pass. Still it is just a "short story" such as would have ornamented any ordinary magazine and such as can be read purely as a story without any suspicion of its clinical bearing by any ordinary individual. The innovation is a distinctly good one so far as that modern tendency is good which would make a journal of whatever kind interesting throughout—a thing of pleasure rather than of toil. But it is an innovation, and one which must cause those who think a medical paper should be a sad and serious thing, to shiver in their shoes. Even the *British Medical Journal*, in its programme for the coming year, proposes to deal with archæological, historical, and literary subjects, thinking that the addition of a little literary flavoring to the solid materials of which the *Journal* is composed may tend to make the mixture more digestible as well as more pleasant. And who shall say that the *British Medical Journal* is not right?—*Hospital.*

Mushroom Juice as a Vaccine against Viper Venom.—The *English Pharmaceutical Journal* says: "We have hitherto been wont to regard the humble mushroom only in the light of a fitting adjunct to beefsteaks, etc., but we now learn that tickling the palate is the meanest of the rôles which this succulent agaric is destined to play in the affairs of men, for M. Thisalix informs us that the juice of the mushroom has been employed by him in no less than two hundred experiments as vaccine—producing the same symptoms as the venom of viper bites. He prepares the vaccine in the following simple manner: Having cleaned the mushrooms as well as possible in several washings of water, he cuts them up into small pieces and macerates them in their own weight of chloroform water for twenty-four hours. The liquor is then drawn off and filtered through chemically pure filter-paper. It has a neutral reaction, a pleasant and agreeable odor, and an insipid taste. In color it is at first brown, but quickly deepens until it finally assumes an inky blackness. It keeps well in stoppered bottles if a drop or two of chloroform be added. Respecting its physiological action, the author assures us that it is not so inoffensive as one might believe *a priori*. A dose of ten cubic centimetres inoculated under the skin of a guinea-pig's thigh produces an œdematous swelling which disappears in five or six days. At the same time the temperature rises from one-half to one degree. If a stronger dose (twenty to twenty-five cubic centimetres) be employed, the local action becomes more pronounced, the œdema spreads to the abdomen, and sloughing sometimes supervenes. The temperature falls gradually (one to two degrees), only to rise again rapidly. The general phenomena are more accentuated when the maceration is injected warm into the peritoneum, the animal being often seized with nausea and falling on its hindquarters. The temperature falls four or five degrees and remains so for twenty hours; the stomach is hard and sensitive to the touch. If, however, injected into the veins of a rabbit, the liquid produces, even while injecting it, violent shocks, which intensify in proportion as the dose is increased. Generally fifteen to twenty cubic centimetres suffice to produce death. The animal falls on its flanks agitated by convulsions, and asphyxia ensues in a few seconds. If the thorax be at once opened, the heart will be found to be distended with blood, immobile, and all the veins swollen. The blood is black and coagulates rapidly. In the ventricles small clots are already observed. Allowing a few minutes to elapse before making the autopsy, the coagulation will be completed in the vessels, and one can withdraw from the heart clots which reach into the aorta and pulmonary artery."

A Bracing or Tonic Bath.—As Franklin was in advance of his time in the use of water, so, too, he led the way in preaching the value of fresh air. In a letter to his friend, Dr. Dubourg, he said: "I greatly approve the epithet which you give, in your letter of the 8th of June, to the new method of treating smallpox which you call the *tonic* or bracing method; I will take occasion from it to mention a practice to which I have accustomed myself. You know the cold bath has long been in vogue here as a tonic; but the shock of the cold water has always appeared to me, generally speaking, as too violent, and I have found it much more agreeable to my constitution to bathe in another element—I mean cold air. With this view I rise almost every morning and sit in my chamber without any clothes whatever, half an hour or an hour, according to the season, either reading or writing. This practice is not in the least painful, but, on the contrary, agreeable; and if I return to bed afterward, before I dress myself, as sometimes happens, I make a supplement to my night's rest of one or two hours of the most pleasing sleep that can be imagined. I find no ill consequences whatever resulting from it, and that at least it does not injure my health, if it does not, in fact, contribute much to its preservation. I shall therefore call it for the future a *bracing* or *tonic* bath."—*The Century Magazine*, December, 1898.

The Power of Gentleness.—In a book just published, recalling some of the incidents in the life of Mrs. Gladstone, there occurs a passage of considerable beauty and showing how this noble woman exercised her "gentleness" in a time of public peril.

Wellnigh fifty years ago, when disease and fever were carrying off hundreds of lives and despair was rife in the land, Mrs. Gladstone went in and out among the stricken ones without the slightest fear. The writer says: "Ah! she was a good woman, a brave woman. She faced all the difficulties at a time when people outside seemed to be panic stricken. Not only was there the dread of infection, but the state of the wards was frightful. Everywhere we had sawdust steeped in carbolic acid scattered about, and underneath every bed there was a large bag of such sawdust. The beds themselves were made of sacks of straw, and such was the nature of the disease that as soon as a patient died or could be removed we carried away the bed of straw and the sack of sawdust and took them to an open space at the back of the hospital, where every other night we had a bonfire. The sufferings of the wretched people were intense, and on every hand one or another would be dying; but Mrs. Gladstone moved freely about among them, saying a kind word here, giving a flower there, and everywhere showing a sympathy which seemed to the poor people to bring a ray of light into the gloomy wards and certainly helped them to bear their trial better. She took no part in the actual nursing, but her sympathy, her flowers, and her very presence in the wards were in that terrible crisis a blessing such as you can scarcely realize now. Happily we have improved on our hospital arrangements since those days, but woman's noble influence in soothing pain and banishing suffering remains the same, without which the finest building would be but a 'whited sepulchre.'"—*Sanitary Record.*

The Study of Nativities in New York City.—This study embraces a period of ten years, and deals with the pauper, or rather poor, population of the American metropolis. The article on the matter was written in *The Forum*, and we quote the statistics that refer to the almshouse. The almshouse, the writer of the article says, is the distinctively pauper institution. It might with much propriety be named pauper-town. Its average population is about 2,500. In considering the statistics of this institution, it is well to remember that the average moral condition is exceedingly low. Those who have spent their substance and their physical and mental energies in unworthy living are present in great numbers. The total admissions from 1885 to 1895 were 27,743; of these only 14.6 per cent. were born in the United States. The 85.4 per cent. born somewhere out of the United States were distributed as follows: 60.4 per cent. were born in Ireland, 14 per cent. in Germany, 4.4 per cent. in England, and 4.4 per cent. in other countries. The most striking fact that appears here is that six out of every ten of New York city paupers were born in Ireland—more than four times as many as those born in the United States and nearly two and one-half times as many as were born in all other foreign countries. Germany's percentage in the almshouse is exactly the same as in the city—namely, fourteen—England's twice as large, while Scotland's is three times as large.

Is Change at All Times Desirable for the Sick?—The days of faith-healing are supposed to be past or at least out of joint with modern civilization. But there is a good deal of it left. It is at the bottom of most of the good that is done by widely advertised patent medicines or by cunning and plausible quacks. Most people, indeed, have faith in some particular doctor or in some particular locality, which faith is more or less independent of the scientific skill of the one or the healing properties of the other. They will do what their favorite medical man tells them or go where he bids them, with the docility of sheep. They will leave or allow others to leave the comforts of home and the cheering company of friends for the discomforts of a long and toilsome journey in cold and stormy weather and the solitude and depression among strangers. It may be necessary sometimes—no doubt it is if life is to be prolonged. But how many cases there are in which, had it not been for this blind faith in change of scene and in travel to which the enfeebled frame is now unequal, the inevitable end might have come gently and painlessly in the old familiar home surrounded by loving faces!—*London Times.*

Concentrated Wit.—German publications have for long frowned upon the frivolity which now and then creeps into American medical journals. Instead of making an attempt to bring a smile to the careworn features of the busy reader at more frequent intervals, the *Münchener medicinische Wochenschrift*, than which there is no more staid and strictly scientific journal in all Germany, has recently published a funny number, from which all things serious are excluded. The racial characteristic of going to the root of things here stands out in the way the whole number, from original articles to the advertisements, has been given over to "fooling." "Asexual propagation of the human race" has been so cleverly worked out that one is led to believe it an excellent scheme. Another article relates the successful transplantation of a pig's stomach to relieve a student of an uncontrollable desire to fill the organ with large quantities of malt and hop infusion. A hit at our bogus institutions in the West is probably intended in attributing the article to Professor Swindel of Mississippi College. Among the new remedies advertised are hæringin for hyperemesis matutina, and argentaurin, a sure cure for impotentia solvendi. The suggestion to substitute artificial assistants made of metal and glass for those of human flesh is not so bad. They might rust or break, but they could not tell each other afterward how much better they could have done the operation themselves. A little nonsense now and then is relished by doctors, who are after all the best of men, but on this side we prefer it strung out over the whole year in small instalments.

Sign of Rickets.—"If there are no teeth at the age of twelve months the infant is probably rachitic."

—SMITH.

Health Reports.—The following cases of smallpox, yellow fever and cholera, have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending February 11, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, San Francisco	January 31st	2*	
Colorado, Denver	January 7th to 14th	1	
Dist. of Columbia, Washington	January 31st	2	
Indiana, Indianapolis	January 31st	4	
Kentucky, Louisville	December 20th to February 8th	47	
"	January 30th	3†	
Michigan, Detroit	January 21st to February 4th	7	
Nebraska, Omaha	January 22d to 28th	3	
New York, New York	January 28th to February 4th	1	
Ohio, Cincinnati	January 21st to February 3d	49	
Cleveland	January 21st to 28th	1	

* One a railroad employe from Colorado; one a leper in pesthouse.
† On s.s. *Tarascon.*

SMALLPOX—FOREIGN.

Argentina, Buenos Ayres	November 1st to 30th	..	5
Brazil, Bahia	December 17th to January 7th	56	6
Rio de Janeiro	December 16th to 23d	27	7
England, London	January 7th to 14th	1	
Mexico, Mexico City	January 22d to 29th	5	3
Monterey	December 23d to January 5th	..	2
Russia, Moscow	January 7th to 14th	3	2
Odessa	January 7th to 14th	1	
St. Petersburg	January 1st to 14th	7	1

YELLOW FEVER.

Brazil, Bahia	December 24th to January 7th	2	1
Rio de Janeiro	December 16th to 23d	7	4
Mexico, Chihuahua	January 22d to 28th	..	2

CHOLERA.

India, Calcutta	December 17th to 24th	..	21
Madras	December 10th to 16th	..	6

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Original Articles.

THE CURABILITY OF CANCER.[1]

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I MAY appear presumptuous in presenting a paper upon the subject I have selected in a city which prides itself as being, so to speak, the metropolitan centre in the tropic of cancer. I trust I may be pardoned for selecting a theme so trite, and yet I know of no surgical subject which should concern us more deeply than that of the curability of cancer.

Despite the constant study of cancer and its varying surgical and medical treatment, its prevalence steadily increases. We are told that in England it is responsible for the death of one-twentieth of all men and one-twelfth of all women who have passed the thirty-fifth year of age.

It certainly is remarkable that the cause of a disease so constantly with us, the subject of such earnest investigation, should still remain undiscovered. Theories without number have been presented. The old idea that it was dependent upon "disordered action of natural component parts of the body" must of course be abandoned. And yet the principles governing our treatment of a disease must be based upon our conception of its origin. If we cannot establish as a fact that cancer is due to the introduction of an extrinsic cause, or at least that it is primarily a local disease, not only capable of transmission to the immediately surrounding structures, but of widespread dissemination to remote sites in the body, surely no surgical procedure directed to removing the existing tumor offers promise of curing the disease. Until recently it seemed that this was a quite universally accepted doctrine. I must confess that one of the reasons which prompted me to believe that this was a timely subject for consideration was a chapter devoted to the study of cancer, in the work recently issued by Dr. A. V. Meigs on the "Origin of Disease." He seeks to draw a parallel between the malignant diseases cancer and sarcoma, and the fibroid process. After discussing what he believes to be their similarity he thus expresses himself:

"To sum the matter up briefly, the result of a careful review of the facts that have been ascertained is to make it patent that the two malignant diseases and fibroid degeneration present many points of parallelism, especially the remarkable tendency that both exhibit to spread. The spreading of the two seems so similar that it is hard to escape from the conviction that the reason is the same in both instances. It may be asserted, without fear of contradiction, that the spreading of fibroid degeneration has nothing of the nature of an infection. If it were conceded that malignant disease and fibroid degeneration spread as they do owing to similar causes, and that the spreading of fibroid degeneration is not the result of infection, it would follow as a necessary corollary that the metastasis of malignant disease cannot be of the nature of an infection."

To my mind, Dr. Meigs has in no wise presented a convincing argument. True, the specific infection has not as yet been found. It is interesting to note the changing views of the profession since Nepveu a little more than twenty-five years ago first positively asserted that microbes were present in epitheliomata. It is scarcely more than ten years since Scheuerlen believed that he had discovered the specific germ of cancer. Some five years ago the theory of the coccidial origin of the disease met with considerable support. Just as we felt that we might be upon the threshold of the great discovery we found ourselves again doomed to disappointment. More recently Sanfelice and Roncali, of Rome, ascribed to certain fungi, when cultivated in acid solutions, the power of producing by the inoculation of animals tumors similar to those from which they had been derived.

While occasionally it has been possible by the introduction of cancerous material to reproduce a malignant growth in animals; and instances of autoinoculation upon ulcerated surfaces have occurred in individuals afflicted with malignant disease; and in a third class there are a few cases in which malignant tumors have been grafted upon other individuals as a result of the accidental contact with malignant growths, we are compelled to admit that the inoculation experiments have been by no means so universally successful as we had reason to expect.

Yet in their manner of growth, development, and spread, malignant diseases so strikingly simulate the course pursued by infectious diseases, disseminating themselves through lymph and vascular channels, that we are compelled to say that no other explanation so perfectly accounts for the origin of cancer as the one which considers it to be primarily a local infectious disease.

And when we approach the subject of treatment we find the older measures so disheartening that Billroth was accustomed to say to his classes, when he had removed a tumor which the pathologists pronounced malignant, that he questioned the diagnosis if no recurrence took place. We are confronted, furthermore, with a work published this year in Germany by Dr. Severin Robinski, in which he takes the ground that operations in cancer are not justifiable. Moreover, we find a large number of the English surgeons questioning our present operative procedures in cancer. So much prominence, indeed, was given this matter that in January and February last the Royal Medical and Chirurgical Society of London devoted three entire sessions to the consideration of breast cancer. When, therefore, we find our very conception of the disease attacked in this country; when a voice from Berlin cries down surgical procedure, and the British surgeons question the operations which have become recognized to-day, the occasion it seems to me is ripe for a consideration of the subject, and it appears eminently proper for us to ask ourselves whether the radical steps which in recent years have been so generally adopted by the surgeons in civilized countries are warranted;

[1] Read before the Buffalo Academy of Medicine, December 6, 1898.

especially as these vigorous measures are being no longer limited to the external forms, but entire organs, not only the uterus, but the stomach and the urinary bladder, are being removed.

I confess that I have little faith in figures, for I do not believe that it is possible to reduce this matter to a mathematical basis. There are important considerations which make it impossible to group together cancers affecting given organs, even though they be apparently histologically identical. There is such a vast difference in the degree of virulence evident in cancerous growths. The future is yet to unfold to us the nature of the infective process in these different forms of malignant tumor, and enable us to discriminate pathologically and bacteriologically between them.

At the present time we are dependent to a great extent upon their clinical course. To me the most important question is their period of growth. Rapidity of growth is indicative of intensity of infection. The slower the growth and the better its definition, the more favorable is its prognosis.

We speak of a "cancer age," a period when the cells of a part change their relationship to their environment. We select advancing years as such a period, and rather expect to find cancerous diseases in middle or old age. It is at this period of life that we expect an existing innocent tumor to take on malignant tendencies. And yet age cannot be considered an essential feature. Perhaps I can best illustrate this point by referring to a case.

R. E——, a schoolboy, eleven years of age, of healthy parentage, with no history of malignancy in the family; he had always enjoyed good health. His parents had noticed in infancy the presence of a warty growth upon the mucous membrane of the lower lip, to the left of the median line. The growth had always been freely movable; it had remained of a fixed size, and presented no evident irritation. About a year prior to his reference to me the tumor began to increase in size; it became more immovable, and ultimately fixed by a broad infiltrated base to the lip. Its surface broke down and ulcerated. Glandular swellings appeared in the neck. His general health suffered. He became anæmic and lost in flesh.

On the 7th of April, 1896, I removed the mass and the infected cervical glands. The tumor was found upon microscopical examination to be an epithelioma. The conversion of a papilloma into a malignant growth manifests itself by the invasion of the subcutaneous or submucous structures by its cells, which rivet it to the connective tissue; by its spread and the infection of lymphatic nodes. It matters naught, be the age of the patient eleven or sixty.

Assuming that every malignant growth is at some period in its career a local disease, but that if neglected it outgrows this stage and becomes generalized, it is apparent that its early recognition is not only essential but of vital importance. The fault of its late discovery may rest with the patient who fails to consult the surgeon in time; but there is no doubt that the family physician frequently fails to recognize the nature of the affection, and advises delay until the opportune moment is lost.

Malignant tumors of the surface should be readily recognized at an early period. And yet a breast cancer may be present many months before the patient herself is aware of its existence. She usually discovers it accidentally. In a singular instance in my experience the patient dreamed that she had a growth in her breast. The dream so startled her that she awakened, and sure enough, as she carried her hand to her breast she recognized the presence of a tumor. No marked discomfort exists early, and the attention of the unfortunate woman is not attracted to the growth at an early period. It is not possible to determine, therefore, the exact age of any tumor. Many physicians do not correctly examine a breast for tumor. They grasp the organ laterally instead of pressing it backward against the chest wall. When the mammary growth has reached the surface and involved the skin, producing dimpling or retraction of the nipple, its growth is already well advanced.

As far as the internal forms of malignant disease are concerned, we are particularly handicapped. The uterus may be eaten away until a mere shell of the organ remains, before the surgeon is consulted. More often than not, profuse hemorrhage and foul discharges have been present a long time. Many times he is not sought until pelvic pain and the interference with the functions of bladder and rectum are added to the manifestations. I had recently an experience in a case of rectal cancer which illustrates the difficulty of early recognition of malignant disease of this organ. It was in the case of a man, fifty-two years of age, married; a farmer by occupation, both of whose parents had died of consumption—his father at sixty-three years of age, his mother at sixty-seven years of age. He had also lost one brother from the same disease. His physician brought him to me on the 4th of November, 1897. He presented the following history: Less than six months prior to my examination he began to complain of a train of nervous symptoms, particularly sleeplessness. He had previously always enjoyed good health. About the 1st of June dull pain appeared in his abdomen, rather more on the left than the right side. It would be absent weeks at a time. Once or twice he had had acidity of the stomach, but never vomited. His bowels moved frequently, usually about three times daily. The movements were never constipated, nor was there ever any diarrhœa. Occasionally he noticed a streak of blood in his stool. Two or three times he had discharged about a tablespoonful of blood. The first complaint of pain in his rectum was two or three days prior to my examination. He never had had straining or pain after his bowels moved, or any uncomfortable feeling about the rectum until the time mentioned, and this was so slight as to have been brought out by my questioning, and not of sufficient importance to have been mentioned voluntarily. Abdominal examination was negative. The suspicion of beginning tuberculous peritonitis which his physician had entertained, rather because of his family history than otherwise, did not seem warranted, although each pulmonary apex was slightly dull. Upon digital examination of the rectum I found the first two and one-half inches clear, but above this point a large tumor was present, firmly adherent to the anterior wall, its surface uneven, and bleeding slightly upon manipulation. I was unable to reach its upper border. However, the diagnosis of epithelioma was made. I was satisfied that the growth was still slightly movable. Having always followed the rule that a movable rectal growth was usually removable, I advised operation. A little delay occurred in his entrance into the hospital. A week was devoted to the preparation of the patient. The urine was daily examined for indican during the process of catharsis to which he was subjected, but no change in its percentage could be made out. In removing the rectum, the patient being placed in the high lithotomy position upon a Trendelenburg frame, the incision began just back of the anus and was carried upward to the middle of the sacrum; the coccyx and the two lower sacral vertebræ were removed, the rectum was freely exposed, and separated from all its attachments; the peritoneum was opened, and the rectum cut out close to the sigmoid flexure above and the anus below. There was marked adhesion of the rectum over the trigone of the bladder. The peritoneal cavity was protected by gauze pads. A number of enlarged glands were found in the

loose fatty tissue around the rectum. The sigmoid flexure was freed, brought down and stitched to the anus, and secured by an occasional suture to the surrounding structures throughout its length. The posterior wound was partially closed; gauze was carried in all directions for drainage. After about one week the posterior wall of the newly formed rectum gave way and a fecal fistula established itself. Aside from this complication there were no bad symptoms; the temperature remained normal, the pulse between 80 and 85, and the patient made a slow but certain recovery. The fecal fistula has not entirely healed, although only a slight amount of fecal discharge finds its way out here. The bowels move naturally. He has perfect control over them. He has gained greatly in weight, and is in better health than he has been for years. I present to you the section of intestine removed. You will see through the posterior opening in the rectum the cancerous mass. I believe you will all agree that it is surprising that so large a growth could occupy the rectum, almost occluding its lumen, and yet produce no more clinical evidence of its presence than has been described.

Ordinarily, we consider epithelioma to be quite a mild form of malignant tumor, yet even here we encounter marked differences in the type of virulence. Only last week I had occasion to see a man, forty years of age, from whom one of our local physicians had removed by a V-shaped incision an epithelioma of the lip, in June, 1897. At the time of operation I am informed there was no evidence of implication of the cervical lymphatics. Now, less than one year and a half since the performance of the primary operation, there is a secondary growth in the neck so extensive as to involve the jaw from the symphysis to the angle, and extending downward almost to the clavicle, firmly adherent to, and deeply implicating, all of the structures of the neck. On the other hand, as emphasizing both the difference between epitheliomata and the fact that slow growth implies a mild type of malignancy, I might refer to a case of epithelioma of the penis in a man, seventy-four years of age, in whom the disease had existed nearly five years when he consented to operation. When I amputated, on the 28th of April, 1869, the growth extended two and one-half inches up the organ, and had a diameter of one and one-half inches. It was ulcerated and covered with a foul discharge. The ulcer presented the characteristic appearances. Its surface was excavated in places, its edges were infiltrated, the granulations warty, and the foreskin was extensively affected. A number of enlarged lymphatic glands were present in each groin. His enfeebled condition warranted only as mild a surgical operation as I could perform. I like the German distinction between amputation and extirpation of the penis. In this case we cut the organ off at its attachment to the body, and so speak of it as an amputation. The urethra was split downward. A soft-rubber catheter was introduced into the bladder, and we had very prompt repair. The glands of the groin were not removed. The interesting features are, that in the nearly three years which have elapsed since the performance of the operation he has steadily increased in weight and grown stronger; there has been no recurrence of the growth, and all of the glandular swellings have entirely disappeared.

No doubt many of you have had to experience the unpleasant conviction that a surgical procedure has awakened into more furious activity the malignant disease you sought to eradicate. On May 9th last, I amputated the cancerous breast of a woman, forty years of age. She had been under the observation of her physician since the preceding September. The growth occupied the upper half of the gland, was adherent to the skin for an area two inches square, and presented the manifestations seen in rapidly advancing carcinoma of this gland. Almost immediately after union had been secured, infiltration of the chest appeared, and within three months from the time of operation the entire chest was brawny, hard, discolored, and the infiltration was still progressing. One month later the whole upper extremity was affected in the same way, until the limit of the elasticity of the skin was tested.

I might briefly present another case which to me was most unusual in form and course. The man was thirty-seven years of age, married; a plasterer and bricklayer by occupation. His father was still living and in good health, and the family history was entirely negative. He had never suffered any acute illness. He had congenitally a long, tight prepuce. He consulted me January 10, 1898. One year before a warty sore had appeared upon the head of his penis. The entire organ became rapidly involved. The prepuce at the time of my examination was deeply infiltrated and could not be retracted. A thin, sanious discharge trickled from it. On both sides of the organ were nodular masses, some one-half to three-fourths of an inch in diameter. At one point several were grouped together. Other nodules were found in the skin over the arch of the pubes, and some could be felt in the scrotal portion of the penis. The patient stated that this extensive involvement of the organ had only been of six or eight weeks' duration, and that until within five months he had been able to retract the prepuce. The inguinal glands on either side were very extensively involved. The patient's general condition was good. He had been upon a course of mercury and the iodides. I did an extirpation of his penis. I carried the incision through the middle of the scrotum into the perineum, and extirpated the organ about an inch in front of the anus. A circular incision was carried over the mons Veneris, removing the structures at this point. The incision was extended laterally to the anterior superior spinous processes and all lymphatics were cleared away. The scrotum and both testicles were removed. A catheter was introduced into the newly formed meatus. For a short time the patient did well, but later a very rapid return of the malignant disease occurred, and he gradually succumbed and died on the 18th of May. I present to you the specimen, and you can readily see the extent of the disease. Microscopical examination confirmed the diagnosis of cancer.

While such experiences are certainly discouraging, it seems to me that we must expect them. We may remove all vestiges of the disease which sight and touch reveal, but to secure the removal of all microscopic evidence of disease is in the very nature of things scarcely possible. On the other hand, I feel that we are to be congratulated upon securing immunity from recurrence of malignant tumors as often as we do.

We come now to the consideration of the question of "how far have we benefited mankind by the more radical operations for the relief of cancer?" Cancer of the breast, which represents about twenty-five per cent. of all tumors afflicting woman, presents perhaps the best opportunity for the study of this question. While, as I have said, I do not value figures very highly in estimating the curative results of operations for cancer, we can, however, form some idea as to whether the newer methods accomplish more than did the old.

In the Ingleby lectures delivered by Bennett May in 1897, he presents a table in which it appears that in 1876 Billroth claimed but 4.7 per cent. of cures, and Esmarch in the same year 11.8 per cent.; but that from 1880, when Volkmann was able to present the first results of his more radical procedures, there has

been a steady improvement in the percentage of cures. Thus, while 17.8 per cent. was claimed by him in 1880, Dr. May presents a summary of the results obtained in 1896, in cases operated upon by Rotter, of Berlin, Helferich, of Greifswald, and Watson-Cheyne, of London, in which their average percentage of cures was 42.1. The last-mentioned surgeon claimed that 57 per cent. of his patients were still alive, and showed no evidence of recurrence at the expiration of the three-year period. Lamphear, in reviewing the history of 109 hysterectomies for cancer, done by European operators, states that Hofmeier reported 33 per cent. of his patients well four years after operation; Fritsch, 36 per cent. five years after operation; Schauta, 47 per cent.; Olshausen, 47.1 per cent.; and the Dresden clinic, 58 per cent. two years after operation.

In regard to breast cancer, it would seem from the figures quoted that there certainly has been a great saving of life in recent years as a result of our present surgical measures. If cancer was simply an expression of a constitutional condition, as suggested by Meigs; if surgical operation is unjustifiable, as Robinski would have us believe, we should have expected no such improvement as the result of more radical local treatment.

That the profession is not of one mind as to the extent of surgical intervention warranted and the surgical technique to be employed, is evident in the surgical literature of the current year. Those of us who believe that the disease is local in its inception, that an infectious element is introduced and follows the lymphatic and vascular roadways into the general system, to be consistent in theory and practice, must remove not only the evident site of infection, but in every instance eradicate such channels of entrance into the system as the clinical course of the disease indicates would in its progress be involved.

To Stiles and Heidenhain we owe our present knowledge of the lymphatic network in the breast gland. Their labors convince us that nothing short of the complete removal of the entire gland is to be countenanced; that at least the fascia covering the pectoral muscles, and indeed the greater part of the muscular substance, must go with the gland. Repeated experience has shown that, although external examination of the axillary space may not make evident the enlarged lymphatics, this space when opened presents almost without exception lymphatic invasion. In one hundred and seventeen cases examined microscopically by Kuester, in only two did he fail to find malignant implication of the axillary lymphatics. In my own experience I have yet to find a single case of breast cancer, no matter how early operated upon, in which I did not find the axillary glands involved.

I must confess therefore to the greatest surprise, in reviewing the proceedings of the Royal Medical and Chirurgical Society of London, at the meetings held January 25th, February 8th, and February 22d of the present year, to find the surgeons of that metropolis expressing themselves in many instances as they have. For example, Thomas Bryant stated that, while it was his practice always to open the axilla, he did not by any means systematically clear out that space nor remove the pectoral fascia. Christopher Heath insisted that he had had results equally as good as those claimed by Halsted, from simply removing the implicated structures and those immediately surrounding them. Barwell remarked that he always removed the pectoral fascia and put his finger into the axilla to feel carefully for enlarged glands and swollen lymphatic cords. Sir Thomas Smith raised the question that if cancer was ever local, when did it become generalized? and suggested that general infection might be as rapidly established as it is in constitutional syphilis from the primary sore. Jonathan Hutchinson admitted that it was not his invariable practice to open the axilla, and attributed the present improved results rather to the early than the extensive operations in vogue. Howard Marsh thought that, while great advance had been made in operative technique, the pendulum had swung too far to the opposite extreme, and that operations of unnecessary severity were being performed; while Treves believed that, as time went on, the new operation would occupy a less prominent place. Others asserted that the immediate results in cases presumably cured were unsatisfactory, because of the deformity which resulted, and the restricted movements of the extremity produced. Only a few were ready to indorse the necessity of radical measures in the treatment of the chest and axilla, and to favor additionally the supra-clavicular operation so strenuously indorsed by Halsted. It would be a matter of some interest to me if this evening we might learn how many of those present are accustomed to include the supra-clavicular operation as a part of their routine in breast amputation. I confess that I take this step only when at the time of operation I feel satisfied that the lymphatics of this region are involved. In my practice the recurrence of cancer at this point has by no means been frequent after the removal of breast carcinoma. And yet the pathological specimens which Halsted has gathered, and which many of you no doubt have seen in the Johns Hopkins Hospital museum, make it evident that supra-clavicular glandular infection is by no means a rare manifestation. Twenty-three times were the glands positively involved in sixty-seven cases in which he opened above the clavicle. In thirty they were not diseased; and in fourteen the examination had not been sufficiently completed to assert whether they were involved. It has been his custom to examine the fat of the axillary and supra-clavicular spaces microscopically in every case. Some years ago Joerrs made similar examinations of the axillary fat and concluded that there was ordinarily no evidence of malignant disease outside of the lymphatic structures. Supra-clavicular glandular implication is not now considered so unfavorable a complication as it was formerly.

In his latest contribution to this subject Halsted mentions the fact that his assistants have entered the anterior mediastinum and removed diseased glands from this space, and that Dr. Bloodgood has removed a section of the innominate vein. I might here refer to an experience of mine. On the 5th of June, 1897, I was asked by a physician to amputate the breast of his wife, who for many years had evident glandular disturbance in the mamma, but which had for a year been unmistakably carcinomatous as the result of traumatism. Not having examined her prior to the operation I was amazed to find the disease so extensive. There was not only involvement of the soft parts, but it became necessary at this time and on subsequent occasions to remove portions of the fifth, sixth, and seventh ribs, amounting to an inch and a half of each at their sternal end. An examination of this patient made within the past ten days—that is, a year and a half after the operation—finds the chest perfectly healed, and the patient in better health than she has been for years.

We should refer, in our discussion of the curability of cancer, to the choice of route in hysterectomy for uterine carcinoma. While, without doubt, the immediate mortality following the vaginal operation is considerably less than that attending abdominal hysterectomy, the very serious question is raised whether by this method we can remove a sufficiently wide area of implicated structures to assure us that a permanent cure can be reasonably expected. This matter has been taken up by Dr. Howard Kelly in his recent work on "Operative Gynecology." He has illustrated

the difference in amount of tissue usually removed by the two methods. He argues for the necessity of an operation which will permit the free removal of the broad ligaments and their lymphatics, the clearing out of all cellular tissues in which there may be infected glands, and which will allow as free a dissection of all implicated parts here as experience has found necessary for mammary cancer.

The question of prophylaxis should perhaps not be considered in a discussion of the curative measures of cancer. But knowing as we do that, particularly in carcinoma of the uterine cervix, the disease has almost without exception occurred in those who have suffered from lacerations, we should emphasize the need of repairing them, provided the edges are everted and infiltrated.

We must at this point ask ourselves two questions: What constitutes a cure of cancer? and what a recurrence? It has been quite generally conceded that if at the termination of a three-year period after operation there has been no recurrence, we can consider the case cured. However, all operators have seen local recurrence at a much later period. And yet, in most instances when the three-year limit has been reached without evidence of trouble, we can predict immunity for the future. In the discussion by the Royal Medical and Chirurgical Society referred to, it was quite universally agreed that the arbitrary fixation of the period indicated was unwise, and every surgeon had a series of objections to raise, which his experience warranted him to interpose. But, to my mind, closely related to this question is the second query, "What do we mean by recurrence?" Is every manifestation of malignant disease which shall appear subsequently a reappearance of the original trouble? Dennis reports the case of a woman who in 1855 had been operated upon for cancer of the breast. A third of a century later she died of cancer of the rectum. It does not seem possible to me that we are justified in regarding these two conditions as cause and effect.

It has not been my fortune to see frequently, after the removal of one cancerous breast, the remaining mammary gland subsequently implicated. A single experience is all that I have had in this direction. The patient remained perfectly well for over two and one-half years after the removal of the right breast, and just as the three-year period was being completed she presented herself to me with a second scirrhus in the left breast. After its removal she did poorly, and died about a year later of malignant disease of the spinal cord. It seems to me probable that in these cases lymphatic anastomosis may cause the infection of one mamma from the other.

But we meet instances in which the metastasis appears in rare form. In July, 1896, I removed the right mammary gland from a woman. She remained in the full enjoyment of health until the present year. When I was called to see her at her country home in March, she had been abed for sixteen weeks under the treatment of a physician for what he called typhoid fever. An examination of the chest found no recurrence, but palpation of her abdomen revealed the presence of a number of tumors. On the right side about four inches below the liver was a round hard tumor six inches in diameter. To the left of the umbilicus there was a second immovable mass. Each iliac fossa as well as the hypogastrium presented growths. Bimanual examination of the uterus found it embedded in a mass which was nodular, stony hard, and immovable. The cervix was free from disease. Both lower extremities were œdematous, and the patient was exceedingly weak. She died within three weeks from this date.

A third case is not without interest. In the spring of 1895 I was requested by her family physician to see a woman, forty-five years of age, who had been married twenty-five years and had given birth to a number of children. Until within a few months of my examination she had enjoyed perfect health. She was suffering from uterine hemorrhage for which I curetted her uterus. The mass removed was found to be malignant, and subsequently hysterectomy was performed, from which she made a very satisfactory recovery. After an interval of two and one-half years of perfect health, without any recurrence whatsoever of pelvic trouble, she discovered a nodule in her right breast, for which she consulted me on the 5th of September last. She attributed it to a traumatism. Three days later I amputated the mamma, and subsequent examination of the tumor removed proved it to be scirrhus. I must confess that I am not ready to regard this mammary cancer as a metastatic growth. If such is the case, we still have much to learn of the manner of dissemination of malignant disease throughout the body. It seems to me only proper to assume in such cases that the individual possesses an unusual susceptibility to malignant disease, and that these growths occurring at points so entirely remote and disconnected should be regarded as independent manifestations.

I am aware of the claims of Dr. Thomas Beatson, of Glasgow, who presented in the London *Lancet* of July 11, 1896, a very remarkable article, in which he advised for the relief of inoperable cases of mammary cancer an entirely new surgical procedure. It was nothing short of double oöphorectomy. He took this occasion to refer to cases of unquestioned breast carcinoma, both recurrent and primary, in which this operation had secured either entire healing or arrest of the progress of the malignant affection. He naturally opposed the theory of the parasitic origin of the disease, and attempted to prove that epithelial disturbances could be awakened through the bond of sympathy which exists between the breast and the ovaries.

If the removal of ovaries will cure a breast cancer, why in our case did it not prevent the recurrence of one? On the other hand, it appears that Simpson was rather of the opinion that the removal of both ovaries predisposed to cancer. Beatson, in the course of his article, refers to the wholesome effect of the use of thyroid extract in carcinomatous conditions. Bishop and Page likewise emphasize the benefit to be derived from its use. Unfortunately this is not the first therapeutic agent suggested for the cure of cancer, and we have good reason to fear that, like its many predecessors, it will fail to cure the malignant disease. We are going through an experimental period in the use of a number of agents, for which much is claimed. In the inoperable forms of cancer any addition to our armamentarium is most welcome. I trust that we may find benefit in the injection of alcohol into the structures surrounding the cancer, and from the use of the carbide of calcium applied to the surface of the malignant growth, after as much has been removed as was possible. I must confess that my personal experience with the toxins of erysipelas and prodigiosus has been productive of no favorable results. I know nothing of the electro-mercuric method suggested by Massey. Indeed, I have but little faith in any therapeutic agent but the knife, except it be in superficial and well-localized epithelioma of slow growth.

As many of you are aware, it was my fortune to secure some statistics of one of the so-called "cancer-cure institutions," which it was my privilege to lay before the New York State Medical Society at its annual meeting in 1896. You will recollect that I presented on the one hand the glowing promises they held out, and the assurance of prompt, painless, and certain relief without the use of the knife. You will likewise recall that the statistics I had proved the utter falsity

of their claims. For not only did they fail to arrest the disease, but every case of true cancer died after months of prolonged agony and torture.

In the light of our present knowledge it seems to me that we are justified in asserting that the recent charges made against radical surgical intervention in cancer are entirely unwarranted, but on the contrary that great advance has been made in its operative treatment. I feel that we can insist that when a cancerous disease is still localized, when there is no evidence of metastasis, the patient should be subjected to operation, with the assurance that there is a reasonable prospect of cure. Age is no contraindication. Three years ago I removed a cancerous breast from a woman of eighty years, who still enjoys immunity from recurrence. But when surrounding structures have become extensively infected and the diseased area cannot be entirely removed, when secondary growths exist, operation is positively contraindicated. I believe that we should be very cautious in recommending as yet the removal of vital organs involved in carcinomatous disease, as the risk is great and the prospect of cure more than uncertain.

I cannot bring my remarks to a close without expressing to you my deep appreciation of the honor you have conferred upon me in inviting me to address you. Knowing what earnest workers some of your members have been in this field, and how valuable have been some of their contributions to our art, I deeply realize how feeble my effort must seem. I beg, however, to assure you that I have brought this subject to your consideration rather for the purpose of eliciting your views as to whether we are to admit that our efforts in treating cancer are futile, or whether we have not good reason to believe that we have done much in this cause.

RESULTS OF FURTHER EXPERIENCE IN THE USE OF SUGGESTION UNDER SLIGHT HYPNOSIS.

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In a paper written not long ago[1] I endeavored to frame a theory by which I thought we might arrive at a clearer understanding of the use of suggestion given during the lighter degrees of hypnosis. I gave my reasons for supposing that there was a common ground of implantation of a fixed idea and of an idea given during hypnosis; namely, that part of the mind to which is relegated the inception of the performance of habitual actions of the body and of habitual or involuntary processes of mind. I reported cases illustrative of the possible manner of implantation of fixed ideas and of the method of giving suggestion in such cases.

Since writing my paper I have tried to find, if possible, some symptom common to those cases in which it has seemed to me advisable to use suggestion under hypnosis. I hoped that, by finding such symptom or group of symptoms, there might appear some scheme or plan, according to which suggestion might be given, thus placing the use of suggestion on a more scientific basis than has hitherto been done, so far as I am aware. I think that every one who has had much to do with cases of psychasthenia has felt that there are certain symptoms that are pathognomonic almost of this condition. By such symptoms he recognizes his cases as being psychasthenic. It will be my endeavor to show that these common symptoms may be traced to a certain definite symptom, which may be called the main. I am well aware that I may be utterly mistaken in my views regarding this main symptom, but I feel strongly that every attempt toward a concrete rather than a general conception of psychasthenic conditions is a step in advance, and, should my theory seem untenable, I shall be only too glad to change my present views or to shape them to any other theory which may tend to put the treatment of mental conditions by mental therapeutics on a firmer scientific basis than at present seems to exist.

My aim, then, in the present paper, is to show that there is a possibility of the existence of an early mental symptom or morbid idea, common to all conditions of brain fag or psychasthenia; also to show that the continuance of the mental state which gave rise to this symptom or idea may give rise to those symptoms which lead us to make our diagnosis of psychasthenia. I shall try further to show that this main symptom or idea may be combated by a definite main suggestion; and that as the secondary symptoms or ideas may be traced to amplification of the main idea, so secondary suggestions, logically connected with the main suggestion, may be used to combat the secondary ideas. I shall give a couple of sets of suggestions illustrative of this method of eliminating the morbid ideas. A report of a small number of cases, and of deductions which may be made from them, will close the paper.

Since the summer of 1894, it has seemed to me that one of the first, if not the very first, symptom of psychasthenia was the lack of power to control the train of thought properly or normally. Now the power to control a train of thought seems to me dependent on some other power. As a train of thought must presumably be composed of a combination or sequence of certain separate ideas, there must be some power of assorting those ideas which are proper to enter into the composition of a normal train of thought—of accepting the suitable, and of rejecting those ideas that are unsuitable to such a train of thought. This power of choice must, in turn, be dependent on some other quality of mind by which is appreciated the ratio of value between two presented ideas, in terms of their acceptance or rejection as component parts of a normal train of thought. It seems to me that this power of appreciating without conscious effort the correct ratio of value between ideas presented to the mind, is probably the outcome of deductions which have been drawn from results of former personal experiences. For instance: the idea of the probability of a chair being able to walk off on its four legs is one which, to the normal mind, is preposterous. It is so at variance with the results of past experience that, without conscious effort of the intellect, we at once make choice of the idea that such a performance on the part of the chair is absurd, and exclude the idea that such movements are possible. Yet such an idea regarding locomotion might be received not only as possible, but even as probable, by a mind unbalanced; so that there might be not only difficulty in choosing between the ideas as presented, but the power of appreciating the ratio of value between the two ideas might be so impaired that the probability of voluntary motion of the chair might seem the idea most consistent with the truth, and might therefore be accepted as the idea most worthy of consideration. For this power by which we unconsciously appreciate the ratio of value, and as unconsciously make our choice, there seems to be no descriptive term. "Will" is hardly the word to use, as most people confuse the ideas of "will" and "volition"; yet, inasmuch as the word "will," taken as meaning unconscious choice made preliminary to action ("*vouloir, c'est choisir pour agir*"),[1] is linked very closely with the power of appreciating ideas at their proper value, I have made use of the word will to denote that power as well, and have always described it

[1] MEDICAL RECORD, February 17, 1894.

[1] Ribot: "Maladies de la Volonté."

as distinct from "volition," which may be taken as representing the conscious choice made previous to action.

This word "will," then, I have taken, simply as a matter of convenience, as representing not only that quality of the mind which makes it possible for the normal mind to ignore at once any idea which in the light of ordinary experience would seem to be absurd, but also to represent the function so closely allied to that of unconsciously choosing—the ability to appreciate the ordinary ratio of value between two ideas. Now it seems to me that, consequent on this loss of will, there must come weakening of the power of spontaneous or passive attention, which, in turn, must be followed by diminished power of the voluntary attention.

I suppose that, as a rule, this weakening of the voluntary attention is the first mental symptom of which the patient is conscious. He cannot explain to himself the cause of his lack of power of initiative, for he cannot realize the condition of aboulia upon which this depends. When, however, he finds that he cannot concentrate his attention for more than a very brief period at a time, he appreciates the condition as one dependent upon weakened power of the voluntary attention. The obvious idea that then presents itself to him is that of some damage done to his mind, and consequently the loss of confidence in himself and in his brain power is to him the logical outcome of this weakened condition of the voluntary attention. By self-analysis this feeling of incompetency is increased, so that the patient self-limits his mental powers in whatever direction and to whatever degree may seem to him logical and natural. Not only may he fancy his mental powers to be very much impaired, but he may further elaborate the idea of mental failure and may infer that he necessarily must be on the road to insanity. In some cases, long after the immediate effects of brain-fag have passed away and after the power of voluntary attention has been regained, he may voluntarily dwell upon these ideas of incompetence, or upon other ideas, until they may become dominant and fixed. There are other cases in which we may have a condition due to fixed idea, while the power of voluntary attention is still weak from the weakness of the "will." These fixed ideas have been perhaps implanted at the time of shock or strain, as I tried to show in my earlier paper, and, to my mind, may be due also to a condition of will failure.

I suppose that it is more than probable that at some time more or less remotely following that at which the brain became fagged (with consequent failure of will power), there comes into existence what one may call a habit psychosis. By this one means that the symptoms directly due to the original brain-fag or psychasthenia may still remain as the result of habits of thought. We then have a condition of pseudo-psychasthenia. The will has recovered its tone, but, as that loss of tone was not recognized by the patient as such at the time of the fag, for the same reason its return to the normal is not appreciated, and therefore, until this condition of pseudo-psychasthenia is explained to him, he can make no use of the increased or normal will power. The will is weak from disuse. Now this pseudo-psychasthenic condition, which is recognized by the symptoms of psychasthenia persisting long after the will should have recovered its normal strength, affords just the class of cases in which suggestion under slight hypnosis seems of value.

Assuming, then, that there is, in the case of every normal person, a will by which not only does he appreciate the proper or ordinary ratio of value between ideas, but also by which he makes choice of one of those ideas as proper under given conditions, and, in addition, assuming that this appreciation and choice are both processes of mind unperceived by the personality at the time of their activity, in what way can we strengthen this will when, on account of strain or through disuse, it may have become weakened? As this will is one of the unperceived and therefore automatic powers of the mind, and if, as I have before tried to show, there is probability that suggestion under hypnosis reaches the same part of the mind in which automatic processes arise, then a suggestion that the will is strong should strengthen the will. As a matter of fact, such a suggestion seems to do this very thing. If a patient presents himself suffering from the effects of aboulia, such as loss of power of initiative, aprosexia, loss of confidence in himself and in his abilities, and possibly with further development of any of these ideas of incompetence, what is the course to be pursued if you mean to use suggestion? After letting the patient detail his woes, I generally endeavor to explain to him the conditions consequent on brain-fag. Now if I am pretty sure that the strain was undergone so long ago that there has been plenty of time for recovery of the brain from the fatigue—in other words, if I think I have to deal with a pseudo-psychasthenic case—I explain that while the condition, the worrying train of thought and its consequences, was due originally to weakness of the will, yet now the will has probably recovered its tone, but may be handicapped in usefulness because the patient believes it still weakened by the original strain; so that the symptoms due originally to a weakness of will are now due to habit alone, and that suggestion, by removing the habit of thought, will leave the will unhampered to do its work properly. This method has been criticised on the ground that I am giving a patient a new fixed idea. Quite right; if it is a new fixed idea, it seems to me a good one, and he cannot come to much harm who has solidly fixed in his mind the idea that his will is strong enough at any time to control his train of thought.

The main suggestion, which I have used since October 28, 1894, is as follows: "Your will is strong enough, at any time, to control your thoughts and to keep them in natural channels." The term "natural channels," by mutual understanding between myself and my patients, is taken to mean "the train of thought which the normal person deems natural under given conditions." I shall now give a couple of illustrative cases. It will be noticed that each patient was handicapped, so far as his work was concerned—one by self-limitation as to the amount of work that could be done; the other by the fear lest a previous condition of ill health might supervene, unless there should be better sleep. In both cases mental strain due to overwork and worry was responsible for the beginning of the train of symptoms which they presented on consulting me; but in both cases the overstrain had taken place some years previously, and, presumably, the line of thought existing at the time of consulting me was due rather to a habit of thought than to an existing condition of brain-fag. The use of a main suggestion to combat the main idea or symptom, and the use of secondary suggestions by which the secondary symptoms were fought, I shall try to show.

CASE I.—Lawyer, married, aged forty-four years. His present trouble dates from 1881. A gradual psychasthenic condition came on as the result of considerable worry and overwork. This condition was characterized by diminished power of concentration, and evolution later of the idea that he had damaged his brain power by overwork and by certain excesses. In 1884 he got a fright about the condition of his heart, his physician leading him to infer that he had mitral disease—a condition later proved not to exist. He became so wretched that in 1884 he went South and engaged in out-of-door work, continuing this till 1893,

when he came North again. Instead of finding himself able to go to work again at the law, after this long rest, he found that he could work no longer or better than before he went away. He was naturally much discouraged when he found that he could work no more than three hours a day. If he worked more than that time, his powers of concentration seemed to desert him entirely; and not only that, but his night was wretched, disturbed by terrifying dreams, and next morning a strange tension in the head, which troubled him after work, persisted in spite of the night spent in bed. After having stood this sort of thing for more than a year, he consulted me on December 24, 1895. There was nothing particularly noticeable in his appearance, nor was his family history of much importance. He was in pretty fair bodily condition, and consulted me simply because he wanted the power to work as well as other men. By that he meant power to work in his office from nine in the morning till five in the afternoon, with an hour out for lunch. He wanted to feel that he could enjoy himself in the evening, free from the idea that he would have a horrible night should he increase his hours of work. He wanted no more pain in his head from the amount of work above mentioned than any normal man would suffer—meaning by that, none. It was pointed out to him that he had probably made the mistake of assuming that the difficulty in concentration, due to disuse of his intellect while he was working in the lumber camp down South, was not due to mental degeneration; that the mind had become but a bit stiff in its working from disuse, and that he had made a limit for himself as to his power for work, by drawing from the deduction a false premise—that the brain had deteriorated in consequence of the severe strain of nine years ago. On close questioning, it was found that there was also the idea present that some deterioration had followed certain excesses just prior to his breakdown in 1881. This seemed to be a clear case of loss of confidence due to temporary loss of the power of concentration. This loss of confidence was followed in turn by the fixed idea that the brain had been damaged, with corresponding physical symptoms such as he would expect from such damage—namely, painful sensations in the head and poor sleep. All this was explained to him. In this case recovery was complete and rapid; the report, one month after treatment, being that he could work from nine till five, as proposed, and that since the first fortnight after beginning to work there had been no tension in the head and there had been good sleep. The improvement was lasting.

The suggestions were, in this case, the main, "Your will is strong enough at any time to control your thoughts and to keep them in natural channels." Second, "Therefore, you know that no excesses or overtaxing of your intellect in the past has diminished your natural power for mental or physical work. You can sleep, therefore, at night, like any healthy person, and a reasonable amount of brain work cannot disturb your rest at night." It will be noticed that in the suggestions no mention was made of the painful tension in the head. This was understood as included in the phrase, "diminished your power for mental and physical work." The painful tension in the head was probably due to an idea of what sort of sensation in one's head would naturally result from brain overwork; in other words, he had evolved this symptom for himself, supposing that excessive brain work would have, as result, pain or tension in the brain; just as excessive muscular work would give rise to soreness and stiffness of the muscles. It seemed best to make a special suggestion regarding sleep, for we wanted to include in that the idea of recuperation from the fatigue of the previous day, by means of that refreshing sleep, free from terrifying dreams, which is natural to the healthy person. In this case the suggestions were given, under light hypnosis, five separate times—fifteen minutes, thirty minutes, thirty minutes, forty-five minutes, and forty-five minutes.

Case II.—Teacher, single, aged thirty-six years. Her father and mother were both strong and well. She always stood well in her classes at school, and had meant to be a teacher. In 1882 she was obliged to leave the normal school before getting her diploma, facial neuralgia and a general breakdown being the causes. There was no insomnia at that time. In 1883 she taught school, but broke down again after six weeks. This time insomnia first appeared. For eight or nine years she had to be at home, idle, incapable of teaching or even of any sustained thought, and lacking the power of initiative. Toward the end of 1891 she began to help her mother in the housework. In 1892 she began some gymnasium work at home, but had to give it up in three weeks on account of the return of insomnia. At that time she could read and study but little, on account of difficulty of application. Early in 1893 she took up work in the Posse gymnasium, and felt much better for it, being able to study and to sleep well. Between 1893 and 1895 she had classes in gymnastics at home and in a neighboring town, keeping well and sleeping well. In 1895 she took charge of gymnasium work, as instructress, in A——. She did well there, being little troubled by insomnia, working hard, but taking a good rest in the summer. In the autumn of 1897 she went to the normal school in B——, as superintendent of the gymnasium. She was a stranger there, and felt her loneliness much. Her work from 1893 to 1897 had been accompanied by physical exertion, and she had felt well. At B——, on the contrary, she had little exercise, but superintended the work of others, with the view of making them instructors.

Present condition: She appears well nourished and in fair physical shape. She gets to sleep fairly well, but wakes early, and can't get to sleep again. She has tried various means of getting asleep, including the ordinary hypnotics. On close questioning there appears to be little cause for any particular worry, other than that for the consequences of the insomnia. She is subject to sudden fits of depression, which are accompanied by epigastric discomfort; but digestion seems to be well performed. After a nap this depression and discomfort will frequently disappear. She regards fear of insomnia as the only drawback to her success. She is sure that if she could only sleep, she would be all right. She has a certain amount of loss of confidence and some aprosexia; is much discouraged at the prospect of having to give up her work, and fears that she may relapse into the condition in which she was in 1881–1893.

Here we have a case of very decided fear lest there should be a return of a condition from which she has been free for about five years. The experience of the last five years goes for nothing. There are symptoms of a psychasthenic condition, as shown by loss of confidence, aprosexia, and lack of initiative. This last symptom became of considerable importance immediately after the treatment, and I think that probably had that phase of the mental condition been treated at the time the suggestions were given, the recovery would have been quicker. I was inclined to think that the unusual sense of loneliness which she mentioned as being an element of discomfort at B—— was due to lack of confidence, and therefore I gave her a special suggestion for regaining that confidence. As in her case the insomnia seemed to her to be the most important symptom, the suggestion for its relief was given as directly consequent upon the main suggestion. The following were the suggestions: Main suggestion, the same as in Case I. Secondary, "Therefore no worries

that you may have had can keep you awake at night; so you can sleep at night, like any healthy woman." "Therefore" (consequent on the main suggestion) "you have confidence in your abilities." The suggestions were given nine times. The patient seemed very reluctant to go back to B——, though I repeatedly urged that she should. She would make up her mind to go, and then the fear lest she might have to give up her work again would deter her from making the move. For a month she hung about, now sleeping well and then again poorly, until she was finally persuaded that no opportunity to find whether the suggestions had done any good would be obtained until she should put herself in the position to do some work. On the urgent solicitation of the principal of the school at B——, backed by me, she returned to B—— just one month after the last time that the suggestions had been given her. It has seemed to me that this delay was due to an aboulia, and that perhaps a mistake was made in not laying more stress on that particular phase when the suggestions were given. All came right shortly after her arrival. On December 5th she wrote: "I taught Thursday and Friday (my return was on Monday), and slept better than for a long time." On January 3d: "I am still at B——, you see. Conditions have been very favorable to me" (by which she means that she had fallen in with some very pleasant people, that her work was appreciated, etc.), "and I hope I am well started in my work." May 1st: "I am very well indeed now, and flourishing on hard but very enjoyable work." Sundays were irksome to her for some time, because there was no work to be done, and she seemed to sleep less well on Sunday night than on the nights that followed work. This same peculiarity I have noted in a somewhat similar case.

TABLE OF CASES.

	Whole Number.	Successes.	Failures.	Percentage of Successes.
Class A.....	31	20	11	64.5
Class B.....	20	11	9	55.0
Classes A and B.....	51	31	20	60.78

Class A includes all cases in which the mental symptoms were especially prominent—that is, cases in which I have been consulted because of the presence of painful or insistent ideas. There were, of course, in most of these cases physical symptoms; but the patients came because they were wretched in mind and regarded their physical symptoms as of secondary importance.

Class B includes those cases in which I was consulted because of physical symptoms, some of which the patients called "nervous." In these cases, although it was not usually difficult to detect the mental cause of the physical symptoms, yet the mental state did not obtrude itself on the patient's attention, and, in fact, he may have scouted the idea that his physical symptoms were in any way dependent on the mental condition.

In classing the cases as successes or failures, I have tried to be conservative regarding successes. They are recorded as such only when relief from a painful train of thought or other symptom has been so quickly obtained, and so long continued, that relief seems, without doubt, to have been the result of suggestion under hypnosis alone.

As failures are classed all doubtful successes—those in which relief was so long coming that it was uncertain whether relief was not due to suggestion in the waking state or to other means of cure addressed to the general condition. Among failures are also included cases of relapse and of short-lived improvement.

That I have no larger number of cases to report, during the four years following February, 1884, is partly explained by the fact that I have used hypnosis in as few cases as possible, because I do not like to employ it, feeling, as I do; that implanting an idea in the mind of a person who is artificially rendered unusually susceptible to suggestion, carries with it a grave responsibility which I do not care to shoulder oftener than I can help. Another reason for the small number is that, working in the field in which mental processes are concerned, one acquires a certain readiness of judgment and facility of expression, that enable him to use to advantage suggestion in the waking state. Dr. Morton Prince, in a recent paper,[1] has called attention to this method, which he calls "the educational treatment"; its aim, of course, being to explain to your patient his condition, so that he can understand it, in that way removing his fears regarding what to him is an inexplicable complex of mental symptoms; thus giving to him hope, the best of all tonics. This treatment, together with attention to the general health, has proved so satisfactory that I prefer using it alone, if there be time. I never use hypnosis in addition, unless time should be very limited, on account of the patient coming from a distance, or for some other reason that may force me to its use—as in the case of a patient who insists that he has come for that particular treatment alone, and who wants it used, unless I am to assure him that its use is unsuited to his case. In none of the cases has there been dependence upon the suggestion under hypnosis alone. In all, the educational treatment has been used to a greater or less degree; the suggestion under hypnosis having been used as a time-saver or for some other sufficient reason. It may be asked why, if the hypothesis that psychasthenic symptoms are due to impairment of will be true, the percentage of success is not greater. This may be explained in several ways. In the first place, from my inexperience I may have used the method of suggestion under slight hypnosis in unsuitable cases. Second, the persons may not have been in the receptive condition at all. This is quite possible; as, being unwilling to induce hypnosis to the deeper degree which will induce the marked features of that condition, I have only as a guide the apparent willingness of a person to lie perfectly quiet, with closed eyes, for an hour or somewhat less. This seeming willingness may be due to complaisance on the part of the patient, and he may not really be "under control." Third, I have put all my doubtful cases into the list of failures.

A comparison of the classes A and B shows that the use of suggestion in the first class was somewhat more satisfactory than in the second. This is what I suspected before I analyzed my cases. I am inclined to think that those cases only are amenable to suggestion in which you might reasonably hope that many iterations of your own beliefs as to the patient's condition might, after a considerable period of time, bring him to agree with your view of his case. In other words, if you can't conceive the probability of being able to talk him out of his beliefs, I am inclined to think that you cannot get the beliefs out of his head by any kind of suggestion. Considerable pressure was brought to bear in a case of paranoia of long standing, and I was induced, though unwilling, to use suggestion. I made a complete failure. I don't believe that that person could have been talked out of her peculiar belief, had she been talked to and reasoned with for years. The so-called cases of pain habit have been also very stubborn, and though in one case there was relief to a certain extent, yet it must be classed among the unsuccessful. Regarding the effects of suggestion under slight hypnosis, I have noticed to a slight degree what Pierre

[1] Transactions Massachusetts Medical Society, June, 1898.

Janet[1] calls the "need of guidance," which sometimes follows deep hypnosis. After patients have been helped, they sometimes seem to have an inordinate respect for one's judgment, and will ask advice on all sorts of unimportant matters. Whether this is due to the condition of hypnosis in which they have been, or whether it is due to gratitude or not, I do not know. When, in my judgment, they ought to depend on themselves, I plainly tell them that I will not help them any longer in the direction in which I think they are able to help themselves, insisting that they are well enough to go alone. I tell them that they must not come to see me for a fortnight or so. Being thus thrown on their own resources, they find that they can do for themselves what was easier for them to have done by some one else, and they gain confidence every day. The wrench is very much like that which a patient gets when, after a long illness, a nurse is dismissed. The patient finds it very difficult at first to do for himself and to think for himself. In some cases the reverse is true. Self-confidence returns early, and the patient seems to think that he has gotten well quite by himself, and that the suggestions are only a bit of advice given him in a friendly way. I rather think that these diverse conditions are a matter of temperament.

The "taking" of the main suggestion is never noticed as such, I think. We are none of us conscious of this power of appreciating the ratio, of which I have spoken above. The power is there, but its use passes unnoticed; so it would be strange if, in cases in which the power was weakened, return of normal strength should be noted. As we are dealing with trains of thought which are, so to speak, automatic, a patient on the way to recovery never says to himself, "Such and such a suggestion has become a belief to me." He says, rather, "Why, it seems to me that it is some time since that old idea has troubled me," or something of that sort. He may not notice that he has confidence in himself to any greater degree than before treatment, but the way in which he looks at life and forms his judgments shows his physician and his own friends that he is more and more "like himself." Little phrases in his letters will tell the story of a changed current of thought, and consequent approach to the normal.

Regarding improvement after psychasthenia, my impression, borne out by observation, is that, with full explanation of the condition to the patient and subsequent suggestion along the line of abnormal thought, a person in many cases may be stronger in mind and better able to stand another strain than before his attack. This seems to me reasonable, because, if again subjected to strain, the first symptom noticed—generally a weakening of the attention—can no longer frighten him as it did. Realizing the symptom at its true value, he takes it as a sign of temporary strain, and is not likely to build a fanciful structure, involving insanity and failure of mind, upon what he has been taught to regard as a weak foundation. In this respect, I think that the educational treatment is of the very greatest importance.

Conclusions.—It seems to me that there is an early mental symptom in psychasthenia, unnoticed by the patient—the main symptom. This is an inability to appreciate the ordinarily accepted ratio of value between ideas presented to the mind. Consequent to this inability come aboulia and the other well-recognized symptoms due to mental strain. This ability to appreciate can be restored by a main suggestion, and secondary suggestions, logically dependent upon the main, may be used to combat the secondary symptoms or ideas. The use of the suggestion—by which I mean ideas impressed upon a person's mind according to some definite plan as regards the mental symptoms, and not any haphazard talking to or any friendly talk with the patient—is of great value in the treatment of psychasthenia. In fact, such cases are those that can probably be most helped by suggestion. Cases of paranoia, cases of any of the different forms of insanity, seem to me to be unsuitable for its use.

[1] Janet: "Névroses et Idées fixes."

THE DIAGNOSIS OF CHRONIC PROGRESSIVE BULBAR PARALYSIS.

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THE first description of this disease was given by Duchenne in 1860. Schmidt (Pepper's "System of Medicine") states that Trousseau had seen it twenty years before. Its pathology was studied by Charcot and Leyden as early as 1870, confirming the suggestion of Wachsmuth, that the disease is dependent upon atrophy and degeneration of the nuclei in the medulla oblongata. The term progressive labio-glosso-laryngeal paralysis is used by some writers in place of the one given above. But as this term does not explain the seat of the disease and makes no mention of the pharynx, which plays an important part in its clinical history, the above term is preferable. For similar reasons the term labio-glosso-pharyngeal paralysis is also objectionable.

The etiology of this disease is unknown.

The disease is insidious in its onset, the early symptoms being occipital headache, dizziness, a choking sensation in attempting to swallow, and difficult speech. In its incipiency the patients make themselves understood in speaking, but the words are slowly pronounced and forced. There is a nasal twang, owing to paralysis of the palate. The tongue can be only slightly protruded. The impairment of the innervation of the tongue betrays itself in loss of mobility in that organ, so that certain letters, such as R, L, S, can no longer be properly articulated, owing to the fact that the tongue plays an important part in their articulation. These patients do not forget words or confound them, since the disease is not situated in the cerebrum. One who has listened to such an individual feels like helping him along in his speech—it becomes so forced. This condition is termed alalia or anarthria. Close examination at this stage of the disease shows commencing atrophy of the tongue. As the atrophy progresses, the mobility of the organ lessens. As the disease advances, the tongue cannot be protruded, or moved from side to side. It is thickly coated and fissured. This impairment of the tongue affects the chewing, allowing the food to collect between the cheeks, and making it difficult to find its way to the pharynx. Atrophy of the lips now becomes apparent, and as their mobility becomes impaired, certain letters which require labial movements, such as B, M, O, F, V, etc., are poorly articulated. "The sound of double O, as in tool" (Strümpell), becomes markedly influenced by this impaired mobility. Fibrillary contractions occur. Owing to atrophy of the orbicularis oris, the patient has an appearance as though weeping, causing the mouth partly to open and the naso-labial fold to be deepened. The muscles of the pharynx and larynx now become involved, only increasing the difficulty in swallowing. The impairment of the innervation of the larynx (pneumogastric nucleus) causes the voice to become husky and later entirely lost. The arytenoid cartilages do not approximate, allowing food, fluids, mucus, etc., to enter the larynx and produce suffocative attacks. The foreign substance may become lodged in the larynx and produce death by suffocation, or the body may enter a bronchus, pro-

ducing broncho-pneumonia. The inability of complete closure of the glottis offers a favorable opportunity for "aspiration-pneumonia," since the excessive amount of saliva (mucus) constantly finds its way down the respiratory tract. This large accumulation of mucus is to the patient the most distressing of all symptoms, requiring its constant mechanical removal, either by means of a brush similar to that used in medication of the larynx, or by sponges. The sense of taste is not lost. The reaction of degeneration (Erb) can usually by careful examination be detected in muscular fibres of tongue and lips (Strümpell). In the last stages of the disease the patients cannot talk at all, so that whatever they would like to say must be expressed in writing. The mind is clear, and the patients frequently weep, since they are only too well aware of the gravity of the situation. One who has seen an example of this disease will agree with Bartholow that it is "truly pitiable." Its prolonged course, usually lasting from two to five years, with the patient becoming more and more conscious, as each month passes, of the true situation, makes it a much more formidable and dreaded disease than hydrophobia—which is certainly bad enough.

But the latter disease has run its course in just about as many days, viz., from two to five. Patients with rabies usually have fever and delirium (hallucinations), the temperature being 103° to 104.5° F. respectively in two cases previously referred to in the MEDICAL RECORD by the writer. And in most cases of reported rabies delirium is referred to as a symptom,[1] while in chronic progressive bulbar paralysis fever and delirium are conspicuously absent.

Frequent yawning is a symptom not often referred to by writers on bulbar paralysis. Its unusual frequency and the pain which it occasions, referred not to the pharyngeal muscles, but to the muscles of the face, like the masseter and temporal, are very annoying to the patient and pass a little beyond its usual physiological significance. A patient of mine in private practice was much relieved when this symptom ceased a few days before death, and wrote so on a slate. A study of this disease suggests, irrespective of experiments on animals, that the centre for yawning must be situated in the medulla oblongata. The patient was a woman fifty-four years of age, and I merely refer to the sex for the reason that most authors are agreed that it occurs oftener in men than in women, and in reviewing the literature of reported cases I believe that this is probably correct. A peculiar fulness in the head occurs in this disease, which is not easily explained. It is not due to fever, since there is none. This sensation is, nevertheless, partly relieved by cold applications. Just before death the pulse may become very rapid, 150 to 160 a minute, probably dependent upon paralysis of the vagus.

With this brief review of the salient features in the clinical history of this disease, we will discuss its diagnosis. It may be confounded with the "pseudo-bulbar paralysis" of Lepine and others. Unlike the disease under discussion, this paralysis has its seat, not in the medulla, but in the cerebrum, and is bilateral. Strümpell says that "in rare instances a similar group of symptoms seems to be referable to unilateral cerebral disturbance." The asymmetry of the paralysis, the more sudden onset of the disease, the absence of the reaction of degeneration of tongue and lips, and lastly the fact that the mind does not remain so clear, distinguish the "pseudo" from the genuine disease. Although bulbar symptoms occur in amyotrophic lateral sclerosis (spastic spinal paralysis, spasmodic tabes dorsalis—Erb, Charcot, and Joffroy), they occur later in the disease, being preceded by contractures and clonic spasm of the muscles of the extremities, which do not occur in genuine bulbar paralysis. The commencing weakness and atrophy of muscles of the upper extremity (arm), followed by atrophy of the lower extremities, also serve to distinguish them. Exaggerated reflexes may occur in both, but appear earlier and are more pronounced in amyotrophic lateral sclerosis. It is a disease developing between twenty-five and forty-five years of age, while genuine bulbar paralysis rarely occurs before forty-five or fifty. I regard this latter statement of much value in the differential diagnosis of this disease. In the same way that Sydenham's chorea has a special predilection for childhood, so chronic bulbar paralysis affects oftenest adults of advanced years. Bulbar symptoms also occur in progressive muscular atrophy, which disease also happens earlier in life. In this disease the atrophy usually first affects the ball of the thumb, *i.e.*, first the abductor brevis pollicis, then the opponens pollicis, and lastly the adductor. The atrophy then extends to the muscles of the forearm, principally affecting the extensors. The upper arm next becomes involved, with special predilection for the deltoid and biceps. It then extends to the trunk, first affecting the trapezius, the pectoralis major and minor, rhomboidus major and minor, and lastly the latissimus dorsi. The lower extremities become atrophic late in the disease. This symmetrical course does not apply to the muscular atrophy of chronic progressive bulbar paralysis. "Changes in the pupil and other oculo-motor phenomena occur when progressive muscular atrophy is associated with bulbar paralysis" (Bartholow). Joint affections may occur in progressive muscular atrophy as in tabes dorsalis, but not in chronic progressive bulbar paralysis. Embolism or thrombosis of vertebral and basilar arteries with subsequent softening, acute inflammation of the medulla, arterio-sclerosis with formation of aneurisms, and subsequent hemorrhage of the medulla may produce analogous symptoms. The softened areas may be small or large. But here the duration of the disease alone, lasting from three to five days, or in exceptional instances a few weeks, is in itself sufficient for a distinction between the two. To this class of cases the term acute bulbar paralysis is appropriately given. In diplegia facialis, or double facial paralysis, facial muscles other than the orbicularis oris are involved. Tumor of the medulla and pons must also be considered. In tumor "choked disc," puffiness of eyelids, distention of facial vein, and slow pulse may be of service in establishing a diagnosis, since they are not the features of progressive bulbar paralysis. Gummata of the medulla run an atypical course and are more or less influenced by the administration of iodide of potassium. In fact, alleged cures of genuine chronic bulbar paralysis were probably of this character. It could be confounded with myasthenia gravis pseudo-paralytica of Jolly or the asthenic bulbar paralysis of Strümpell. I do not agree with Kojewnkihoff, who holds this latter disease to be a milder form of true chronic progressive bulbar paralysis. The descriptions given by authors (J. Collins, Pineles, Bruns, Murri, etc.) lead me to believe that it must be a wholly different disease. It occurs in younger people (Collins' case, a woman twenty-seven years old; Strümpell's case, a woman twenty-one years old), more often in women than men, and presents a characteristic rapid exhaustion not only of the paralyzed, but of the normal or apparently healthy muscles. There is no change in the electric reaction, and, while most cases are fatal, improvement may take place (in two out of four cases reported by Pineles this occurred), while genuine chronic bulbar paralysis, like hydrophobia, is invariably fatal.

Gradual compression of the medulla is also to be considered. This may be due to tumors arising from

[1] Exceptionally in hydrophobia the mind may remain clear, as in a case recently reported by Dr. R. J. Wilson.

the bone (occiput) or of the atlas and axis, aneurism of the vertebral artery, tumors arising from the sphenoid bone, enchondroma of the base of the skull, and new formations arising from the dura mater, as well as new growths of large size, having their origin in the pons or in the cerebellum. This class of cases presents an asymmetrical symptom complex, and sensory lesions, hemiplegia, etc., occur.

CONSERVATIVE TREATMENT OF THE OVARY AND OF THE APPENDIX VERMIFORMIS.[1]

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THE pendulum movements of ovarian surgery are often quoted in illustration of what we may expect of appendix surgery. This is wrong. The physician who is on the wrong side of such a question carries misery to the bedside because he practises his beliefs. People trust him. They expect him to know. It is not difficult for him to know if he makes logical deductions from data that are accessible. A brief comparison between salient points of conservative ovarian surgery and of conservative appendix surgery will suffice to show their differences.

First, as regards the ovary. During the menstrual life of woman the ovary is known to be an important organ because of its function of ovulation. Before, during, and after the menstrual life of woman the ovary is believed to be an important organ because of its function of furnishing an internal secretion. An ovary that is undergoing any one of several benign forms of degeneration continues to be serviceable for the performance of both functions. An ovary that is rendered inert in its ovulating function because of adhesions resulting from some acute septic inflammatory lesion that has subsided, is still furnishing its internal secretion. Such an ovary may usually be restored to its double field of usefulness by painstaking surgical treatment of the uterine adnexa. An ovary that is neuralgic or inflamed in a benign way, without septic infection or malignant neoplasm, is commonly sharing in some general ailment, or in some neighboring ailment of the patient.

This gives a nice opportunity for diagnosis, which is improved or neglected according to the general knowledge and diagnostic acumen of the physician. If one is near-sighted in practice he may decide that such ovaries ought to be removed. If he is well equipped as a diagnostician he may discover the cause for ovarian symptoms in near-by internal hemorrhoids, in a loose coccyx, in the ulcerated floor of a crypt of Morgagni, in a lithæmic diathesis, in an error of refraction, in an inherited neurosis. Do not think this a fanciful statement. It is verified constantly in the practice of the physician who is watchful and careful in safeguarding the precious interests that are given to him in trust. It is wrong to change a woman from a full woman into a partial woman because the physician has partial knowledge instead of full knowledge of the nature of the case. There is perhaps no part of practice that is richer in pleasure than the practice of conservative ovarian surgery—hunting for remote causes for ovarian symptoms, separating old adhesions and putting the adnexa into a neat and useful condition, sparing part of an ovary here, transplanting or grafting ovary there, doing work that is constructive and not destructive.

Now in regard to the appendix. The appendix vermiformis is a part of the alimentary tract that today is as useless as the wisdom tooth. During the early years of the individual it has the unimportant function of secreting a little mucus that is similar to the mucus of the rest of the colon. After middle life it usually undergoes an involution process, and often ceases to secrete even a little mucus. As a result of acute infective injury the appendix mucosa is easily damaged, so that its little supply of mucus is lessened or stopped. Bacteria and normal involution remove the function of many more appendices than are removed by the surgeon. The involution process of removal is practically harmless, excepting for the irritation that sometimes results from the pinching of terminal nerve filaments in contracting connective tissue.

Bacterial removal of the appendix is quite another matter, and one of deepest interest to society. The annual death rate from appendicitis under medical treatment in the United States alone is several times as great as was the death rate from wounds and from disease in the Spanish-American war.[1] This is not only a preventable death rate for the most part, but it is perennial, and nevertheless arouses less interest than the death rate of the Spanish-American war. Aside from the matter of death rate, the suffering-rate and the loss-of-time rate in appendicitis under medical treatment become subjects for serious consideration.

If we remove the appendix as soon as an accurate diagnosis of appendicitis has been made, the death rate at the hands of several American surgeons has been shown to be a fraction of one per cent. in the class of cases in which infection is practically limited to the appendix structures. The death rate has been lowered to about five per cent. by a few surgeons in the class of cases in which infection has escaped beyond the structures of the appendix. The death rate in appendicitis under any sort of medical treatment has been estimated to be above twenty-five per cent,[1] and no physician has, to my knowledge, published any statistics which indicate that the death rate can be lowered below twenty-five per cent. by medical treatment.

According to "Worcester's Dictionary," the first definition of "conservative" is, "tending to preserve."

A deduction, then, from the foregoing remarks is something like this: In ovarian surgery the work of the conservative surgeon has a tendency to preserve the important ovary in cases in which the life of the patient is not thereby jeopardized. In appendix surgery the work of the conservative surgeon does not begin upon the useless appendix vermiformis until the life of the patient is jeopardized by bacterial infection of that organ. Statistics and our knowledge of the pathology of appendicitis having taught us that the death rate, the suffering-rate, the loss-of-time rate under medical treatment are greater than the death rate, the suffering-rate, and the loss-of-time rate under good surgical treatment, the term "conservative treatment" must logically mean the prompt application of good surgery for the removal of the appendix that is serving as a focus of infection. The term cannot be applied to medical treatment. The difference between conservative treatment of the ovary and of the appendix vermiformis will not allow us to anticipate fluctuating movements of opinion concerning the desirability of conservative treatment of the infected appendix.

49 WEST THIRTY-NINTH STREET.

[1] Read at the meeting of the New York State Medical Society, February 1, 1899.

[1] See "Lectures on Appendicitis," third edition.

Delaware State Hospital for the Insane.—Dr. Edith Baker has resigned as pathologist and Dr. Jean Wilson has been elected to fill the vacancy.

Progress of Medical Science.

Tuberculin.—At the last British Association meeting, Dr. McCall Anderson made a plea for the more general use of tuberculin by the profession as a diagnostic test, as a means of discovering additional foci of disease of which there is no evidence at the bedside, and as a curative agent. Instances were cited in illustration of the value of tuberculin in these different ways. A very important point, it seems to the writer, is that at the same time that tuberculin is being used means be taken to change the soil by means of hygiene, food, pure air, and the use of antistrumous remedies, including cod-liver oil.

Exciting Causes of Meningitis.—(1) Traumatic and infectious. (2) Contagious and infectious. (3) Infectious and metastatic. The first group includes all the cases in which pathogenic bacteria have gained admission to the body through wounds, injuries, or simple abrasions. The second group includes those which develop in connection with pyogenic disease of adjacent structures and cavities, such as the mastoid and middle ear, and even organs so far removed as the tonsils. The third group includes those cases of meningitis which are secondary to other infectious diseases, notably pneumonia, typhoid fever, cholera, dysentery, and influenza.—COLLINS, "Twentieth Century Practice."

Intermittent Entero-Colitis in Influenza.—Dr. Martin Raget (*Revue de Thérapeutique*, Dec. 13, 1898) states that this may be considered as the abdominal form of influenza. The patients complain of a slight febrile disturbance and malaise. Suddenly severe colicky pains in the abdomen occur, while the temperature rises to 40° C. In twenty-four hours apyrexia and a feeling of well-being set in. Eighteen to twenty-four hours afterward a second similar attack occurs, which is likewise followed by a fever-free period. Occasionally the attacks last fifty days. The abdomen is very tense and exceedingly painful. The bowels are constipated, and the fæces are fetid, with small scybala which float in a greenish fluid. Therapy consists of calomel, enteroclysis, and warm baths.

Effects of Suprarenal Extract upon the Circulatory Apparatus.—In the *Allgemeine medicinische Central-Zeitung*, January 11, 1899, the following conclusions of Dr. Alois Velich appear: (1) In markedly chlorotic animals, or those which have been brought thoroughly under the influence of curare, the intravenous injection of suprarenal extract gives rise to a pronounced increase of blood pressure. (2) In severe instances of curare poisoning an increased rapidity of the pulse, even with a non-disturbance of the pneumogastrics, occurs as the result of the effect of the extract, while the centres of the same nerves are paralyzed by a large amount of curare. (3) The intravenous injection of suprarenal extract causes a minor degree of increased blood pressure in the lesser or capillary circulation. The main cause of this increase lies in the fact that the right heart receives through the descending vena cava a vast amount of blood from the hyperæmic brain, and that the left heart does not empty itself thoroughly enough.

The Heart in Infancy and Childhood.—Crandall, quoted by Taylor and Wells, makes the following statements: (1) The apex lies higher in the chest and farther to the left than in the adult. (2) The apex beat is hard to detect in the infant. In the child, palpation shows this easier than in the adult. (3) The area of dulness is comparatively large. (Rotch indicates three stages in infancy and childhood during which differences are noted in relative and absolute dulness.) (4) Murmurs are heard over comparatively large areas. A study of differences in the quality of the sound will help us here. (5) The rate may be incrased and the rhythm altered by slight causes. (6) In rachitic children and in those affected by empyema or pleural adhesions, the apex may appear in an abnormal position. (7) Prominence of the precordia is sometimes marked. The examination should always be performed during sleep or in a state free from physical or psychic disturbance, and a child should never be frightened with a formidable-looking stethoscope or other instrument.

Prague Method for the Delivery of the After-coming Head.—Dr. Adam H. Wright, in an article entitled "Management of Difficult Breech Labors" (*Canadian Practitioner and Review*, January, 1899), says: "Grasp the ankles with the right hand and place the left hand over the shoulders with the thumb and index finger on one side of the neck and three fingers on the other side. Pull downward and backward until head has entered the pelvis and then upward and forward, bringing the back of the child nearer to the mother's abdomen, as the face, chin first, slips over the perineum. I use the terms right and left hands for the sake of convenience. The choice of hand for each portion of the manipulation may be left to the operator. In this method the force is expended on the child's neck, and, if too great, might cause dislocation or even decapitation. In the majority of cases delivery is accomplished simply and quickly by this method, but in difficult cases where much force is required I adopt the Veit-Smellie method. I may add that British obstetricians, as a rule, consider that the Prague method should be employed only when the head is in the pelvis.

Abdominal Palpation in Obstetrics.—(1) External exploration, known as abdominal palpation or external palpation, is one of the most useful methods of examination in obstetrical cases. (2) This method of examination, known from time immemorial, has been employed advantageously only since the early part of this century, but it is really only in about the last twenty years that it has been thoroughly studied and that its methodical application has enabled us to state that it should be used in every case of pregnancy. (3) Easy to teach, easy to learn and to use, abdominal palpation is the best method for the diagnosis of normal or complicated, simple or multiple, uterine or ectopic pregnancies. (4) The diagnosis of such conditions as triple pregnancy, hydrocephalus, etc., has been made possible only by the methodical use of this measure. (5) During pregnancy it in many cases determines the indications for prophylactic and curative measures. (6) During labor, although often valuable, it is less so than internal examination. (7) During delivery of the placenta it is of equal value with internal manœuvres. (8) After labor it should be the sole procedure in physiological cases, internal exploration being joined to it only in pathological cases.—DR. A. PINARD.

A New Series of Six Hundred Thyroid Operations.—In 1895 Kocher published the results of one thousand thyroidectomies; since then he has performed the operation six hundred times. Of these, eighteen were for malignant struma, with six deaths; eleven for strumitis; and fifteen for Baedow's disease, two of these patients succumbing. Of five hundred and fifty-six operations for colloid struma, only one resulted fatally, and that owing to the chloroform anæsthesia. Since the prognosis of the operation at the present day

is so very favorable, Kocher considers that the indications for surgical intervention may be more broadly regarded than heretofore, and undertakes the operation not only where medical treatment has failed after long trial, but also in those cases where such methods do not seem hopeful at the start, especially when there is the slightest suspicion of malignancy. Rapidly growing tumors, as also those that have become a deformity, demand early operation. The great indication is dyspnœa resulting from tracheal stenosis through pressure, and medical treatment of such cases is entirely unjustifiable. Both iodine and thyroid therapy are not well borne for long periods, especially when, through old age, atheromatous vessel-changes with their concomitant heart and lung lesions increase asthmatic and dyspnœic difficulties. An uncomplicated thyroid operation may at present be considered danger-free, and even in more difficult cases the risk is greatly decreased by the substitution of local cocaine anæsthesia for general narcosis. Kocher still adheres to his old method of operating and never does a total extirpation without urgent need, and even then endeavors to leave some small portion of the gland behind. Since 1883 only four instances of the cachexia strumipriva have resulted.—*Cor.-Bl. f. Schweizer Aerzte*, xxviii., 18, 1898.

Hip Disease: Treatment and Results.—Dr. B. E. McKenzie (*Canadian Practitioner and Review*, January, 1899) concludes as follows: (1) Hip disease is a local manifestation of a constitutional disease. (2) Early operative interference is seldom justifiable. (3) As soon as softening can be determined, the surgeon should operate and obey indications, observing all care not to injure needlessly the mechanical integrity of the joint, and knowing that he is but aiding nature by removing tissue which she has already cast off. (4) In the future management of the wound, the principles of asepticism and antisepticism must be carefully observed. (5) From the earliest moment, efficient protection for the joint should be secured and constantly maintained by a well-fitting mechanical appliance. (6) Constitutional treatment is indicated as in other tuberculous affections. Great emphasis should be laid on obtaining the freest exposure to sunlight and fresh air. (7) After excision a perfect recovery is never effected, the mechanical integrity of the joint having been interfered with. (8) Following mechanical and constitutional treatment, perfect restoration of function is sometimes obtained. (9) Even when softening of tissue occurs and necessitates incision there is sometimes a perfect restoration, and frequently a highly useful return of joint function.

Conclusions on Diphtheria Antitoxin.—Immunity in any given case, of no matter how thorough exposure to diphtheria, may be conferred, for at least ten days, by the injection of a small dose (100 to 250 units) of serum, provided it is given twenty-four hours previous to actual infection. A larger dose (250 units for a child of two, up to 500 units for one of eight or over) will confer safety for three weeks—or, to be a little more conservative, let us say twenty days—under similar conditions. No harm will result from the treatment in a vast majority of cases of sick children, and probably in no case of a healthy child provided the serum used is up to the present standard of purity. In conclusion, I would say that any one who thinks that antitoxin will prevent the occurrence of a follicular tonsillitis or of a coryza in an individual who happens to have the Klebs-Loeffler bacillus in his throat or nose will be disappointed; for neither of these conditions constitutes a diphtheria any more than the coexistence of the pneumococcus in the saliva and a bronchitis constitutes a frank pneumonia. I will add that a physician who fails promptly to immunize the members of a family or close community in which diphtheria breaks out, neglects to do his duty by those whose safety lies in his hands.—Dr. F. Gordon Morrill.

Pain in the Fallopian Tubes.—The *Canadian Practitioner and Review* for January, 1899, credits Dr. Ernest Hall with the following: Chronic salpingitis is painful for two reasons: first, on account of the exudations causing adhesions with the neighboring organs; second, on account of distention of the tube, usually at the menstrual period. One fact appears to us to be beyond dispute, that small and lax adhesions no more than the existence of serous exudations are insufficient in themselves to cause pain. It seems that active inflammation and the presence of infection are needed to make this condition painful. The prolapse of the tube toward the cul-de-sac is always troublesome, and at least causes slight pain and uneasiness. We should notice the probability of making a wrong diagnosis in salpingitic pain. The patient might complain of pain in one side of the pelvis, when upon examination inflammatory exudation or a tumor may be discovered upon the other side. We have seen a displaced tube lying across the posterior face of the uterus in such a position that its pavilion, extended by exudation, formed a tumor which was fixed to the pelvis on the opposite side. The pain in this case was located in the fine nerves which are distributed upon the tube through the corresponding ligament. The pain of salpingitis is generally fixed, and undergoes increase during menstruation, not previous to it, as in ovaritis. But after menstruation it undergoes marked decrease, and reappears two or three days later. This latter pain is caused by the traction of the adhesions which fix the tube to the pelvis.

The Pathology of Experimental Quinine Amblyopia.—Holden has produced experimental quinine amblyopia in dogs, and here presents the results of his work. These in *résumé* may be expressed as follows: Although the arteries were constricted, no histological changes were noticed in the vessels of the nerve or retina in any case, there being neither thickening of the vessel walls nor proliferation of the endothelium. The thin-walled central vein of the optic nerve was often found to be empty and collapsed, and the delicate connective tissue about its small vessels, owing to its being stretched and apparently increased in amount, sometimes suggested the appearance of an organized thrombus in the vein, but this same appearance was noted also in healthy dogs when the vein was empty. The pathological process, then, consists in a constriction of the retinal vessels, and particularly of the arteries, followed by a highly albuminous serous exudation into the nerve-fibre layer and a degeneration of the ganglion cells, together with their axis-cylinder processes which become the centripetal fibres of the optic tract. There is no way of determining exactly how far the degeneration of the ganglion cells and their axis cylinders may be due to the direct toxic action upon them of the cinchonized blood, and how far the degeneration may be due to the indirect toxic action of quinine in constricting the retinal vessels, and thus reducing their nutritive supply. The pathological changes are analogous to the degenerative changes which follow so-called retinitis of the inner layers. Administration of nitrite of sodium, though theoretically desirable as a therapeutic agent, is non-efficacious.—W. A. Holden, *Archives of Ophthalmology*, vol. 27, 1898, No. 6.

Influenza Pneumonia.—Dr. Galliard, in his book entitled "La Grippe," gives the following as characteristic of influenza pneumonia: (1) Its insidiousness, no initial rigor; (2) absence of the stitch in the side (*point de côte*); (3) the absence of the rusty spu-

tum; the sputum is stringy, mucous, adheres but slightly to the vessel, is sometimes streaked with blood, sometimes muco-purulent, but never very opaque, nor very viscid; (4) the irregularity of the temperature chart; one may see on the chart the frequency of remissions, and the extent of the febrile rises; (5) the disagreement of the pulse and the temperature; the pulse is often slow and small and only sixty to sixty-eight per minute; (6) even apyrexia is possible; (7) the great prolongation of the disease, with a persistence of the physical signs; (8) the pneumonia frequently is bilateral; (9) the number and gravity of the complications, pleurisy, pericarditis, otitis, meningitis, secondary abscess, and gangrene of lung. The onset of grippal pneumonia appears rarely on the first day of an influenza attack; some say it appears from the fourth to the eighth day, others on the seventh to the tenth day, or even the fifteenth day, *i.e.*, at the stage of decline or even of convalescence. This pneumonia runs a course of from six to twelve days. Some cases are very rapid, with death on the third or fourth day. Relapses are frequent, and convalescence is slow. The prognosis is always grave, sixteen to seventeen per cent. death rate (Netter).

Gonorrhœal Ophthalmia.—Dr. D. T. Vail, of Cincinnati, is credited with the following: (1) The general practitioner should always warn his gonorrhœa and leucorrhœa patients of the danger of inoculating their eyes. (2) As the family physician is usually the first consulted, he has the golden opportunity which the first hours afford. He should seal the unaffected eye at once. (3) It is well to bear in mind that all cases of purulent ophthalmia are not gonorrhœal; on the contrary, only a very small percentage are. (4) For diagnostic and scientific reasons microscopical examination of the discharge should be made. (5) For the cornea to escape involvement is the great exception. (6) The best early treatment in my judgment is: (*a*) leeching; (*b*) continuous iced applications day and night; (*c*) nitrate of silver, two to four per cent. solution, applied to the everted lids once or twice a day; (*d*) non-irritating gentle flushings of the eye every few minutes; (*e*) canthotomy downward and outward to liberate the lower lid.

Gunshot Wounds of the Brain.—Experiments on eviscerated skulls and those with their contents intact have shown that bullets passing through the former produce simply clean perforations of the bony walls, while the latter, when fired upon under precisely similar conditions, exhibit phenomena comparable to those produced by explosive projectiles, indicating that the presence of the brain markedly influences the dynamics of the missile's impact. But in all the experiments heretofore conducted the tendency has been to consider the bone lesions produced, to the exclusion of the injuries inflicted on the cranial contents. Professor Tilman (*Arch. für klin. Chir.*, lvii. 3, p. 608, 1898) has for several years been making observations of the brain lesions produced by the bullet of a nine-millimetre revolver, and groups the effects produced under three heads—first, the destruction of brain substance in the line followed by the projectile, then the crushing resulting in the immediate vicinity, and lastly a species of concussion which is demonstrable through the increased number of hemorrhagic points and the minute lacerations of cerebral tissues. These latter injuries are greater in degree in proportion to their nearness to the bullet hole and diminish in intensity toward the periphery. The diameter of the perforation increases to about its middle point and then grows less, so that the wound of exit is smaller than that of entry. Owing to its greater vascularity and more delicate structure the gray matter suffers more than the white. That these lesions are attributable to hydrodynamic pressure effects was demonstrated by cinematographic photography, which showed either a momentary increase in size of the entire cranium or even an explosive spurting of fluid through the apertures or crevices produced. In ordinary concussion all parts of the brain are affected to an equal degree, but this form of gunshot concussion is due to a force acting from within outward and compressing the brain substance against the skull wall as well as destroying it along the line of fire, and produces a greater effect on the central masses than at the periphery. This internal disorganization is to be considered characteristic of injuries of this kind, as no other form of traumatism is capable of causing it. The clinical picture is a composite of the results of the separate lesions, and it is impossible to diagnosticate them separately. The observations showed that expectant treatment (v. Bergmann) is most rational.

The Diplococcus Intracellularis has been demonstrated for the first time in the blood during life in a case reported by Dr. Gwyn (*Philadelphia Medical Journal*, vol. ii., No. 24). It was also found in the fluid obtained by lumbar puncture and in the pus from a knee-joint.

Modified Inoculation Preferable to Vaccination.—Dr. C. H. Tebault (*Gaillard's Medical Journal*, January, 1899) concludes as follows: (1) Simultaneously with the presence of smallpox, we have offered us the means for arresting the disease in its first appearance by effectually limiting it to the first cases presenting. (2) No doubt should exist with respect to its strength or freshness, for the physician can thus escape the intermediary, and estimate, in his own knowledge, its freshness in exact minutes and hours. (3) Should a father enter his own home attacked by smallpox, every member of his family could be protected through him, and no questioning would be necessary, in employing the virus for modified inoculation taken from himself, for the protection of his own family. (4) Modified inoculation protects more rapidly than the best possible vaccine virus and more certainly, for the author and every practitioner of medicine of ripe experience and who has seen much of smallpox knows that smallpox has repeatedly overtaken vaccination two weeks after its successful insertion, and even later, while in the author's experience modified inoculation has arrested smallpox already in the papular stage. (5) Modified inoculation would make it unnecessary to provide for compulsory vaccinations when no physician employing the humanized or the bovine virus can vouch, personally, for its freshness or its purity. (6) To-day every physician depends for his virus upon vaccine farms run for the profit of their owners, and he is compelled to rely upon these propagators and their assistants, residing in distant localities, for the reliability, the honesty, and the purity of their products—whereas, in modified inoculation, he can provide his own material and can calculate from his own information, to a minute, with regard to its freshness and also in the matter of its purity. (7) Modified inoculation can be made stronger or weaker, to meet any required case or emergency; stronger, for example, in cases prudently needing a second or third protection, if an emergency should suggest repetitions. (8) One or two modified inoculations would answer for a lifetime, whereas one-third of the re-vaccinated will make a response, if vaccinated with reliable virus every third year. (9) A vaccinated patient will actively respond to modified inoculation in a year, and even a smallpox patient, after recovery, will slightly, or positively, respond to modified inoculation in the second, and even the first, year. (10) To practise modified inoculation, it is

simply necessary to obtain the smallpox lymph in the vesicular stage only and admix the same thoroughly with from three to six drops of fresh, warm cow's milk and proceed to operate precisely as for vaccination. Modified inoculation, thus practised, is not communicated by contact or contagion.

The Treatment of Tetanus by Brain Extract.—Dr. H. Schramm, docent in surgery at the Lemberg University, reports the following case (*Przegląd Lekarski*, January 21, 1899), which, so far as he is aware, is the second on record in which extract of brain has been applied as a therapeutic agent in the human being. The first one was published by Dr. Krokiewicz in *Noviny Lekarskie*. The present case has the following history: On December 10th, there was brought to St. Zoffie Hospital H. L——, a girl, nine years old, who suffered from well-advanced traumatic tetanus. In the beginning chloral was used in two-gram doses per rectum, but it did not have the slightest effect on the tetanic contractions. The child had from fifteen to twenty attacks daily, but expectant treatment was continued on account of the fever being low (between 37° and 37.4° C.). At last, on the twelfth day from the beginning of the disease, the child became very much exhausted and the temperature went up to 40° C. The author decided to use brain extract. For that purpose he took fresh brain of a young rabbit, about eight to ten grams, freed from fat, washed it in freshly prepared physiological salt solution, macerated it thoroughly in an aseptically cleaned porcelain mortar, with the same quantity of physiological salt solution, which he afterward pressed through six layers of gauze sterilized by boiling in decinormal salt solution. The whole amount of extract he obtained amounted to about fifteen grams. He injected ten grams of this mixture, which contained from five to six grams of pure brain, into the left side of the chest, using always the most rigid antiseptic precautions. In the evening the temperature fell to 37.4° C., and the child became quieter, notwithstanding that chloral was not given. Next day the patient was able to open her mouth. On the third day after injection she became worse. The operator extracted in the same way as before ten grams of rabbit brain, and mixed it with twelve grams of decinormal salt solution after maceration and expression. He secured ten grams of fluid, this extract being stronger than that used before; this amount he injected into the right side of the child's chest. During the day the child had less frequent attacks and passed the night quietly. On the third day from the last injection the child was able to sit up in her bed. On the fourth day she got up. The sites of injection were painless and without any swelling. The author did not observe any bad effects from this treatment, and the injected fluid was rapidly absorbed. This case differs from that of Dr. Krokiewicz, in that in the latter abscesses formed at the place of injection, which, he explains, were probably due to thicker particles of brain matter injected under the skin, and that he used calf's brain probably not very fresh and surely contaminated. Wassermann and Taky have shown that the brain of any warm-blooded animal, such as the dog, rabbit, etc., possesses antitoxic properties; therefore for therapeutic purposes any brain may be used, but best of all rabbit brain, for the reason that calf's brain removed by the butcher will always be contaminated and probably stale, while a rabbit can be easily procured and the brain removed under antiseptic precautions, so that it can be depended upon. On the ground taken by Wassermann and Taky, brain extract should be used in every infectious disease in which the nervous system is mostly affected, such as rabies (*rage*) and others. Dr. Borstein ("Ueber die antitoxischen Eigenschaften des Central Nerven-Systems," *Centralblatt f. Bact. und Parasiten.*, xxiii., 4) has tried brain extract in diphtheria, but with negative result, probably because in this disease the nervous system is not very much affected.

A New Sign of Measles in its incubation stage is said by Meunier to be a pronounced loss of weight (three hundred to five hundred grams daily in a child of one to four years).

Diabetes in Gynæcological Practice.—In a collection of twenty-two instances studied by Kleinwächter (*Zeitsch. für Geburts. und Gynäk.*, Bd. xxxviii., Hft. 2) menstruation was found irregular or diminished in a small proportion of those who had not passed the menopause. Pruritus vulvæ was present in seventy-three per cent., the amount of sugar not apparently influencing the intensity. In the internal generative organs there were no changes attributable to the diabetes and no evidence of premature atrophy.

Treatment of Urachus Fistulæ.—Lexer (*Archiv f. klin. Chir.*, lvii., S. 73) as a result of extensive experience recommends the most simple treatment (cauterization, scraping the fistula), immediately after birth, for urachus fistulæ, after having provided for the normal evacuation of urine. If these methods do not prove successful, then after two years we must believe that the patency of the urachus is due to the large lumen, cystic dilatation, or inflammatory changes in its course. A major operation is advised only after a number of years, because the peritoneal cavity is thus opened. By means of absolute cleanliness and a large aseptic gauze compress the condition of the child may be made bearable. If operation must be done, then a radical cure is to be advised. In acquired urachus fistula, the method of Bramann (incision of fistula and removal of the epithelial wall), which prevents injury of the peritoneum, and which on account of the frequent inflammation around the fistula is not altogether without danger, is recommended.

Prophylaxis of Tuberculosis.—Dr. Fränkel, of Berlin (*Klin. Wochenschr.*, No. 2, 1899), publishes the following report: In 1889 Cornet suggested the idea to the medical world that neither liquid sputum nor saliva of tuberculous patients could spread infection of tuberculosis through the air, since so long as there were liquid tubercle bacilli would not float in the air. Therefore, the whole attention of the medical world has been directed only to dry sputum as offering the greatest danger of the spread of tuberculosis in this way. In the last few years the studies of Fluegge have proved this idea of Cornet to be erroneous. Fluegge proved that tubercle bacilli multiply with ease in the air in the minute drops into which the sputum of patients becomes divided when they cough. Huebner in his experiments has also proved that bacilli present in the oral cavity of tuberculous patients get into the air during talking and float there for a certain time. Schaefer proved that lepers with changes in the mouth cavity, during coughing, sneezing, or talking, spread great quantities of bacteria. Latschenko in Fluegge's laboratory showed that violently coughing tuberculous patients in this same way contaminate the air around them, and that in their oral cavity bacilli can be found constantly. Fraenkel himself showed that the saliva of tuberculous patients often contains tubercle bacilli (but not always), even in cases in which there is no laryngeal tuberculosis; therefore the greater part of tuberculous patients distribute bacilli in the air by their ordinary conversation. To prevent the danger of spread in this way Fraenkel advises that all tuberculous patients should wear a mask devised by him, which is very similar to a chloroform mask.

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THE NECESSITY FOR NATIONAL QUARANTINE.

IF there if any doubt as to the necessity for a national system of quarantine, it can be very effectually dispelled by a study of the present belligerent tendencies of the different State health boards along the Gulf border. Each commonwealth concerned in the prevention of the invasion of yellow fever is not only determined to adopt its own independent means of insuring safety to its inhabitants, but is inclined to dictate a policy for its neighbor. Thus the Mississippi State board, after formulating rules satisfactory to itself, threatens New Orleans with quarantine unless certain provisions absurd in their way are carried out. Texas also joins issue on the same lines, and not only threatens Louisiana, but Mississippi as well. It is not unlikely that these interstate difficulties will become still more multiplied, as they may involve not only the different counties of each State, but even the smaller towns in threatened districts. If the precedent is established of each one looking after himself, it is a grave question where the end is to be.

It is also plainly to be seen that there is no hope for any proper understanding between the States short of some compulsory regulation by the general government. The interstate interests can never be recognized or harmonized on any other basis. Although numerous conferences between State boards have been held with the view of reconciling conflicting tendencies and of formulating rules for mutual protection, they have not only signally failed, but have resulted in making the differences of view more absolute, and the chances for concerted action more indefinite and remote. Each party in the controversy, assuming its privilege to be absolutely right, not only does as it pleases within its own territory, but presumes to dictate the policy of the authorities across its border. As a striking instance of the latter method of interference, Mississippi insists that a representative of her State board shall supervise the doings of the sanitary authorities of New Orleans, in order to judge whether or not his State shall declare quarantine against that city. The reason for this is based upon the charge that the health board of New Orleans cannot be trusted to do its duty in declaring the existence of yellow-fever cases. The proposition is not only an absurdity and an insult, but very clearly demonstrates how widely apart the States are from any proper and conciliatory line of action for general safety. It is easy to see that such policy can be productive only of the greatest harm to all concerned. The more interference there is from outsiders the more resistance there is from those who are threatened with such ill-advised missionary efforts.

While this lamentable disagreement of the health authorities is so obviously impossible of reasonable settlement, the merchants and the general public are clamoring for the abolition of quarantine altogether, asserting that they prefer to run the risk of the fever rather than face a senseless and obviously unfair system of trade restriction. It is useless to deny the fact that quarantine in any shape is always a very serious matter. When it is necessary it is very necessary. To be effective it must fulfil all its widespread purposes. The decision as to its extent and thoroughness cannot be left with any local authorities influenced by arbitrary and selfish motives. We have proved this over and over again by the loss of life and property year after year as the result of unprevented fever invasion. We shall be merely repeating history by allowing matters to go on as they are at present. There is only one hope for the better, and that is in the speedy enactment of a national health law by our present Congress. Before we may be able to realize the dreadful fact, the warmer months will give their ever-ready invitation for a pestilence. The Marine Hospital Service may do its best as heretofore to adjust difficulties and generalize laws, but its powers are necessarily limited. The only seeming remedy for the present troubles which can be applied quickly and effectively is to strengthen that arm of the service and give it the opportunity of proving its real usefulness. Certainly there is nothing better within reach at present, especially when so little time is left for the national legislature to perform its obvious and pressing duty.

THE HYSTERIA OF HYPOCRISY.

MORE subtle than the effect of absinthe, and more insidious than the contagion of smallpox, is the instinct to reform, not one's self, but others. The heart of man—of the other man—is inconceivably wicked; the ways of the world are hopelessly annoying to those too good to live in it; therefore it is unquestionably the duty of those who have no sins of their own to prod the consciences of others and throw the strong light of their illuminating piety upon the dark corners of life.

It matters not what the subject of the reform may be, provided the reformers are sufficiently ignorant of the sins they would cope with, and are possessed with that inward fervor which rises superior to facts and takes no heed of natural laws. The fascination of being a power for good, and of wearing a badge and paying a small annual due, is characteristic of the present stage of this hysterical craving for reform, whether it be a tea-meeting of New England spinsters

to discuss the suppression of suttee in India, or a congress of temperance ladies to abolish the saloon; the enthusiasm is in direct proportion to the lack of knowledge of existing conditions.

Fortunately in this country this enthusiasm expends itself for the most part on subjects not wholly concerned with vital questions, such as the hunting up of revolutionary ancestors and the providing of stools for shop-girls; but of recent years in England, where there is a leisure class, old women of both sexes have abandoned themselves with whole-souled fervor to the delights of the chase; and when the preserves are emptied of big vices, they must needs beat the bush for some new game. It is bad enough when the hysterical conscience gets on the scent, as when a Darwin or a Huxley and a Spencer are religiously boycotted; but it is a little too bad when the good old English law is split up into a thousand instruments of torture and whittled to a fine point for moral reforms. For instance, the fostering of a kindly spirit toward stray cats and overworked horses was a legitimate expression of humaneness, but the attitude of the Society for the Prevention of Cruelty to Animals when it objects to vivisecting a few chloroformed puppies, for the sake of learning how to relieve human suffering, is an excellent example of this hysteria, and the laws against vivisection, as well as the famous conscience clause in the vaccination act, are enough to make justice "throw up the position."

Now moral England is by the ears over its favorite reform. For years the pure in heart have been trying to make others pure by wearing white ribbons in their buttonholes; but recently Mr. Havelock Ellis, who has for twenty years or more been studying some of the causes of sexual perversion, has published a careful scientific statement of facts which leading physicians and alienists welcome as an important contribution to their studies. But the moralists of England never dreamed that there were such shocking things extant. It was all very well to provide respectable lodging-houses for soldiers and sailors and occasionally make a raid upon an improper resort, but such deeds of decency paled before the excitement of suppressing these facts.

What mattered it that perverted instincts were being reproduced in the children of these debased human beings? What mattered it that the tainted ancestry and unhygienic surroundings and the cramped quarters of the poor were responsible for some of such conditions? The fact only was apparent to the reformers, who were sensitive ladies and very moral gentlemen, that the one way to preserve their own purity and ignorance was to suppress the book. Accordingly by the same law that abolished the penny dreadfuls and the publication of erotic and sensual literature this scientific work was suppressed, making its sale illegal. It is not because we think that Mr. Havelock Ellis' work would have redeemed London from its social sins that makes us deplore the good Englishmen's action; it is the pity of the fact that as soon as an able man applies his research to the physical causes of moral disease with as much care as if it were a bodily plague, he should be so rudely, sensationally, and unreasonably stopped by the very people whose end he was best serving.

The freemen of Europe, who are studying the same questions connected with crime and disease, have stretched out compassionate hands to their fettered brother; and we of this country, who hope to work out some of the problems he suggests, cordially encourage him to struggle out of this tangle of white ribbons and phylacteries.

THE NEW SEAMEN'S BILL.

THIS bill, which has just become law, appears—from the seaman's point of view—to be a great improvement on the regulations by which up to now his life and conduct have been ruled. In order, however, to be in a position to estimate the superiority of the new to the old act at its true worth, and intelligently to compare their various sections, it would be requisite to possess a more intimate knowledge of the trials and hardships of a seaman's life than a landsman can be expected to have. But one does not need to be an expert on the subject to comprehend the fact that, if the provisions of the bill now in effect are strictly adhered to, the lot of those who pass the greater part of their lives on the sea will be vastly bettered. The fight between the seamen and their supporters on the one hand and the shipowners on the other has been bitter and tedious. The shipowners were naturally interested in securing the defeat of the measure, and the bill recently passed is the result of seven years' work on the part of the organized seamen of the United States. According to *The Coast Seamen's Journal*, it was in January, 1892, that the Sailors' Union of the Pacific elected a "committee on maritime law." The result of this committee's work was the Maguire act, which became law on February 18, 1898. Since then this work has been carried on by the legislative committee of the International Seamen's Union of America, representing the seamen's unions of the respective districts—Pacific, Atlantic, lakes, and Gulf. The Maguire act concerned only the seamen in the coastwise trade, while the latest act applies to seamen in both the coastwise and foreign-going trade. While reserving to the coastwise seamen all the benefits of the Maguire act, it adds others, besides extending many of the provisions of both acts to the seamen in the foreign-going trade. Thus it will be seen that the scope of the new act is far-reaching. Some of its sections are of especial interest to the medical profession—for example, that relating to discharge of seamen through sickness in foreign ports. Under the old law, when a seaman was discharged abroad without his own consent, the responsibility of the ship ended with the payment of one month's extra wages. By an addition of a clause in the new law the master must either pay the seaman a month's extra wages or provide him with employment on a vessel agreed to by the seaman. This, of course, applies only in cases where the seaman is discharged without his consent and not for "neglect of duty, incompetency, or injury incurred on the vessel." The new law also provides that "when a seaman is discharged abroad through

sickness he must be supported and returned to a home port at the expense of the United States." By the terms of the new law the *personnel* of the surveying board is improved by the insertion of the provision that when the complaint is about the food, etc., one of the surveyors shall be "a physician or a surgeon of the Marine Hospital Service." This, of course, applies only to surveys called in domestic ports. Under the new law flogging "and all other forms of corporal punishment are prohibited; no form of corporal punishment shall be deemed justifiable; and officers breaking the law are liable to a punishment commensurate with their offence, and shipmasters who fail to surrender such officers are liable in damages to the seamen illegally punished. Probably the most satisfactory feature of the present act to the seamen themselves is the provision enforcing a more generous and more varied diet table. The new scale increases the amount of food allowed by the old scale to the following extent: Water from three to four quarts daily; coffee from one-half to three-fourths of an ounce daily. The following rations are decreased: Biscuits from one pound to one-half pound daily; beef from one and one-half pounds four times weekly to one and one-fourth pounds three times weekly; pork from one and one-fourth pounds to one pound three times weekly. The following rations not contained in the old scale are now provided for: Canned meat, fresh bread (one and one-half pounds daily), fish, potatoes or yams, canned tomatoes, beans, rice, molasses, dried fruit, pickles, vinegar, corn meal, onions, lard, butter, mustard, pepper, and salt. The provision in the new law for substitutes specifies fully the articles and their proportions which may be substituted. Under the old law any stipulation for substitutes might be inserted in the scale. The seamen are to be congratulated on the successful results of their efforts to obtain just and humane legislation, although it should be remembered that without the aid of influential friends outside their labors would have been, if not in vain, at least indefinitely protracted."

Sanatoria for Consumptives in Germany. — The German Empress recently attended a meeting of the central committee for establishing sanatoria, which was held at the residence of the imperial chancellor. It was stated in the annual report that there were already twenty sanatoria in Germany for consumptive patients. Regret was expressed that accommodation was chiefly provided for male patients, and attention was called to the urgent necessity of establishing sanatoria for women. The Duke of Ratibor, the nephew of the chancellor, made a statement regarding the congress on tuberculosis, its dangers and its prevention, which will meet in Berlin at Whitsuntide, under his presidency. Professor von Leyden spoke on the same subject, and expressed a hope that the congress would contribute to make the success of the national movement for combating tuberculosis in Germany more widely known, and that it would secure fresh supporters for this work of humanity.

News of the Week.

Anti-Tobacco Legislation in Norway.—A law was recently passed in Norway prohibiting the sale of tobacco to any boy under sixteen years of age without a signed order from an adult relative or employer. Even tourists who offer cigarettes to boys render themselves liable to prosecution. The police are instructed to confiscate the pipes, cigars, and cigarettes of lads who smoke in the public streets. A fine for the offence is also imposed, which may be anywhere between fifty cents and twenty-five dollars.

Investigation of the Washington Asylum. — Dr. Gallinger, senator from New Hampshire, has recently secured the passage of a resolution providing for an investigation of the Washington Asylum. He says that there are eight hundred and twenty-six inmates of the institution, and the overcrowding is scandalous. In the workhouse for males there are only two hundred and sixteen bunks, but three hundred and fourteen inmates. The situation, he says, is a disgrace to Washington, and one to bring reproach upon Congress.

A Proposed Cancer Hospital in Buffalo.—It is stated by the *Buffalo Medical and Surgical Journal* that a cancer hospital is under discussion for establishment in Buffalo. Last winter an appropriation of $10,000 was made by the legislature for the purpose of enabling the Buffalo University to make certain laboratory experiments in the line of treating cancer. A further sum of $25,000 will probably be asked for this winter to equip the hospital. The institution will be conducted on the plan of the German Cancer Hospital at Berlin.

The British Medical Association Tuberculosis Committee.—The special tuberculosis-investigation committee of the British Medical Association has just made a report, in which it suggests that the authorities should not permit a house to be built unless it has a dry site and dry foundation, and sufficient space to allow free access of air and light. It also urges the appointment of meat inspectors and the erection of public slaughter-houses, no killing being allowed elsewhere. It recommends legislation giving to inspectors the right to visit cow-sheds and take samples of milk, and to the health officers the right to exclude milk if the tuberculin test be refused.

Poisonous Flannel.—An English trade journal says that it had received a sample of flannelettes from a correspondent, who thought the cloth had a suspicious feel and wished to know whether it contained any deleterious matter prejudicial to health. The sample was tested and was found to be loaded with chloride of zinc. If such material were worn next the skin without washing, the consequences would probably be serious. The effect of this adulteration was shown by the report on the Birmingham case which courted so much attention. Some weeks since over sixty men employed in cleaning away snow in the streets were invalided, in consequence of skin irritation produced

by chloride of zinc washed out from their overcoats and overalls. What effect flannelette treated with the same chemical would have upon the delicate skin of women and children may easily be imagined.

Hand-organs.—A very present suffering as we write leads to the query whether or not it is permissible in this city for two hand-organ men to play their instruments of torture simultaneously on the same block. We have no serious objections to a hand-organ when at a little distance, so that the noise is mellowed a little, but the volume of discord produced by two piano-organs playing different tunes is disquieting. We believe there is an ordinance in existence prohibiting such an outrage, but it has probably gone to find the clean streets that were once, for a too brief period, the joy and pride of our city.

A Correspondence School of Medicine.—A man named Irving was recently convicted in the court of quarter sessions, under the New Jersey State law, of practising medicine illegally. Complaint was made against him because he had failed to file for registration in the office of the county clerk a certificate from the State board of medical examiners. In his defence Irving said that he was a graduate of the National Electro-Therapeutical College of Lima, O. Under cross-examination he was forced to admit that he had not attended any college of medicine, but had studied medicine by means of the correspondence method for a period of four months. His examination for a diploma was conducted in the same way, and he was graduated. Then he hung out his shingle in Passaic, and straightway fell into the clutches of the law.

Overcrowding in London.—A correspondent of the London *Daily Chronicle* remarks: "The report says that in 1891 the census disclosed that 214,843 persons lived in one-roomed tenements. This is minimizing the evil with a vengeance. There were 386,489 so horribly crowded, the report says, that 128,000 lived from four to twelve in a room. This is true of one-roomed tenements, but other tenements were equally crowded, and the census proved that no less than 184,800 persons lived from four to twelve, and even seventeen, to a room. Further, the census discloses that there were no less than one and a quarter millions living from two to twelve in a room; that one and three-quarter millions lived in tenements containing one or two, and in no case more than three, rooms to each family of from one to twelve; and that over two millions lived in an overcrowded condition."

The Thirteenth International Medical Congress, to be held at Paris in 1900, will be in session from the 2d to the 9th of August. The work will be divided into five sections as follows: 1. Biology: Descriptive and comparative anatomy, histology, embryology, physiology, physics and chemistry, anthropology. 2. Medicine: General and experimental pathology, bacteriology, pathological anatomy, internal pathology, hygiene and pathology of diseases of children, pharmacology, neuropathology, psychiatry, dermatology, and syphilidology. 3. Surgery: General surgery, surgical diseases of children, surgery of the genito-urinary tract, ophthalmology, laryngology, rhinology, otology. 4. Obstetrics and Gynæcology: Obstetrics, gynæcology. 5. Public Medicine: Hygiene, sanitation, epidemiology, legal medicine, military medicine and surgery, ship medicine, tropical medicine. The official language of the congress will be French, but in the general sessions and also in the sectional meetings German, English, and French are permitted.

Medical Laboratories at the University of Pennsylvania.—It is proposed to erect a building for medical laboratory work at the University of Pennsylvania in Philadelphia, and an appeal has been made to the alumni of the medical department for funds to secure the success of the undertaking. The building will have three floors, devoted to physiology, pharmacology, and pathology respectively. The main part of the laboratory building will be one hundred and ninety-two feet in length, with wings running back at each end one hundred and twenty-eight feet. Large laboratories for students are to be placed in the wings, while the front of the main building will be divided into a number of special research-rooms, offices, and work-rooms of various sorts. To the rear of the centre of the main building there will be on each floor a special demonstration-room, a lecture-room arranged in the form of an amphitheatre. The animal house will be a special building, two stories high, and situated at the open side of the hollow square formed by the main building and the two wings.

Medicine in the Klondike.—The Canadian papers announce the establishment of a Yukon College of Physicians and Surgeons, which seemed to be necessary for purposes of protection and mutual help, there being a number of American physicians practising in Dawson and the vicinity, contrary to the laws of the Northwest Territory, in addition to about twenty-five Canadian practitioners. A temporary amendment of the medical ordinance of the Northwest Territory allowed all *bona-fide* medical practitioners, practising in the Yukon Territory at the date of the establishment of the College of Physicians and Surgeons, who were able to produce certificates of having attended a medical college for three years and a diploma of qualification from the same, to be eligible for admission to the College of Physicians and Surgeons upon passing an examination and paying $100 to the registrar. This amendment was to hold good only until the close of the first examination, which was announced for October 15, 1898. The present regulation with reference to the practice of medicine in the Yukon Territory provides that (1) licentiates of Quebec, Manitoba, and the Northwest Territories are eligible to practise medicine in the Yukon Territory on the presentation of their licenses and the payment of a fee of $100; (2) those who can present certificates of attendance for four years, or a diploma of qualification from a recognized school of medicine, are eligible to practise in the Yukon Territory, upon passing the examination of the Medical Council of the Territory and the payment of $100 to the registrar.

At the election held on October 5, 1898, the following were elected members of the council of the College of Physicians and Surgeons of the Yukon Territory: *President*, E. D. Dunn; *Vice-President*, R. R. Macfarlane; *Registrar*, A. F. Edwards; and J. W. Good and H. H. Hurdman.

Legislation on Cabarets in Belgium.—A bill has been introduced into the Belgian senate, reducing the number of drinking-places from 1 to every 30 inhabitants, the present legal proportion, to 1 to 150 inhabitants in communes of under 10,000; 1 to 200 in from 10,000 to 20,000; 1 to 250 in from 20,000 to 50,000; and 1 to 300 where the population is over 50,000. The bill will reduce the number of the cabarets in Brussels to one-tenth of the present number—that is, to 700. The sale of absinthe will be entirely prohibited if the proposed law is enacted.

Congress of French Neurologists.—The tenth annual congress of French alienists and neurologists will be held April 4th, 5th, and 6th, at Marseilles, under the presidency of Dr. Doutrebente. The following questions are proposed for discussion: "Systematic Secondary Deliriums," to be introduced by Dr. Anglade; "Polyneuritic Psychoses," to be introduced by Dr. Dutil; "Lunatics Not Recognized as Such and Punished," to be introduced by Dr. Taty.

The Independent Order of Physicians and Surgeons.—We have received a circular containing a "declaration of principles" of a proposed medical organization—the Independent Order of Physicians and Surgeons—which Dr. Charles G. Kuhlmann, of San Francisco, is endeavoring to establish. The aims of the association may be gathered from the following list of questions addressed to intending candidates: "1. Do you believe in counteracting all causes that tend toward destroying the efficiency of the medical profession? 2. Do you believe in counteracting all causes that tend toward the inevitable pauperization of the medical profession? 3. Do you believe in counteracting all causes that tend toward making the members of the medical profession the poorly paid and overworked hirelings and slaves of wealthy corporations and organizations? 4. Do you believe in unlimited general medical competition? 5. Would you be satisfied with your just share of medical patronage and experience under general medical competition? 6. Do you believe in laws that will subject private medical institutions, that secure their patients through cappers and questionable advertisements, to public inspection and regulation? 7. Do you believe in laws that will throw the burden of medical charity equally upon all tax-payers? 8. Do you believe in promoting friendship, harmony, and sociability among the members of the medical profession? 9. Do you believe that corporations and organizations have the right to bar the way in life for the young men of this State after they leave richly endowed institutions to practise their profession? 10. Are you broad enough to rise above petty professional differences and prejudices, fostered under conditions over which a disunited profession could have no control, and join the Independent Order of Physicians and Surgeons in a united effort to wrest the profession now and forever from the vulgar grasp of merciless ignorance and commercialism?" Any attempt to regulate the private life of members or their relations with their patients is expressly disclaimed as not coming within the scope of the proposed organization. The reading of papers or the exhibition of cases at the meetings is prohibited by the constitution of the order.

New Journals.—The *Boletin de la Sociedad de Medicina y Cirurgia de Panamá* is the name of a journal published on the isthmus, under the editorial charge of Drs. Julio Icaza and José E. Calvo. It is the official organ of the society whose name it bears, which was founded at Panama in November of last year. The first number of the *Western Clinical Recorder*, of Chicago, appeared in January. It is edited by Drs. Fred. Jenner Hodges and William T. Rinehart. Its object, as announced in the salutatory, is "to familiarize the general practitioner with the practice and methods obtaining in the leading public and private hospitals of the land."

Another Object-Lesson for Spain.—During the past twelve years smallpox has been epidemic in and about Holguin in Santiago province, Cuba. Three months ago the American troops under Colonel Hood occupied the district and took measures to conquer the disease. One week ago Capt. R. S. Woodson of the army medical service reported to General Wood at Santiago that smallpox no longer existed at Holguin. Over ten thousand persons were vaccinated and twelve hundred smallpox cases were treated. Seven isolation hospitals were established. During January the rate of mortality from all diseases in the district was unusually high, being ten per cent. In Holguin city alone one hundred and fifty persons died, but not one from smallpox. Although the troops were used to guard the lazarettos not a single soldier contracted the disease. Dr. V. Gomez, formerly of Brooklyn, was one of those to whom credit is due for this good work. He volunteered as an acting assistant surgeon in the army at the breaking out of the war. He was sent with Colonel Hood to the Holguin district, and was appointed by him mayor of Gibara, as it was believed that, being a medical man as well as a native Cuban, he could succeed in the necessary sanitary work where others might fail. The excellent work done by him has given ample testimony to the wisdom of his appointment.

Surgical Novelties would appear to be almost out of the question. Bouchut and his followers claimed the O'Dwyer tubes, and Townsend claims the MacGuire tub. Treves invented the Halsted bag, and Downes devised it before either thought of the matter. Kelly invented Pawlik's instrument, and, so far as we have heard, has never acknowledged it. Keyes' cutaneous punch was invented by a man out West, and Keyes said he could have all the glory there was in it. If it had been the milk punch or the solar-plexus punch which was in question, there might have arisen a controversy over priority of claim. Indeed, if there

is any instrument or device which has not been dug up in the ruins of Pompeii, it is because it burned up at the time of the catastrophe.

German Hospital, Philadelphia.—Dr. J. C. Wilson has been re-elected chief of the medical department, Dr. J. B. Deaver chief of the surgical department, Dr. C. S. Turnbull chief of the ophthalmological department, Dr. A. A. Bliss chief of the laryngological and aural departments, and Dr. Carl Frese medical superintendent.

The Prevalence of Measles in Philadelphia.—Dr. Benjamin Lee has recommended to the Philadelphia board of health the adoption of stringent measures to prevent the spread of measles, two hundred and thirty-four deaths having resulted last year from this disease.

Philadelphia Academy of Surgery.—At a meeting held February 6th, the following officers were elected for the ensuing year: *President*, Dr. J. Ewing Mears; *Vice-Presidents*, Dr. W. W. Keen, Dr. John Ashhurst, Jr.; *Secretary*, Dr. William J. Taylor; *Treasurer*, Dr. William G. Porter.

Vital Statistics of New Jersey.—During the last fiscal year the number of births in the State of New Jersey was 34,687 (an increase of 3,092), the number of marriages 13,663 (a decrease of 4,507), the number of deaths 28,033 (a decrease of 1,789), the number of stillbirths 2,083 (an increase of 52).

Harvard Students are to have a hospital of their own, under the control of the corporation, through the generosity of James Stillman of this city. This gentleman not only gives an amount sufficient to erect the building but contributes $2,500 a year toward the running expenses. Dr. Clarence Blake, of Boston, has been instrumental in bringing the needs of the university to the attention of those able and willing to supply the necessary funds.

Typhoid Fever in Philadelphia.—The alarming prevalence of typhoid fever in certain sections of the city of Philadelphia is thought to be due to contamination of a reservoir with the overflow from an intercepting sewer. Four hundred and twenty-seven cases were reported in that city for the week ended January 28th, as compared with nine in Boston and sixteen in New York. Seventy-two were reported on February 6th and 7th, nearly two-thirds from wards supplied with water from the infected reservoir.

Northwestern Medical Society, Philadelphia.—At a meeting held February 7th, the following officers were elected for the ensuing year: *President*, Dr. John A. Boger; *Vice-President*, Dr. Samuel P. Gerhard; *Secretary*, Dr. W. C. Robertson; *Treasurer*, Dr. H. Hanna; *Censors*, Drs. Charles Herwisch, Howard S. Kinne, D. A. Modell; *Executive Committee*, Drs. Wendell Reber, chairman; Drs. I. M. Koch and Frank Massey.

Pennsylvania State Hospital for the Insane at Norristown.—Dr. Edith A. Barker has been elected pathologist in succession to Dr. Florence Hull Watson, recently resigned. Dr. D. Richardson, the chief resident physician, reports the hospital to be overcrowded, three hundred and two male patients being compelled to sleep in the corridors. There are one thousand and sixty-three women and nine hundred and ninety-eight men in the hospital.

Dr. Allan McLane Hamilton, our distinguished townsman, has been elected a Fellow of the Royal Society of Edinburgh.

Dr. Joseph S. Neff has been appointed a member of the board of charities and correction of Philadelphia. Dr. Neff is besides medical director of Jefferson Medical College Hospital.

The Phœnixville (Pa.) Medical Association was organized on February 1st, with a membership of fourteen and with the following officers for the ensuing year: *President*, Dr. F. D. Emack; *Vice-Presidents*, Drs. W. B. Wynne and George Umstad; *Secretary*, Dr. Edward J. Hadfield.

Medico-Legal Society of Philadelphia.—At a stated meeting held February 1st, the following officers were elected for the ensuing year: *President*, Dr. E. B. Wheeler; *First Vice-President*, Dr. A. M. Eaton; *Second Vice-President*, Dr. L. H. Adler; *Treasurer*, Dr. G. M. D. Peltz; *Secretary*, Dr. C. H. Clewell; *Librarian*, Dr. J. I. Nash.

No Yellow Fever in the Two Hundred and Second New York.—The five yellow-fever suspects in the Two Hundred and Second New York Regiment at Guanajay, Cuba, have all recovered. The disease in each case has been diagnosed as not being yellow fever.

A Bill against Tight Lacing.—One at least of the Wisconsin law-makers is in favor of ample waists, and has introduced in the Assembly of that State a joint resolution looking to the protection of the health of women in the State of Wisconsin by making a law to prohibit tight lacing. He proposes a commission to be made up of three members of the Assembly and one of the Senate to draft such a bill as he has in mind. He says he believes tight lacing is a menace to the health of posterity, and that there is imperative need of legislation to stop it.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending February 18, 1899. February 11th.—Passed Assistant Surgeon L. L. Young, sick leave extended three months. Assistant Surgeon J. H. Payne detached from the *Marcellus*, when put out of commission, and ordered home. February 14th.—Passed Assistant Surgeon C. P. Kindleberger, relative rank of lieutenant, junior grade, from July 9, 1897. Assistant Surgeon J. H. Payne ordered to temporary duty on the *Franklin* when detached from the *Marcellus*. February 15th.—Assistant Surgeon D. F. Sughrue honorably discharged February 14th.

The Vaccination Question.—A bill has been introduced at Albany by Assemblyman Ware, of New York,

which provides for the appointment of a State commission to investigate the nature and value of vaccination and other orrhotherapeutic and prophylactic measures. It will be known as the "Commission on Prophylaxis of the State of New York," and will consist of five members, two of whom must be physicians appointed by the governor. The State board of health is to recommend to the governor the name of some person in favor of the use of vaccination, antitoxin, and other serums as prophylactics, and the Brooklyn Anti-Compulsory Vaccination League of Kings County will recommend some one who is opposed to the administration of vaccine and of serums. The other three members of the commission must be persons who have formed no fixed opinion upon the subjects to be investigated. The commissioners will hold office for two years and receive a salary of $3,500 per annum, and during their term of office they are forbidden to engage in any other business, but are to be allowed a vacation of six weeks in the summer. The appropriation to carry out the provisions of this act is fixed at $35,000.

J. M. Da Costa has been elected a trustee of the University of Pennsylvania, in succession to the late Thomas McKean.

Retired Pay for Dr. W. A. Hammond.—The military affairs committee of the House of Representatives has reported favorably the bill to give Surgeon-General W. A. Hammond (retired) the pay of his rank. Dr. Hammond, who was surgeon-general of the army during the Civil War, was courtmartialled in 1864 and dismissed from the service. The charges were: (1) "Violation of the act of Congress of April 16, 1862, by making purchases of medical supplies in person, and not through a medical purveyor." (2) "Corruption in ordering purchases of particular articles, sometimes of inferior quality, from certain persons at specified prices." (3) "Falsehood, in stating that General Halleck had requested him as a particular favor to assign Surgeon Murray to duty in Philadelphia." In 1878 Dr. Hammond succeeded in having the Senate pass a bill setting aside the verdict of the court-martial, and President Hayes then restored him to the rank of surgeon-general and placed him on the retired list without pay. The present bill, if passed, will give him in the future the pay of a surgeon-general retired, but it carries no arrearages of pay.

Municipal Hospital, Philadelphia.—According to the report of the physician-in-chief, there were received into the Philadelphia Municipal Hospital, dur ing the year 1898, 1,797 patients, including 380 cases of scarlet fever, 1,229 of diphtheria, 33 of pseudo-diphtheria, 34 of tonsillitis, 77 of measles, 2 of smallpox, 1 of typhoid fever, and 1 of leprosy. There had been no case of smallpox previously for three years. Of the deaths, 283 were from diphtheria, 35 from scarlet fever, and 30 from measles. Throughout the city there were 4,415 cases of diphtheria, with 1,154 deaths.

The German Hospital.—At the annual meeting of the trustees of this institution last week it was stated that the expenses had exceeded the income for the first time in ten years. The number of patients was in excess of the accommodations. The work of last year is illustrated by the following figures: In the hospital were treated 2,207 free patients, with 47,019 days; 676 paying patients, with 15,027 days; altogether 2,883 patients, with 62,046 days. In the dispensary 28,793 patients were treated free of charge, and 80,259 calls were made by them.

A Memorial to Dr. Müller.—The Vienna Medical Club has voted the sum of three hundred gold crowns for the foundation of a prize in memory of Dr. Hermann Franz Müller, who died of plague not long ago.

The Smallpox Epidemic in Maine.—The State board of health of Maine has taken stringent measures to stamp out the smallpox epidemic now prevailing in and around Waterville. The schools have been closed, and all public gatherings have been forbidden. Coburn Institute and Colby University have been closed. All persons who have left Waterville since the beginning of the epidemic are being traced in order to quarantine them, for it is said that nearly every smallpox case in neighboring towns originated in that city. The infection was first brought here by a soldier in one of the regiments returning from Southern camps.

Philadelphia County Medical Society.—At a stated meeting held February 8th, Dr. J. T. Rugh read a report of two cases of unusual length of umbilical cord with, in each case, five turns about the child's neck. Such twisting of the cord is not rare, but such a large number of turns is. Each cord measured fifty-four inches in length. One of the infants was a male, the other a female. One was stillborn from causes not related to the umbilical cord. Dr. Frederick A. Packard reported a case of embolism of the posterior tibial artery by an atheromatous plate and presented the specimens. The patient was an elderly woman who was suddenly seized with severe pain in the posterior aspect of the leg and subsequently developed gangrene of the foot. Amputation below the knee-joint was performed, but the flaps sloughed, and death resulted from exhaustion. An apical systolic murmur had been audible, and it was believed that an embolism had resulted from valvular disease, but the dissection showed the posterior tibial artery occluded by a thrombus in the midst of which was a slender calcareous mass. The autopsy disclosed thickening of the leaflets of the mitral and aortic valves and extensve atheroma of the thoracic aorta, from which it was believed the plate had been detached and swept into the circulation, lodging at the site of thrombosis. Dr. W. Joseph Hearn, who performed the operation, called attention to the characteristic sharp, stabbing, or cutting pain as indicative of embolism, and insisted upon the wisdom of not awaiting the formation of a line of demarcation, but undertaking operation with the first indications of gangrene. Dr. Packard called especial attention to the possibility of embolism and thrombosis from detachment of plates from atheromatous vessels, particularly in the absence of signs of valvular disease of the heart sufficient to give rise to such a complication.

The Atlantic City Academy of Medicine.—At a recent meeting of this society the following officers were elected for the ensuing year: *President*, Dr. W. B. Stewart; *Vice-President*, Dr. William Edgar Darnall; *Secretary and Treasurer*, Dr. W. Reynolds; *Corresponding Secretary*, Dr. J. B. Thompson.

The State Homœopathic Society on the Sale of Antitoxins.—At the annual meeting of this society, held last week at Albany, the following resolutions were unanimously adopted:

"*Whereas*, Under the authority given by section 1,226 of chapter 378 of the laws of 1897 of the State of New York, the city of New York, through its board of health, is engaged in the business of selling antitoxin to different cities of the United States; and,

"*Whereas*, We believe it to be contrary to the spirit of our institutions, and beyond the province of municipalities, in the discharge of their legitimate functions, to engage in commercial ventures, and to complete with their own citizens engaged in the same line of business; now, therefore, be it

"*Resolved* by this society, That we favor the immediate passage of the Collier bill, now pending before the State Assembly, and which has for its object the repeal of said section 1,226."

The resolution was introduced by Dr. William M. Butler, of New York.

The Hospital for Scarlet Fever and Diphtheria Patients has just completed its first year of work. The hospital is intended to provide comfortable private rooms, at a moderate price, for patients with scarlet fever or diphtheria, whose residence in apartments, hotels, or boarding-houses makes their proper care and isolation difficult. The patients may be attended by their own physician, and may be accompanied by their mothers. There has been a daily average of seven patients throughout the year. In thirteen cases the mothers accompanied their children. There was one death during the year. Of the cases of scarlet fever, none left the hospital suffering from any of the occasional sequelæ of the disease.

Obituary Notes.—Dr. George Henry Rohé, of Baltimore, died on February 6th, in New Orleans. He was born in Maryland in January, 1851, and was graduated from the medical department of the University of Maryland in 1873. After graduation he studied for a while in Europe. He was at one time health commissioner of Baltimore, and later was superintendent of the Maryland Hospital for the Insane at Catonsville. He was professor of materia medica and therapeutics at the College of Physicians and Surgeons, Baltimore. He was president of the American Public Health Association and ex-president of the Medico-Chirurgical Faculty of Maryland and of the American Association of Obstetricians and Gynæcologists. He had recently taken charge of the new Maryland State Hospital for the Insane. Dr. Rohé was a man of unusual talents and was a recognized authority in hygiene, gynæcology, and mental diseases, and was also of more than average skill and ability as a dermatologist.—Dr. George H. Stone, of Savannah, Ga., died on February 19th. He was born at Albion, N. Y., and was graduated in medicine from the University at Georgetown, D. C., in 1868. Five years later he went south to live, locating in Savannah. He was for two years president of the Georgia State Medical Society.—Dr. Robert P. Harris died at his home in Philadelphia on February 20th, at the age of seventy-five years. He was a graduate of the medical department of the University of Pennsylvania in 1844 and became a resident physician in the Pennsylvania Hospital. He was the American editor of Playfair's "Midwifery," and he contributed generously to gynæcologic and obstetric literature. He did much to bring into favor the operations of Cæsarean section and symphyseotomy, on which subjects, among others, he wrote classic essays. He was a prolific medical writer, but was perhaps even better known as a student of horticulture. His delight was in the acclimation of vegetables from other countries, and he introduced a number of melons and cucumbers from Italy and elsewhere into the Southern States and California. At the time of his death he was vice-president of the Pennsylvania Horticultural Society.

Health Reports.—The following cases of smallpox, yellow fever, and cholera have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending February 18, 1899:

Smallpox—United States.

		Cases.	Deaths.
Colorado, Denver	November 2d to February 8th.	23	1
Dist. of Columbia, Washington	February 7th	6	
Indiana, Dana	February 8th	1	
Evansville	February 8th	1	
Indianapolis	February 8th	1	
Louisiana, New Orleans	January 28th to February 4th.	2	
Maine, Auburn, Androscoggin County	February 11th	1	
Kennebec County at Waterville and Winslow	February 11th	8 or more.	
Maryland, Baltimore	February 10th	1	
Nebraska, Omaha	January 28th to February 11th.	5	
New York, Dunkirk	January 28th to February 4th.	1	
New York	February 4th to 11th.	1	
Ohio, Cleveland	January 28th to February 4th.	1	
Texas, Laredo	January 21st to 28th	43	9
Laredo	January 28th to February 4th.	69	14
Virginia, Alexandria	February 7th	19	3
Alexandria	February 8th.	11	3 *
Alexandria	February 9th.	6	2
Norfolk	February 8th.	9	
Norfolk	February 9th	61†	
Wisconsin, Appleton	February 7th.	2	

* Suspects. † Total on land, 132.

Smallpox—Foreign.

Africa, Lorenzo Marques	November 1st to 30th.	..	29
Lorenzo Marques	December 1st to 31st	..	6
Brazil, Bahia	January 7th to 14th	15	1
Bahia	January 14th to 21st	10	
Canada, Province of Quebec	January 26th to February 6th.	21	1
China, Hongkong	December 31st to January 7th.	3	
England, Liverpool	January 15th to 22d	1	
London	January 15th to 22d.	1	
India, Bombay	January 11th to 18th	..	1
Ceylon, Colombo	December 24th to 31st.	..	1
Madras	December 31st to January 6th.	..	1
Japan, Awomori Ken.	December 9th to 31st.	73	15
Chiba Ken.	December 9th to 31st.	1	
Iwate Ken.	December 9th to 31st.	1	
Nagano Ken.	December 9th to 31st	1	
Mexico, Mexico City	January 31st to February 4th.	5	4
Nuevo Laredo	January 31st to February 4th.	9	1
Vera Cruz	January 19th to February 2d.	..	2
Russia, Moscow	January 14th to 21st.	6	7
Odessa	January 14th to 21st.	5	2
Odessa	January 21st to 28th.	5	
St. Petersburg	January 7th to 14th.	2	
St. Petersburg	January 14th to 21st.	2	
Warsaw	January 24th to 31st.	..	4
Turkey, Constantinople	January 9th to 23d	..	28

Yellow Fever.

Brazil, Bahia	January 7th to 14th	2	1
Rio de Janeiro	December 23d to 30th.	11	8
Mexico, Vera Cruz	January 19th to February 2d.	..	4
Vera Cruz	February 4th to 8th.	..	2

Cholera.

India, Bombay	January 11th to 18th	..	6
Calcutta	December 24th to 31st	..	56
Madras	January 7th to 13th	..	1

Plague.

India, Bombay	January 11th to 18th	..	308

Reviews and Notices.

BERICHT ÜBER DIE DR. V. EHRENWALL'SCHE KURANSTALT FÜR GEMÜTHS- UND NERVENKRANKE ZU AHRWEILER (Rheinprovinz). Köln. 1898.

THIS is a well-gotten-up catalogue of the sanatorium of Dr. Ehrenwall. The illustrations, which are numerous and of good execution, show the beauties of the surroundings and the arrangements of the buildings.

TENTH REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF MAINE, for the two years ending December 31, 1897. Augusta: *Kennebec Journal* Print. 1898.

BESIDES other interesting matter there is an excellent bacteriological report on formaldehyde by Drs. F. C. Robinson and B. L. Bryant; also a painstaking *résumé* of fifteen years' experience in disinfection by the secretary, Dr. A. G. Young, who is thus to be doubly congratulated. Instead, however, of calling it "Notes," he should call it "A Book on Disinfectants."

ACROMEGALY. An Essay to which was awarded the Boylston Prize of Harvard University for the year 1898. By GUY HINSDALE, A.M., M.D. Reprint from *Medicine*. Detroit: W. Warren. 1898.

THIS is an excellent compilation, and brings together the many stray facts regarding this interesting and rare condition. The disease is considered from all its standpoints and the literature thoroughly searched, and the opinions of various authors are stated with impartiality and exactness. A rare exhibition of thorough bibliographical research is also given in the concluding pages. The essay is well illustrated, and there are a number of original researches of the author included in the report here presented.

KING'S AMERICAN DISPENSATORY. By HARVEY WICKES FELTER, M.D., Adjunct Professor of Chemistry, Pharmacy, and Toxicology, and Demonstrator of Anatomy in the Eclectic Medical Institute, Cincinnati, Ohio, etc.; and JOHN URI LLOYD, Ph.M., Ph.D., Professor of Chemistry, Pharmacy, and Toxicology in the Eclectic Medical Institute, Cincinnati, Ohio, etc. Entirely rewritten and enlarged. Eighteenth Edition—Third Revision. In Two Volumes. Volume I. Cincinnati: The Ohio Valley Company, 1898.

THE present edition of this rather exhaustive work shows evidence of the care with which the revision and rewriting have been done. Naturally much compilation from other works has been a necessity.

MANUAL OF DISEASES OF THE SKIN. With an Analysis of Twenty Thousand Consecutive Cases. By L. DUNCAN BULKLEY, M.D. Fourth Edition, revised and enlarged. New York: G. P. Putnam's Sons. 1898.

IT was as far back as 1882 that the author presented his excellent little manual to the public. Much has transpired in his department of medicine to make necessary the rewriting of particular chapters. The name "Students' Manual" has been retained, though undoubtedly many men whose student days are far behind them have found in it a trusty friend through these sixteen years. The size has been increased from the original three hundred and twelve to three hundred and sixty-two pages. A "Diagnosis Index" has been added; the formulary has been made better by additions, and minor changes have been made here and there. It still remains a concise and pleasing little volume to turn to for refreshment in cutaneous matters.

THE PRINCIPLES AND PRACTICE OF MEDICINE. Designed for the Use of Practitioners and Students of Medicine. By WILLIAM OSLER, M.D., F.R.S., F.R.C.P. London; Professor of Medicine in the Johns Hopkins University, and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore. Third Edition, entirely Revised and Enlarged. New York: D. Appleton & Company.

IT is only three years since the second edition of this work was published, yet in this volume there are twenty-six articles which the author has found necessary to rewrite or to insert for the first time, while more or less essential changes and additions have been made in a number of others. It is needless to review in detail a book which is so well known and so valued as this. The author is, perhaps, the most generally recognized authority on medical subjects in the country, but, like all men with strong opinions, he is often illogical, and is not a guide to be followed blindly. He is suggestive and stimulates thought, and in matters of fact is trustworthy, but his conclusions are sometimes unsound and based on prejudice rather than argument. With this caution, Dr. Osler's treatise deserves the almost extravagant praise that it usually receives from those who like to have others think for them.

DISEASES OF THE SKIN. An Outline of the Principles and Practice of Dermatology. By MALCOLM MORRIS, F.R.C.S.E. New and Revised Edition. Philadelphia: Lea Brothers & Co.

IT seems that a year has elapsed since the first edition of this excellent little illustrated manual was exhausted. The text, it is claimed, has now been thoroughly revised, and it is self-evident that a large amount of recent progress has been incorporated, while a few new pictures have been added. The author has been aided in the revision by Dr. Galloway, who is himself a writer and investigator of no mean ability. The formulæ are run into the text, making them less striking to the eye and more difficult to grasp quickly. The colored pictures are for the most part too highly colored, and the prints are not so clear and characteristic as those in many works on the skin which have recently appeared in this country. The five hundred and eighty-nine pages contain much of practical worth, and reflect the personal experience and observations of the author.

AFFECTIONS CHIRURGICALES DU TRONC. Statistique et Observations. Par le DR. POLAILLON, Chirurgien de l'Hôtel-Dieu, Professeur agrégé à la Faculté de médecine de Paris, Chargé de cours de clinique annexe, Membre de l'Académie de Médecine. 8vo, pp. 843. Paris: Octave Doin, 8 Place de l'Odéon. 1898.

THERE is also published as a separate fascicule the second part of this larger volume, which treats of the diseases of the ano-rectal region, urinary affections common to both sexes, and diseases of the male genital organs. The work represents the author's hospital experience during the past twenty years, and is a continuation of his previous publications upon the surgical affections of the extremities, reviewed at the time in these pages. With the publication of the next volume, in which will also appear the statistics of diseases of the female genital organs, omitted here for lack of space, a very complete series of statistical reports will be available in well-elaborated form, representing a vast amount of clinical observation and work in making proper record of it. Without the aid of very competent and faithful assistants, no such work could be undertaken by a man so actively engaged. Over three thousand cases are systematically recorded, including over seven hundred traumatic and organic lesions of the trunk, over four hundred of the thorax, and nearly seven hundred of the abdomen, while the male genital organs furnish 1,124 affections. Fifty engravings illustrate some of the most interesting conditions. A work of this kind, giving the results and outcome of all operations, cannot but contribute largely to surgical knowledge, and great credit is surely due the author for his services to science in this manner.

A MANUAL OF OTOLOGY. By GORHAM BACON, A.B., M.D., Professor of Otology in Cornell University Medical College, N. Y., etc. With an Introductory Chapter by C. J. BLAKE, M.D., Professor of Otology in Harvard University. Illustrated. New York and Philadelphia: Lea Brothers & Co. 1898.

THIS is an excellent manual for the practitioner and the advanced student, and contains enough to give a good working knowledge of otology. Like many other works upon very special subjects, the most important lesson which it teaches is that it is best to let the highly trained specialist attend to cases in his own department. A manual on otology can really give the non-specialist reader only enough information to make a diagnosis of moderate difficulty and carry out treatment of the same character, as there is perhaps no branch that requires such highly trained fingers as this one. About one-third of the book is denoted to anatomy and physiology, and to diseases as far as the membrana, and this por-

tion with that upon mastoid disease naturally contains most that is useful to the average reader. The subjects in these chapters are treated concisely, and the dangers of delay, etc., in mastoid disease are properly emphasized. Nasal diseases in their relation to otology are considered, and the importance of a knowledge of both subjects is well shown. The book is a good one for the general surgeon to have, but we suppose most otologists would not consider it sufficiently detailed for a work of reference. The introductory chapter is a well argued plea for specialism and special instruction.

Therapeutic Hints.

Infantile Convulsions.—

℞ Tinct. colchici 8
Syr. rhei 60
Gummi arab. pur 60
Aquæ 250
M. S. 3 i. every two hours.

—*Allgemeine Central-Zeitung*, January 7th.

Nervous Enteritis.—

℞ Tinct. opii ..... gtt. x.
Aquæ flor. aurant 20
Spir. sacchari,
Syr. simpl ..... āā 40
M. S. One dose with a large glass of water.

—RITTERBAND.

Bronchitis.—

℞ Apomorphine ..... gr. iss.
Codeine sulphate ..... gr. iv.
Syrup of wild cherry ..... ʒ iij.
M. S. 3 i. every three hours.

—HERWIRSCH.

Diuretic in Bright's Disease.—

℞ Copaiba resin ..... gr. x.
Diluted alcohol ..... ♏ xv.
Spirits of chloroform ..... ♏ x.
Syrup of ginger ..... ♏ xl.
Mucilage of acacia ..... ♏ lxxx.
Water ..... q.s. ad ʒ i.

—*Westminster Hospital.*

Influenza.—

℞ Salol ..... gr. xxxvi.
Phenacetin,
Quinine hydrochlorate ..... āā gr. xxiv.
M. ft. caps. No. ii. S. One capsule every two hours.

—*Medical News.*

Quinsy.—

℞ Salicylate of soda,
Syrup of acacia ..... āā ʒ ss.
Cinnamon water ..... ʒ iv.
M. S. A dessertspoonful every two or three hours.

—*Columbus Medical Journal.*

Dandruff.—

℞ Resorcin ..... 3 ij.
Alcohol,
Glycerin ..... āā ʒ ss.
Rose water ..... ʒ iv.
M. S. Apply to scalp.

—*Columbus Medical Journal.*

Ergot in Hemorrhage.—In treating medical hemorrhage our object should be to endeavor to favor the formation of a clot in the ruptured vessel by measures that increase the coagulability of the blood, by calcium chloride, or, where possible, by local applications (such as the topical use of such remedies as hamamelis in epistaxis, the gentle inhalation of turpentine or other hæmostatic vapor in hæmoptysis, the administration of tannic acid in hæmatemesis, of acetate of lead in hemorrhage from the bowel), to prevent mechanical disturbance of the clot by producing local rest (opium to check cough and to stop peristalsis), and to use our best efforts to lessen blood pressure (as by restriction of fluid ingestion, by the use of saline laxatives where permissible, by the hot foot-bath, by ligature of the extremities, by veratrum viride, nitroglycerin, or venesection in various classes of cases); but, above all, to avoid any cause for increase in blood tension, and especially to abstain from the use of ergot, which is, above all other drugs, the most active in lessening the capacity of the arterial tree.—FREDERICK A. PACKARD, *University Medical Magazine*, December, 1898.

Acute Gastritis.—

℞ Vini ipecacuanhæ,
Tinct. nucis vomicæ ..... āā 3 i.
M. S. Two drops in water every two hours.

—PEPPER.

Mental Depression.—

℞ Strychninæ sulph ..... gr. 1/32
Quininæ sulph.,
Extr. hyoscyami ..... āā gr. iss.
Ferri reducti ..... gr. i.
M. For one pill. S. One pill t. i. d.

—TULLY.

Amygdalitis.—

℞ Sodii benzoat ..... ʒ i.–iv.
Glycerini,
Elix. calisayæ ..... āā ʒ i.
M. S. Teaspoonful every one or two hours.

—STEVENS.

Persistent Diarrhœa in Children.—

℞ Silver nitrate ..... gr. i.
Dilute nitric acid ..... gtt. v.
Mucilage of acacia,
Syrup of orange peel ..... āā 3 iv.
M. S. Teaspoonful every three to four hours.

—*Pediatrics.*

Ulcus Ventriculi.—

℞ Codein. phosp.,
Extr. belladonnæ ..... āā gr. v.
Bismuthi carb ..... gr. i.
Lactose ..... 3 i.
M. ft. chart. xv. S. Two to three powders daily.

—VON LEUBE.

Conjunctivitis.—

℞ Acidi borici c. p ..... gr. xij.
Sodii chloridi ..... gr. iv.
Aquæ camph ..... 3 i.–ij.
Aquæ rosæ ..... q.s. ad ʒ i.

Instruct the patient to instill into the eyes two or three drops every half-hour to six hours, according to the amount of discharge and congestion of the conjunctiva. When the case does not yield to mild treatment use the following:

℞ Zinci sulphatis ..... gr. ¼–½
Ammonii muriat ..... gr. ¼–½
Aquæ menthæ piper ..... 3 i.–ij.
Aquæ rosæ ..... q.s. ad ʒ i.

Put two or three drops in the eyes two or three times daily. Should this not prove effective, evert the lids and brush the whole conjunctival sac about twice or thrice weekly with a solution of silver nitrate, one-half grain to the ounce of distilled water.—WAKEFIELD.

Treatment of Chorea.—Of the numerous remedies to which resort has been made in the treatment of chorea, I give preference to those derived from the aromatic plants, such as antipyrin, exalgene, asaprol, and analgene, whose curative action in the treatment of chorea I was the first to demonstrate.—DR. MONCORVO, of Rio Janeiro.

Iron, arsenic, and manganese, and strychnine in full doses; salicylates occasionally; and to quiet the patient, one-quarter of a grain of codeine.—DR. W. F. BOGGESS.

Eighteen to twenty-seven drops of Fowler's solution, three times a day.—DR. SEGUIN.

Bronchitis.—When we have once admitted the importance of abnormal nasal respiration as an etiological factor in bronchitis and other inflammatory processes of the lower respiratory tract, it will be apparent that

it is an equally important factor in the treatment of these affections. Why should we dose the patient with expectorants when the real cause is an enlarged pharyngeal tonsil, which prevents normal respiration and thus produces the irritation arising from breathing unprepared air; or if there is a diseased condition in the nasal chambers which has a continued effect in keeping up the irritation below? Scientific treatment demands that we remove the cause wherever this is possible. Opiates, for instance, simply mask the symptoms, but do not remove the cause.—Dr. William Scheppegrell, *New York Medical Journal*, December 3, 1898.

Society Reports.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 11, 1899.

T. Mitchell Prudden, M.D., President.

Rupture of the Urinary Bladder from Overdistention.—Dr. E. Hodenpyl reported this case, and presented the specimen, which had been removed from a man of fifty years, who, five days before death, had become extremely intoxicated and had remained unconscious for a number of hours after reaching the hospital. On admission there were a bruise over the left eye and some epistaxis, but no other marks of violence. A catheter withdrew about fifty ounces of bloody urine at first, and each time after this some bloody urine was withdrawn. During the five days he was in the hospital he was not able to empty his bladder. The case was supposed to be one of rupture of the kidney. The autopsy revealed a marked pulmonary œdema, which had been apparently the immediate cause of death. In addition, there was found a ruptured bladder. There was no peritonitis or effusion of blood into the abdominal cavity, but about six ounces of urine was found in the pelvic cavity. On removal of the bladder, a large L-shaped rent was discovered in the fundus, the long diameter of the opening corresponding to the anterior surface of the viscus. The edges of the rent were completely healed. The mucous membrane of the bladder appeared to be normal.

Syphilitic Pneumonia with Lesions of the Kidney.—Dr. Hodenpyl also exhibited a series of fresh specimens removed at autopsy a few hours earlier. The subject, a woman, aged thirty-five years, had entered the hospital the previous night, suffering a good deal from dyspnœa. Her urine was of low specific gravity and contained albumin and casts. The right lung was moderately emphysematous and quite anæmic. The left lung was firmly adherent to the chest-wall and considerably compressed, and the pleura was greatly thickened over it. On section, there were found numerous small cavities (bronchiectasiæ) and dense fibrous tissue between them without any evidence of tubercle. The condition of the lung was considered to be the result of a syphilis. At the middle portion of the lesser curvature of the stomach were three ulcers, the larger measuring two inches in its largest diameter. It had perforated at some previous time, as shown by the presence of adhesions. The floor of this ulcer was made up in part of connective tissue and in part of the pancreas. The capsules of both kidneys were adherent. In one kidney there were several stellate cicatrices, and in this organ the cortex was thickened and pale, and the vessels were dilated and thickened.

Dr. John H. Larkin asked if thrombosis did not have something to do with the color of the large white kidney just presented.

Dr. Hodenpyl replied that as the blood-vessels were found plugged with thrombi it was evident that this accounted largely for the color of the organ.

Small Accessory Spleen in the Body of the Pancreas in an Infant.—Dr. Rowland G. Freeman reported this case and presented the specimen. At the autopsy the pancreas exhibited a small, dark spot, about one-fourth of an inch in diameter, the nature of which was not suspected at the time. However, on microscopic examination it proved to be an accessory spleen, as it was entirely surrounded by pancreatic tissue. This condition was rare. Dr. George P. Biggs had presented to the society two cases of accessory spleen in the pancreas, in 1893, and in one of these the spleen was entirely surrounded by pancreatic tissue.

Amœbic Dysentery Simulating Typhoid Fever.—Dr. George A. Tuttle presented the organs from a man who had been a resident of the tropics for three or four years. He had been in good health up to one year ago, when he had had a sudden attack of pain just below the border of the ribs on the right side and radiating down into the abdomen. From that time until his admission to the hospital there had been about fifteen attacks of severe pain. In the last one the pain extended through the back and underneath the scapula. Four or five of these paroxysms of pain were attended by jaundice. A few days before his admission, November 15th, there had been severe pain associated with a temperature of 103° or 104° F. Subsequently the temperature ranged from 101.5° in the morning to 103° or 103.5° F. in the evening, for a period of a week or ten days at a time, and then it fell nearly to the normal, remained there for a day or two, and again rose. There were at this time no jaundice and no lesion of the heart. No calculi were discovered in the stools. After some days a rounded swelling was noticed under the border of the ribs on the right side, which was thought to be the gall bladder. On November 29th he was operated upon for gallstones, but none was found. The gall bladder was distended with about three ounces of thick bile; its walls were thickened and somewhat inflamed. Palpation of the liver revealed no abnormality. The temperature remained elevated, and about five or six days later there was evidence of fluid in the pleural cavity. On December 11th, paracentesis of the chest was performed, the ribs were resected, and a considerable quantity of pus was evacuated. Exploration beneath the diaphragm failed to show the presence of pus. At the time of the first operation some cultures were taken from the gall bladder, and about half a dozen minute colonies were developed. They were actively motile, and responded to all the tests for typhoid bacilli. They produced no indol, no coagulation of milk, and no fermentation. With a specimen of typhoid blood they gave the characteristic Widal reaction. At the second operation cultures were also taken, and these gave two varieties of bacilli—one exactly like the first, and the other the colon bacilli. The fever persisted, and the man gradually became weaker, and died on January 3d. He gave no history of dysentery or typhoid fever, and exhibited no symptoms of dysentery while under observation. At the autopsy the heart was found to be normal. The left lung was practically normal. The right lung was adherent everywhere except over a small area around the opening through the chest-wall. The lower lobe was excavated by a sloughing cavity which reached as far up as the upper lobe. The diaphragm was apparently absent beneath this cavity, and the base of the cavity was formed by a large cup-shaped depression on the right lobe of the liver. This opened into another smaller cavity, deeper

in the substance of the liver. In addition, a number of smaller abscess cavities were discovered in the right and left lobes of the liver. The kidneys were normal. The small intestine gave no positive evidence of typhoid fever, although a few of Peyer's patches had an appearance suggestive of the possibility of their having been the seat of cicatrization. In the caput coli, and for a distance of six or eight inches along the ascending colon, the wall was riddled with small, grayish ulcers, and an occasional ulcer was seen throughout the remainder of the colon. This suggested the presence of the amœba, but it was only a few hours ago that examination proved the presence of the amœba coli in this case. Whether the bacilli referred to were really typhoid bacilli remained yet to be proved.

Dr. W. H. Park said that at the Health Department laboratory they had experimented with a large number of bacilli and had found only one that gave a reaction which was not the genuine typhoid reaction. Curiously enough this, except in its size and motility, bore no resemblance to the typhoid bacillus. This bacillus came from the fæces of one of the persons in the laboratory. He recalled a case seen in Roosevelt Hospital in which a good Widal reaction had been obtained, yet an exploratory operation showed an advanced stage of carcinoma. After the exploration, the intermittent fever gradually subsided, and the Widal reaction nearly disappeared. This was probably an irregular typhoid infection.

Dr. Tuttle said that the curious feature of his case was the fact that during the seven weeks the man was in the hospital his bowels had never moved without enemata or laxatives. At no time had there been any blood in the stools or anything to call attention to the condition found at the autopsy. The Hiss test had been tried, and had seemed to respond fairly well.

Tumors of the Œsophagus.—Dr. John H. Larkin presented three tumors of the œsophagus. The first case was that of a man, forty-five years of age, who had been an inmate of the hospital for consumptives for seven months. He gave the ordinary physical signs of an acute pulmonary tuberculosis, and tubercle bacilli were found in his sputa. It was not until four weeks before death that he complained of dysphagia. As he was subsequently obliged to subsist on fluid diet, the emaciation became extreme. He was forty-eight hours in coma before death. The autopsy revealed cavity formations in both lungs, a diffused tuberculous pneumonia, a general tuberculous peritonitis, and tuberculous kidneys. The mediastinal lymph nodes around the root of the lung and along the spine were very large and hyperplastic, and on section looked cheesy. At the periphery of these cheesy nodes were small, hard, white areas about the size of a pin head. In the œsophagus was an ulcerated mass about four inches in length, involving all of the coats of the œsophagus. Below the lowest portion of this ulcerated mass were fine white nodules, and below these small, punched-out ulcers extending down to the cardiac end of the stomach, and resembling miliary tubercles. There were a number of these white areas in this portion of the stomach. Judging from the diffused tuberculosis present, the tumefaction and ulceration in the œsophagus were at first thought to be tuberculous, but further examination revealed an epithelioma of the œsophagus. The enlarged lymph nodes in the mediastinum were tuberculous, but the little white areas at the periphery were epitheliomata.

The second case was one of epithelioma of the œsophagus, occurring in a man fifty-four years of age, who gave a history of dysphagia for five months before entering the hospital. At the time of admission he was very greatly emaciated and could take only fluid food, and that in very small quantities. Operative interference was not deemed advisable. He remained in this condition for two months, being sustained by rectal alimentation solely. He died seven months after the first symptoms. At the autopsy, the lungs were found to be normal; the heart was slightly fatty; there was general venous congestion of the viscera, especially the liver, and several metastatic nodules were seen in this organ. The stomach was unusually small, measuring sixteen centimetres from the cardiac end to the pylorus and four centimetres at its widest part longitudinally. It exhibited an hourglass contraction. The tumor in the œsophagus was situated about three inches above the cardia, and in the centre of the ulcerated mass was a little furrow.

The third case was also one of epithelioma of the œsophagus. The subject was a man fifty-one years of age, who gave a history extending back only six weeks. He had complained of dysphagia for only one week. He was not emaciated, but his breathing was exceedingly loud and stridulous. There was no involvement of the vocal cords. About eight hours after coming to the hospital tracheotomy was done, but he died the following morning. The autopsy was made about three hours afterward. At the upper portion of the œsophagus, behind the larynx, the arytenoids and aryteno-epiglottic fold, and extending downward about two inches, was a flattened mass exhibiting a slight superficial ulceration. There was a very well-marked œdema of the larynx. The most common place for epithelioma of the œsophagus was said to be below the cricoid cartilage, and very few cases had been found in which the tumefaction had been high up, except when they were secondary to epithelioma of the tonsils or larynx.

Dr. James Ewing said that in the first case reported by Dr. Larkin there had been an almost continuous discharge of a thin, milky fluid from the ulcerating surface. He had examined this fluid, which he believed came from the surface of the œsophageal tumor, yet had found in it no evidence whatever of a new growth, the fluid consisting principally of leucocytes, necrotic granular matter, and bacteria.

Influenza Bacillus.—Dr. W. H. Park said that bacteriological examination of a case supposed to be one of pneumococcus infection had revealed the fact that about ninety-five per cent. of the micro-organisms in the smears were influenza bacilli. This was interesting when contrasted with two other cases giving symptoms of influenza, in one of which streptococci had been found and in the other pneumococci, but no influenza bacilli. The latter were easily obtained from the infected lungs by streaking an agar plate first with blood from the rabbit and then with the exudate. From the sputa it was more difficult, and at least half a dozen plates should be made. The colonies were about half the size of those of the pneumococcus and were exceedingly faint. These bacilli grew in hæmoglobin or blood and occasionally made threads. They grew only at fairly high temperatures, and did not produce septicæmia in animals. They were not stained by Gram. As a rule, these bacilli did not grow at all secondarily without blood, and never to any extent.

Dr. Ewing asked Dr. Park if he had had any experience in the examination of the sputum of cases of influenza, and if he had found, as some had stated, a characteristic grouping of bacilli within the leucocytes, and whether the bacilli could be identified by these or other morphological characters.

Dr. Park replied that a fair guess could be made from the large number of small bacilli present rather than from the grouping. He did not believe any observer could absolutely distinguish the influenza bacilli in the sputum alone. These bacilli grew best in pigeon's or rabbit's blood, and very little hæmo-

globin was required. Sterilized horse's blood had also given fair results.

A Pin in the Vermiform Appendix.—Dr. Harlow Brooks presented specimens taken from a woman who had died of broncho-pneumonia, and who had been supposed to be suffering from influenza. The vermiform appendix was found adherent to the sheath of the psoas muscle and also to a cystic ovary. The appendix itself had ulcerated through, and was bound down by very dense adhesions. There was a small collection of pus and fecal matter surrounding the perforation. On cutting into the appendix he had found a pin covered with calcareous deposit and lying in the appendix, head down. The woman was partly irrational when brought to the hospital and gave a very unreliable history, but she had persisted in saying that she had had much pain in the right iliac fossa. The case represented apparently a very slow form of the disease and a most unusual causative factor.

Clot on Aortic Valve Causes Misleading Physical Signs.—Dr. Brooks also presented specimens from a woman who gave a previous history of cardiac trouble following an attack of gout, several years previously. The apex beat of the heart was in the fifth space; there were a diffused systolic murmur at the apex and a thrill, evident on palpation, in the same area. There was a double systolic murmur at the apex, transmitted to the left, and a double murmur was audible over the aortic valve. The pulsations of the vessels in the neck and in the episternal notch were marked. Three eminent clinicians who saw the case diagnosticated aneurism of the transverse arch. At the autopsy the arch of the aorta was found not dilated at all, but the aortic segments were the seat of an acute ulcerative process. Attached to the flaps was a very dense clot, which extended up in the arch as far over as the subclavian on the other side. It was very intimately adherent to the segment of the valve and had become, near its base, in part calcareous. It was evidently a pre-formed clot. It was probable that the thrill had been caused by this clot vibrating in the stream of blood. The other symptoms were accounted for by the state of the mitral and aortic valves. On looking over the literature, Dr. Brooks said that he had found an account of several cases in which thrombi in the aorta had given rise to thrills and auscultation sounds closely simulating those heard in cases of aneurism.

Dr. D. H. McAlpin showed, in connection with this case, a heart that had been taken from a patient who had presented a systolic murmur during life, transmitted up the vessels of the neck, a diastolic murmur transmitted downward along the sternum, and a systolic murmur heard at the apex, and transmitted to the left and backward. In this case, the diagnosis of mycotic endocarditis was made. Cultures were taken from the blood by three observers, none of whom was able to discover any growth. Twenty-four hours before death the patient developed friction sounds, and a diagnosis was made of pericarditis. The autopsy revealed a condition very similar to the one just described by Dr. Brooks. There was a somewhat calcified vegetation attached to the aortic valve and extending up into the aorta. Behind the segment of the aortic valve to which this vegetation was attached was a large pouch filled with chocolate-colored material. Cultures from this showed no apparent growth. There was no thrill felt in this case. The question arose as to whether this might not be a post-mortem clot. The anterior portion of the clot was whitish, but it was discolored posteriorly.

Dr. Carlin Phillips thought it would be interesting to ascertain whether or not these thrombi were organized. It was most probable that the thrombus presented by Dr. Brooks was thoroughly organized; on the other hand, the specimen presented by Dr. McAlpin was apparently one of late formation, while the circulation was enfeebled, and consequently gave rise to no physical sign.

The Influence of Hepatic, Renal, and Other Cells upon the Transformations of Indol and Phenol.—Dr. C. A. Herter and Dr. A. J. Wakeman presented a paper with this title. Dr. Herter said that indol and phenol had been selected because they were normal products of proteid cleavage in the intestine, and were often formed in excessive quantity in the course of digestive derangements, and also because both indol and phenol were recognizable by means of delicate color reactions. Two methods had been pursued. In the first, the organs of healthy rabbits were removed after the animals had been nearly bled to death. After fine comminution of the organs seven grams were brought into contact with a weak solution of either indol or phenol for two or three hours. The mixture was then subjected to distillation, and the distillate was tested for the indol or the phenol. All of the organ-pulps possessed some activity, as was shown by comparison with controls. Eighteen observations were made with phenol. The liver distillate gave the smallest coloring, hence the activity of the liver was greater in disposing of the phenol than was that of all the other organs studied. The kidney occupied the next place, as shown by a study of twelve cases. The next was muscle, and after this came the blood and then the brain. Millon's reagent was employed in testing for phenol and the so-called "Choleraroth-reaction" for indol. The brain and blood behaved very much alike. Less uniformity was observed in the thirty observations with indol. The liver in eleven led in activity: in two it was the same as the kidney, in one the same as the brain, and in one it behaved the same as the kidney, muscle, and blood; nevertheless, it led the other organs, though the kidney was a close second. The order of activity was: liver, kidney, muscle, brain, and blood. There was little difference between the brain and muscle. The results differed from those with phenol in that the blood showed the smallest action of any in the series.

In the second method, the investigation consisted in the use of intravenous infusions of solutions of these substances. They were given until nervous symptoms appeared; then the animals were quickly killed, and definite weights of the organs were submitted to examination. There was much confusion in the order of the color tints in this series. The muscle exhibited less color than the others, possibly because less phenol had passed in, or because it had been more rapidly transformed; but in view of the fact that in the contact experiments there was less activity here, it was probable that the muscle took up less of the phenol than the other organs. The liver and kidney did not differ materially in the injection experiments. In the case of the indol injections, as with those of phenol, the muscle contained less of the infused substance than any other tissue, due either to less absorption or to moderate transforming power. In a very large proportion of cases the liver yielded more color than any other tissue, probably because the liver was especially active in removing indol from the blood. Owing to the experiments being made on rabbits, sufficient spleen pulp for study could not be obtained, but it was probable that this organ would take a position similar to that of the liver. The authors concluded from their observations, that the process by which indol and phenol were converted into other substances went on more actively in the liver and kidney than in the other organs and tissues. Indol was converted into indoxyl potassium sulphate, and it was conceivable, though not experimentally proven, that the oxidation step which preceded this formation was exerted in various cells of the body, chiefly the liver. Jacquet found in

1893 that the tissues possessed good oxidizing power even after immersion in alcohol for some time. Then it was found that dead tissues had a certain oxidative power. Our present knowledge indicated that the oxidative changes carried on by cells removed from the body had reference to substances easily oxidized, and it was justifiable to hold that such changes went on with equal vigor in dead and living cells. Treatment of the cell-pulps with boiling water and strong sulphuric acid, and exposure to a temperature of 160° C. failed to destroy their power to change indol and phenol. This was not, however, absolutely inconsistent with the theory that their activity was the result of a ferment.

Dr. P. A. Levene said that, if oxidation took place, it might be ascribed to bacteriological activity and the development of nascent hydrogen, but, as most of the changes occurred in the first few minutes, this would seem to be excluded.

Dr. Herter replied that some of the pulps had been purposely allowed to undergo putrefaction, and it had been found that their activity had been lessened thereby. The very great rapidity with which these changes took place, and the fact that the same transformations went on in the body of the animal with rapidity, seemed entirely to exclude the action of bacteria.

Dr. Bookman said that the experiments described in the paper seemed to him to verify the theory that the changes were due to enzymes. Professor Fisher, in isolating some of the enzymes, had demonstrated that very similar changes occurred.

Dr. Levene thought that the changes that occurred must depend not only upon the chemical, but upon the physical condition of the organs. The liver consisted mostly of cells, far more so than muscle. As long as there were relieving cells, poisoning should not give very definite results. It was very doubtful if the activity of the enzymes had anything to with this matter, as there were very few oxidizing enzymes known. Their action was hydrolytic.

Clinical Department.

A CANCEROUS FAMILY.

By HUGH M. SMITH, M.D.,
WASHINGTON, D. C.

The following rather remarkable instance of the prevalence of cancerous disease among the members of one family seems worthy of a record in pathological literature, because of its general interest and its bearing on the question of the hereditary tendency to cancer. There is no doubt of the authenticity of the cases cited.

Case I.—Mrs. R. B——, a native of New York, of English ancestry. She had ten brothers and sisters. She was married when seventeen years old, and had seven children, two of whom died young. She died of cancer of the breast in 1882, aged seventy-six years five months and seven days.

Case II.—Mrs. M. P——, eldest daughter of Case I., mother of four children. She died of cancer of the stomach in 1898, aged seventy-four years nine months and seventeen days.

Case III.—Mrs. O. R——, second daughter of Case I., mother of two children; still living (December, 1898), with cancer of the breast, in her seventy-fourth year.

Case IV.—Mrs. A. W——, third daughter of Case I., mother of one child. She died in 1896 of cancer of the breast, aged seventy years two months and nine days.

Two other children of Mrs. R. B——, a son, aged sixty-three years, and a daughter, aged fifty-seven, are living and healthy. Inquiry has failed to elicit any information showing the occurrence of cancer in collateral or antecedent members of this family; and none of the grandchildren or great-grandchildren of the woman first mentioned, and none of the descendants of her brothers and sisters, has developed cancer, with the exception of a daughter of a brother of Mrs. R. B——, who had a mammary cancer removed twenty-four or twenty-five years ago and is still living, aged about fifty-two years. It may not be amiss to state that a son of Mrs. R. B—— died in 1897, in his sixty-second year, of some liver disease, characterized by enlargement of that organ; no autopsy was held, and the condition was diagnosed as "abscess on the liver."

The foregoing record of a mother and three daughters developing cancer when over seventy years of age is perhaps not without parallel, but has certainly rarely been duplicated.

A CASE OF CARCINOMA, WITH RECURRENCE TWENTY-TWO YEARS AFTER OPERATION.

By ABRAHAM L. WOLBARST, M.D.,
NEW YORK.

The following case, which occurred in the writer's practice, deserves consideration because of several remarkable features. Dr. R. F. Weir informed the writer that he has seen a similar case in his practice, in which recurrence took place twice, sixteen and twenty years respectively after removal of both breasts. The history of the writer's case is as follows:

Mrs. C. A——, Russian, aged fifty-six years, mother of two children, visited the writer in August last, complaining of a growth in the left axilla which had existed several years. She gave the following previous history: Thirty years ago, while nursing her second child, she suffered from an abscess of the left breast. The abscess was incised and the wound healed in a short time. About a year later she noticed a small hard nodule in the same breast (she cannot remember in which portion of the breast), which was painless and gave no discomfort until about three years later, during which time it had slowly become much larger and quite painful. A diagnosis of "cancer" was made, and the whole breast was removed by a surgeon in St. Petersburg. The patient recovered from this operation, and felt entirely well until about nine months later, when a similar nodule appeared in the left axilla. Operation was advised, but the patient waited about ten months longer before she consented. After this second operation she was informed that the whole axilla had been "cleaned out." This operation was performed in Volkmann's Clinic, Vienna. From this time on (1872) she had no reappearance of the trouble and considered herself perfectly cured. Four years ago, however (1894), twenty-two years after the second operation, she noticed a nodular growth in the left axilla, over the cicatrix of the last operation. It was painless and of slow growth for the first three years, but thereafter it grew much more rapidly and became painful at times. In August she noticed a slight oozing of blood from the tumor, which caused her to seek medical advice.

She called on the writer the day after the hemorrhage was first observed. On examination a tumor of irregular, polyhedral outline was seen, about two inches across its widest part. It was exceedingly hard, except in one or two places, pressure over which caused pain and increased oozing of blood. It was circumscribed, and several nodules could be distinguished on palpation. The tumor was quite freely movable on the underlying parts, but was rather closely connected

with the skin which lay over it. There was no glandular involvement in any other part of the body.

The patient was slightly built, but looked fairly healthy. Her appetite was good, she had not lost any weight, and but for the inconvenience of carrying such a large tumor, the occasional shooting pains, and the recent oozing of blood, she would not have sought medical advice.

Permission was refused for the removal of a specimen for microscopical examination. Operation was advised, but was not consented to until late in October. In that month she entered Mount Sinai Hospital, where the growth was removed by Dr. Gerster. The wound healed by primary union, and the patient went home within two weeks. The pathologist of the hospital reported that the growth was an adeno-carcinoma.

This case presents a number of interesting features, which have induced the writer to publish it:

1. It is a generally accepted rule that after complete removal, if there be no recurrence within three years, a cure is almost certain. In this case recurrence seems to have taken place twice—nine months after the first operation and twenty-two years after the second operation.

2. The slow growth, absence of pain, absence of metastases, and circumscribed outline, together with the general good health of the patient, would point to a tumor of benign character; whereas the recurrence and the microscopical examination indicate malignancy.

3. Can one say whether the growth was really a recurrence or a "re-inoculation" in a portion of the unremoved gland?

4. Can one answer the questions asked by the patient when operation was advised, namely: First, "If I have the tumor removed, will it never return?" Second, "If I do not have the tumor removed, will it prove fatal?"

In concluding, the writer wishes to thank Dr. H. M. Brickner, house surgeon of Mount Sinai Hospital, for his kindness in acquainting him with the report of the pathologist as to the character of the tumor.

262 East Broadway.

TRAUMATIC APPENDICITIS IN AN INFANT.

By THOMAS R. SAVAGE, M.D.,

NEW YORK.

I recently removed from a boy, two months old (sixty-one days), a perforated appendix. The child had been troubled with a right inguinal hernia from birth, which had become irreducible about one week prior to the operation. Daily efforts at reduction by taxis had been made by the attending physician. Finally strangulation occurred, accompanied by stercoraceous vomiting and collapse. I was called in to operate, and found the caput coli down in the scrotum, on the right side, where firm adhesions had formed. When the colon was liberated, the appendix was found to be inflamed and perforated. This was removed and the bowel returned to its place. A slight rally followed the operation, but the child, at best a puny thing, died in two days.

The appendicitis was undoubtedly of traumatic origin, having been set up by the active efforts at taxis.

In the specimen, which I have preserved, there are two areas of tissue necrosis, where perforations would probably have occurred later on under favoring conditions.

The chief features of interest in this case are the evident traumatic origin of the appendicitis and the extreme youth of the patient.

181 East One Hundred and Sixteenth Street.

A CONTRIBUTION TO THE LITERATURE OF MATERNAL IMPRESSIONS.

By EDWIN I. THORN, M.D.,

SALT LAKE CITY, UTAH.

The case reported by Dr. A. C. Flack, under the heading "Maternal Impressions," in the Medical Record of date February 26, 1898, calls to mind a case occurring in my practice in 1884, which I believe is worthy of being placed on record. The facts in the case are as follows: In January, 1881, Mr. R. S—— suffered a stroke of apoplexy. Later improvement took place to such a degree that he was enabled to walk and be around generally, though his right arm remained paralytic. This hand, for the sake of comfort, he carried in a sling flexed upon the body, the palmar surface naturally against the body. The thumb always dropped into the palm, and lay between that and the body, hiding it from view. This continued up to the time of his death, several years subsequently.

On October 23, 1884, Mrs. S. S——, a daughter-in-law, gave birth to a male child, strong, healthy, and well developed, excepting a deformity of the right arm and hand, consisting in flexion of the arm with ankylosis at the elbow-joint; also absence of the thumb on that hand. During pregnancy, the mother had been a daily witness of the disability, position of hand, etc., of her father-in-law.

Surgical Suggestions.

Tumors of the Bladder. — When an infiltrating growth is felt, per rectum or per vaginam or with the sound, to be involving a large surface of the bladder wall, and to be infiltrating its coats, especially in the neighborhood of the ureters and neck of the bladder, no operation whatever should be proposed unless the hemorrhage is copious or the symptoms of cystitis are severe, and then an incision for palliative purposes only should be made. By this means we place the bladder at rest; and thus, by drainage, we remove the septic urine from an inflamed bladder, and by preventing the alternation of distention and contraction of the bladder, which is the chief cause of the bleeding, we check the hæmaturia. When the disorganized state of the kidneys is unfavorable to any prolonged operation, drainage is still indicated to check hemorrhage, or for the relief of the sufferings caused by cystitis.—Dr. Henry Morris.

Cases Demanding Immediate Operation.—1. All cases of acute appendicitis not improving within forty-eight hours. 2. All cases of subacute appendicitis, even before forty-eight hours, when local tenderness is extreme. These cases usually perforate. 3. All cases of apparently general peritonitis not altogether hopelessly lost. 4. All cases of local septic peritonitis whose origin is probably outside the pelvis. 5. Cases of persistent vomiting with general intestinal pain and a fixed point of marked local tenderness. 6. Cases of profound collapse, when the previous history is that of an abdominal disease. 7. Any case of abdominal tumor (not fecal) presenting acute and alarming symptoms. 8. All cases of hemorrhage. 9. In any case with acute and alarming abdominal symptoms, when a diagnosis is beyond careful and competent examination, a true exploratory section is positively indicated.—Walter C. Wood.

The Danger in Ligature of the Axillary Artery. —From personal observation of a case and as a result of literary researches, Dr. Soupart summarizes (*Bull.*

de l'Acad. Royale de méd. de Belgique, No. 1, 1898) as follows: (1) Ligation of the axillary artery between its subscapular branch and the superior profunda should not be considered, since all collateral circulation is thereby destroyed and gangrene of the arm results. (2) The application of a ligature proximally from the subscapular artery allows of free anastamosis, but should be rejected because of the small thrombus formed and the tendency to secondary hemorrhage. (3) Ligation of the subclavian artery above the clavicle is therefore the only safe procedure in this region. (4) Those successful cases in which a ligature applied between the subscapularis and superior profunda arteries does not result in gangrene of the arm, are to be explained by some anomaly of circulation, such as a high bifurcation of the axillary into the radial and ulnar arteries.

Operation for the Restoration of the Urethra and for the Closure of a Vesico-Vaginal Fistula Involving the Neck of the Bladder.—The successful result depends upon two points in the technique of the operation: First, the use of a very small catheter, which should be left in position until primary union has been secured. Attempts to pass a catheter through a somewhat distorted canal daily or more frequently might result in perforation of the canal and failure of the operation. Second, the method used in suturing. First restore the lining membrane of the canal with a continuous catgut suture, and so make it possible to insure a narrow urethra of uniform diameter; in the subsequent restoration of the wall of the urethra, it is possible to disregard the urethral canal and to consider merely the building up of a firm urethral wall.—Dr. Charles P. Noble, *American Journal of Obstetrics*, March.

Balanic Hypospadias.—A transverse incision is made across the lower surface of the glans, which embraces the hypospadiac opening. By pulling the lower wound margin downward, the urethra can be exposed and separated from its surrounding tissue without being injured. Then, after a longitudinal incision has been made alongside the median line of the groove, by dissecting the edges of the groove, two flaps are to be formed and cut off in order to give a freshened surface. Now the hypospadiac orifice of the urethra is drawn forward and sutured to the initial point of these freshened margins of the groove, and opposite to it another suture is introduced in the same manner. If now the posterior portion of the displaced urethra is slightly inverted in its longitudinal direction, the retracted margins of the integument are pulled together and united above the urethra. The shape of the wound now becomes longitudinal, forming a support for the urethra, which is thus kept straight at the same time. Instead of forming a new urethra, the present one is dissected free and is made to do the service of a new canal.—Carl Beck.

Venous Stasis.—Tightly applied rubber bandages upon either side of the affected extremity, so as to produce tumefaction and lividity, have been recommended by Dr. Bier, of Kiel, in the treatment of local tuberculosis and chronic joint rheumatism. The skin about the articulation is first protected with several layers of linen bandage, and, when it is not the hand or foot which is itself affected, the distal part is protected from congestion by even pressure from the ends of the fingers or toes, by means of a linen bandage. A rubber bandage is used to make firm pressure both below and above the joint, so applied that it overlaps evenly and is not so tight as to produce a sensation of cold. The articular pains should disappear within a few hours. At first the bandage is left in place day and night, and then is omitted for a longer or shorter time, according to the results obtained. It is well to remove the bandage every twelve hours to make sure that it does not always compress the same points. To secure sufficient congestion the constricting band should always be placed above the joint as well as below.—*Le Scalpel*, October 9th, 1898.

Movable Kidney.—A flannel bandage wound several times around the body and supporting the abdomen is the best means of immobilization that can be devised. In the event of persistent unbearable pains, peritonitis, and hydronephrosis from twisting of the ureter, an operation should be performed, fixing the kidney to the posterior abdominal wall.—Jules Comby.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ABDOMINAL SECTION, THREE SEVERE CASES—ASSOCIATION OF RHEUMATISM AND SORE THROAT—TUBERCULOSIS CAMPAIGN—OYSTERS AND TYPHOID—TITLE OF PHYSICIAN—VACCINATION—DEATHS OF SIR J. NUGENT AND DR. PAUL.

London, February 3, 1899.

Three cases of abdominal section, related to the Clinical Society by Mr. Hutchinson, Jr., are interesting from the diversity of their features and the circumstances leading to operation. One was that of a man who had been run over and became collapsed. The abdomen was found full of blood, but no vessel requiring ligature could be found. Some oozing seems to have occurred subsequently, but the man left the hospital a month afterward. The question was, whether effused blood in the peritoneal cavity would be injurious. The second case was that of a single woman with symptoms of intestinal obstruction. On operating over two pints of yellow, clear fluid escaped. The intestines were congested, the stomach was dilated, the uterus enlarged as at the third month. The nature of the fluid was not determined. Next day abortion occurred and the patient died. At the post-mortem a further accumulation of the yellow fluid was found with commencing peritonitis. In the middle line of the posterior surface of the bladder, an inch above the peritoneal reflexion, there was a perforation, one-seventh of an inch in diameter, which would have been searched for and probably could have been repaired had the nature of the fluid been suspected. It was surmised that the perforation had been produced by an unskilful attempt to cause abortion. The third case was that of a woman, forty-seven years of age, who had been seized with acute pain and collapse when lifting a basket. Ovarian cyst, twisted or ruptured, was diagnosed, and on section a quantity of characteristic glairy fluid escaped, evidently coming from the largest cyst, which was ruptured, of a multilocular ovarian tumor. The question raised as to this case was whether this thick glairy fluid would be as innocuous as thin serous ovarian effusion.

The president (Mr. Langton), as to Case I., said that though blood need not necessarily bring about septic mischief, it was better to operate, as we could not know the conditions existing. He once operated on a bullet-wound case and found the liver extensively lacerated. He managed to arrest the hemorrhage and the man recovered. Mr. Dunn said in the president's case the wound was or would become septic.

Dr. B. Shaw, referring to the third case, related that a woman brought to the hospital three days after labor died on reaching the ward. A quantity of straw-

colored fluid was found at the autopsy with a collapsed ovarian cyst, but no sign of inflammation.

Mr. Charters Symonds related the case of a girl, aged fourteen years, in which he found on operation the cavity full of serum and a ruptured ovarian cyst. She recovered. He also mentioned the case of a woman in which after some delay the abdomen was opened and much fluid found, but no sign of inflammation. This woman died of shock, and he was inclined to think she might have recovered if no operation had been done.

The president thought thick viscid fluid might very likely lead to peritonitis, and mentioned the case of a lady in which spontaneous rupture of a cyst followed by shock with ultimate recovery had occurred four times. After the last he opened the abdomen and removed the collapsed cyst. There had never been peritonitis and there were no adhesions.

At the Clinical Society, Dr. B. Abrahams read a paper, bristling with figures, on what he designated rheumatic tonsillitis. The association of a number of lesions with rheumatism has been freely discussed on various occasions, and the term "rheumatic sore throat" has been adopted by some specialists, as also has the analogous phrase "gouty sore throat" for a somewhat different affection. Statistics were given by Dr. Abrahams of three distinct affections, viz., 248 cases of chorea, 43 of acquired heart disease in children unassociated with chorea, and 66 of rheumatic fever in adults. Of the choreas 53.4 per cent. had a family or personal history of sore throat. In the cardiac cases the percentage was 66.7. Considering how common sore throat is, I am inclined to set little value on a family history of the kind. Much more pertinent are statements of an actual attack within a brief period. Thus among adults the 45.5 per cent. with a history of sore throat dwindles to 21.2 per cent. with actual attacks within three weeks, and 47.2 per cent. within two days of rheumatic symptoms. The suggestion that the tonsils may often be the channel of infection is supported by bacteriological examination, many cases revealing streptococci and staphylococci. Similar organisms were found in the urine, and Sahli has reported their occurrence in the blood and synovial fluid. Some persons regard the rheumatic poison as the attenuated virus of pyæmia.

Dr. Abrahams divides rheumatic sore throat into faucial erythema and tonsillitis, the former most common in adults, the latter in children, in whom he found it assumed a follicular type; though when occurring in adults it would be quinsy. He concludes that faucial erythema is an initial manifestation of acute rheumatism, and tonsillitis may be the actual primary lesion. A number of cases have been recorded in which endocarditis has followed a non-scarlatinal tonsillitis unaccompanied by joint pains, and in other cases tonsillitis has immediately preceded arthritis or chorea. The presence of the same microbes in tonsils, joints, blood, and urine points to the participation of pyogenic cocci in the etiology of rheumatism.

In the discussion which followed, Dr. Fowler regarded the paper as a confirmation of the views he published in 1880. He objected to the term "growing pains" as an expression reflecting on the Creator. The pains often so called were really rheumatic. Dr. Carr defended the term as really correct. He suggested that ordinary tonsillitis may attack rheumatic as well as other subjects, and he was not convinced that the sore throat was modified by anti-rheumatic drugs. Dr. Lucas Benham said any sore throat might be followed by rheumatism; the curious point was that the throat affection seemed always to precede the rheumatism, so perhaps it might be a cause. Dr. Sutherland suggested that other structures might be attacked, *e.g.*, the lymphoid tissue of the alimentary tract, and he spoke of a "rheumatic appendicitis." Dr. Toogood said in his experience most cases of follicular tonsillitis were bacterial and markedly infectious.

Profs. W. A. Herdman and Rupert Boyer have communicated to the Royal Society their investigations on oysters. They go to show that the danger of contracting typhoid from this source has been exaggerated. Sanitary supervision of oyster beds and quarantine for imports are recommended; for, though the typhoid bacillus is not found in oysters fresh from the sea, it is met with in those obtained from shops in certain towns and from polluted oyster beds. The bacilli do not generally increase in the tissues of the oyster, but only occupy its intestine. In infected oysters washed in sea-water the bacilli diminish or disappear in the course of a week. Shell-fish generally are apt to be infected with the colon and other bacilli when obtained from shops.

The campaign against tuberculosis is being pushed vigorously, and in many directions we hear of projects, of warnings, of educating the people, and of all sorts of plans for meeting the enemy. I do not think, however, that the public will consent to compulsory notification, and very few politicians will be likely to advocate it. Indeed, the local government board has constantly refused permission to add tuberculosis to the list of notifiable diseases, an attitude which Dr. Newsholme in a recent paper declared to be "a great shame." This paper was read to the Society of Medical Officers of Health, and strongly advocated local option on this question, *i.e.*, that such local sanitary bodies as wish may adopt notification. Dr. Newsholme is the distinguished M. O. H. for Brighton, where bacteriological examinations are provided without fee, and where an immense number of lodging-house keepers would probably be benefited by the plan. Dr. Niven declared that in the North of England public feeling had been so roused that legislation would be welcomed. Doubts were expressed by other speakers, including Drs. Sykes, Heron, Murphy, Beevor, and Groves. Most of them would be pleased with notification, but admitted that for the present it could only be voluntary. Meantime the extension of precautions, the foundation of sanatoria, and the promotion of knowledge on the subject were urged as most valuable. Certainly the time for compulsion is not yet, and if the legislature is to be invoked, it should perhaps be against the spread of bovine tuberculosis. Considering how the politicians have succumbed to the attack of anti-vaccinationists, it would be a great mistake to stimulate the formation of other anti-sanitarians. I am acquainted with one cleric who preached against vaccination because, as he confessed to me when I remonstrated, he thought that the medical officers of health were obtaining too much power and would become autocrats.

Two judges have decided that a licentiate of the Apothecaries' Society has no right to call himself physician. You may suppose this settles the ever-recurring dispute about titles. Not at all! The society will seek other means of proving that the two judges are wrong. These last say that physicians are only the "persons in the highest grade of medical practitioners," but they give no definition of the grade. Is it the university graduates? Many of such are carrying on rather a low grade of practice. Is it those connected with colleges of physicians? Then which of the college grades? It seems as if a contemptible controversy about titles is to be a perennial affliction. The decision of the court was given in reference to the case of Mr. Hunter, the qualified man prosecuted by the Medical Council, and the appeal

has been defended by the council's legal advisers, although Messrs. Horsley and Brown, as I told you, protested against such a course. We shall therefore hear more of this scandal. Mr. Hunter has died in the mean time, and his friends say his death was hastened by the worry of this prosecution. So people parody the nursery rhyme thus—

"Who killed poor Hunter?
The Medical Council," etc.

The Lords of the Admiralty have issued a stringent order in reference to vaccination which will probably effectually prevent the appearance of the "conscientious objector" in the Royal Marines. A married marine whose children are not vaccinated will practically lose all the privileges of being on the married roll. Children now attending the schools of the marines are to be medically examined, and, if not efficiently vaccinated, must submit to the operation or go elsewhere for their education.

Several boards of guardians are petitioning for the restoration of compulsory vaccination, and the fear of the results of the repeal is widely spreading.

Dr. Vallance has been awarded £150 damages for libel in an electioneering contest.

Dr. Waldo, the energetic M. O. H. of St. George's, Southwark, has been elected Milroy lecturer. His subject will be "Summer Diarrhœa."

The death is announced of Sir John Nugent, M.B., T.C.D., at the age of ninety-four years. He was a remarkable man, of determined character. He practically ruled the Irish lunacy service for pretty well half a century. He was appointed inspector of asylums in 1845, and retired only some seven years ago.

Dr. J. H. Paul died on the 29th ult., aged eighty-three years. He was well known in the lunacy department of practice, and was for many years treasurer of the Medico-Psychological Association.

MEDICAL MATTERS IN AFRICA.

(From our Special Correspondent.)

THE RINDERPEST AND BUBONIC PLAGUE IN AFRICA—INFANT MORTALITY IN THE TRANSVAAL—THE MAGATO CAMPAIGN—THE AIM OF THE BURGHERS.

PRETORIA, SOUTH AFRICA, January 16, 1899.

THE meeting of the South African Medical Association held at Johannesburg is over. It lasted ten days, during which time many very interesting papers were read and discussed. Among the most attractive was one on "Movable Kidney," with limelight demonstrations, by Dr. Kendal Kranks. It was, however, a disappointment that more original papers on diseases peculiar to South Africa were not read. The meeting was the first of its kind held in the Transvaal, and there were representatives from all the South African states.

The terrible ravages caused by the rinderpest throughout South Africa, which disease was so thoroughly investigated by Dr. Koch, from Germany, and Dr. Daring, from the Pasteur Institute, and so successfully treated by them here—by the former with bile, and the latter with serum—have no sooner passed over than we are threatened with a worse pest in the form of the bubonic plague, which has broken out, so to say, "across the way" in Madagascar, where one European and over one hundred blacks have succumbed to the disease. The island has been proclaimed, under the public health act, as affected with Oriental or bubonic plague. The Natal and Delagoa Bay authorities are, however, taking all precautions. From D'Urban application has been made to the government of India for a supply of plague serum, and a hospital is to be erected on the beach.

The last few weeks have been hotter than anything we have experienced in the Transvaal for years—103° F. in the shade. In conjunction with this heat a wave of infantile diarrhœa has passed over Pretoria and Johannesburg, leaving its "spoor" behind in the shape of a large death rate. I need, therefore, hardly say that the great factor in the high death rate for the year 1898 has been the infant mortality.

The Magato campaign against the rebellious tribes under Mpefu is practically over. Eight thousand burghers were in the field against some thirty thousand rebels. The death rate among the burghers was practically *nil*—only three, and two of these cases were accidents. The exertions and skill of the medical staff were thus not greatly taxed. There seems to be no field for acquiring an extensive knowledge of gunshot wounds or injuries from among the burghers in our campaigns; as for the Kaffirs on the other side, there are few of them wounded. The burger aim is too good; it carries invariably death with it.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 18, 1899:

	Cases.	Deaths.
Tuberculosis	255	187
Typhoid fever	15	1
Scarlet fever	155	16
Measles	210	9
Diphtheria	161	41
Laryngeal diphtheria (croup)	15	6
Cerebro-spinal meningitis	0	3
Chicken-pox	13	0

Wicked and Strong.—Dr. J. Marty, a French criminologist, has recently made an examination of four thousand delinquent soldiers of the French army, and has found that in height, weight, breast measure, muscular power, and general condition, they averaged much better than the well-behaved soldiers. Dr. Marty does not imply that criminals are by nature better physically than non-criminals, but suggests that the condition of criminal families is so much more wretched than respectable ones, that only the uncommonly strong survive.

Consumption of Alcohol.—The United States along with Germany and Switzerland show a decrease in the use of alcohol, according to a recent thesis prepared by Dr. Ruyssen, dealing exclusively with distilled beverages. In France, on the contrary, as well as in Belgium, there has been a constant and marked increase during the past sixty-eight years. France, it seems, occupies the first place in the list of nations, consuming fourteen litres of proof alcohol for each inhabitant, while Canada stands at the bottom with only two litres per year for each individual.—*La Presse Méd.*, November 16, 1898.

Carbolic Poisoning, from the local application of equal parts of acid and glycerin to the umbilical cord a few hours after birth, resulted in death on the following day (*Le Bull. Méd.*, November 23, 1898). It has been shown that the tissues surrounding the vessels of the cord may absorb during the first few days of life and

possibly too during intra-uterine existence. Strong carbolic applications should in any event be most guardedly employed about open wounds and delicate structures at any age.

The Plague.—It is stated that during the plague outbreak in the Saharanpur district there was a concurrent mortality of monkeys. Capt. Chaytor White, of Mallapur Camp, Sitapur District, thought that accidental inoculation by abrasion of the skin surfaces or the mucous membrane was the exception rather than the rule in cases of plague, and he doubted whether such abrasion was sufficient to account for the large number of femoral, inguinal, and axillary buboes which amounted to seventy-five per cent. of the total cases. On account of the position of the buboes one ought to look for some peripheral point of inoculation which was difficult to find.—*London Times.*

Tailed Men.—Africa is a continent rich in tailed-men myths. There is supposed to be a caudate race of pigmies somewhere in the uplands of Abyssinia. The Main-Mains are a celebrated case. A good many years ago the French government dispatched a M. Descouret with instructions to explore some of the least-known parts of Africa, and to ascertain the exact degree of truth in the various stories about the Main-Mains. He describes the people as being mostly under five feet in height, ill-proportioned, thin, weak, and ugly, with short woolly hair, and with an external elongation of the vertebral column, which he says, "in every individual, male or female, forms a tail of two or three inches long."

South America's Suicide Wind.—An English journal is responsible for the following: "In Brazil and other parts of South America the natives know and fear a certain condition of the air which they call "suicide wind." It is not superstition, but an actual condition of the atmosphere which seems to drive the people to madness, and during its continuance self-inflicted deaths are numerous. Criminologists and scientists all over the world are interested in this peculiar atmospheric influence, which is indicated by a soft, moist, warm air that settles heavily on the earth. The climatic condition known as the "suicide wind" is greatly dreaded in that part of the country. Statistics prove that suicides and other crimes occur together, or in waves, as they are described.

A Lay View of the Cause of Longevity.—There has recently been a discussion in one of the most popular English Sunday journals on the above subject, and much interesting expression of the lay opinion thereon has been evoked. The writer of the editorial comments in the afore-mentioned journal says: "A correspondent discussing my conclusion that in longevity a good constitution is the chief factor, and heredity the cause of it, remarks: 'This may be true in a way, but I think nevertheless that food plays a considerable part in it. I maintain that long-lived people instinctively eat the proper food to insure longevity, and also that their instinct may be cultivated and improved to the benefit of the individual. Every man in time gets to know the diet most suitable to him, and if he has strength of mind to follow it benefits. Of course I am not going to lay down a general rule of diet except that generally meat, vegetables, and fruit are better than starchy foods, containing as they do less of the minerals which eventually choke one up and lead to an ossification of the system.'"

Decline in the Birth Rate in Europe.—It chanced that the birth rate began to decline in France sooner than in the other great countries of Europe, and that the decline has been more rapid. But, as the figures of the registrar-general show, the same tendency is now very strongly marked in England and is plainly visible in every other European country. It is quite conceivable that a couple of generations hence Frenchmen may find that their birth rate is no longer the lowest in Europe. The truth is that the present rapid growth in European populations is a phenomenon which is almost entirely confined to the last one hundred and fifty years. Through some of the grandest periods of her history England was almost stationary, and the same statement applies to France. If this decrease is due to non-natural causes it is not a matter for congratulation, but if it means that European people are ceasing to contract reckless and improvident marriages and are showing more care and discrimination in the begetting of children, it is a healthy sign of the times. Large families are not necessarily an evil, but if the members composing them are diseased and degenerate, they become a standing danger to the body politic.—*Humanitarian.*

Eye Affections in Spain.—The expression, "as blind as a Spaniard" has been popularly believed in this country to have reference to the shortsightedness of a people who have seemed to be so often blind to their own interests. Professor Hirschberg has recently made a communication to the Berlin Ophthalmological Society, which puts the matter in a different light. Travellers in Spain, he says, have for a century commented upon the large number of either partially or totally blind persons encountered in public. The only available statistics (those of the census of 1860) are regarded as of little value, placing as they do the number of blind at eleven in each ten thousand. The actual number would appear to be very much higher. At the Congress of Hygiene held in Madrid last spring, Hirschberg called attention to the alarming spread of ophthalmia neonatorum and trachoma, and to the great prevalence and severity of phthisis bulbi in all parts of Spain, and urged Spanish physicians to pay more attention to so important a subject.

A Royal Doctor.—Duke Carl of Bavaria, the famous oculist, has just been appointed an honorary member of the St. Petersburg Academy of Medicine. His Highness, who has just celebrated his sixtieth birthday, is at present practising in his clinic in Munich. His brother, Prince Ludwig Ferdinand, who is also a medical doctor, has just been promoted this New Year's to the rank of general of cavalry. He, however, only saw active service in the rank of lieutenant, while his brother, Duke Carl, commanded his wing of a cavalry regiment as major. Prince Ludwig Ferdinand receives patients in his palace at Munich and is a visiting physician of the University clinic. On account of one of his children being ill with an infectious disease, His Highness has not been at court for some weeks.—*From European Edition of The Herald.*

Cheap Medical Services to the Rich.—According to the report of a recent intercolonial medical conference, published in the *Inter-Colonial Journal* of Australia, one of the third-class (six cents a week) patients lives in a mansion worth £5,000 ($25,000) and his wife owns and runs race-horses. Another is a retired civil servant owning a row of cottages, who while taking his ordinary attendance from his club doctor at six cents a week, does not hesitate to pay two guineas as a consulting fee when he requires further advice. One of the medical men making this report has attended an ex-mayor with many thousands. He paid him about two hundred visits and consultations during three years, and got nothing beyond his six cents a week. Another has attended a bank manager, two brewers, several well-to-do storekeepers, and

a good many farmers. One doctor says he attended a man worth from $100,000 to $150,000, who lived in a castle in an Eastern suburb; while another had a patient whose will was proved at $110,000, yet he had attended him and his family for $3 a year. There are pages of these examples, and the universal testimony is that while the *bona-fide* workingman, the proper club patient, is comparatively considerate, these well-to-do parasites on the club system are troublesome and exacting to a degree. One doctor says they "expect more, are less thankful, and always have an idea that they are not getting enough for their money," while he plaintively adds, "The wife generally keeps you waiting a quarter of an hour in the drawing-room while she 'does' her hair." The drawing-room of a patient at six cents a week—alas, for the meanness of well-to-do man!—*London Hospital.*

Drains and Diphtheria.—*The Hospital* points out that there are always two factors in a case of diphtheria, predisposition and infection. Even if the disease germs are not brought into a household by way of the drain, the occupants of the place may become enfeebled by the poor sanitary conditions that environ them. For many years it has been the belief of the profession that sewer gases, accumulations of refuse, and dampness in a house are predisposing causes of diphtheria. The suspicion has received more or less corroboration from statistics. For instance, the condition of drains in all houses where certain kinds of diseases had prevailed for a year was carefully investigated in Hackney, a part of London, in 1897. Of all the cases of enteric fever, which is admitted to be intimately related to drainage, 29.8 per cent. occurred in dwellings having defective sewers. Of the diphtheria cases 27.8 per cent. had similar associations. The percentage of scarlatina, however, was only 18.7. Sir Richard Thorne has suggested that the relation between bad sanitary conditions and diphtheria is this: Foul emanations from sewers promote a morbid state of things in the throat, and such a state affords a soil favorable to the lodgment and development of diphtheria microbes. Where the germs come from may be another question, but that they are able, when one's throat is already sore, to work greater harm in consequence of imperfect drainage is certainly credible.—*New York Tribune.*

Massage Establishments in London and in Other Large Towns.—A public scandal of a grave nature, which has for many years been allowed to proceed in London without check, has recently been laid bare. Under the cloak of fulfilling a legitimate purpose the so-called massage institutions which abound in London have up to the present time been allowed to ply their evil trade without restriction and to defy the law. These establishments are in the great majority of instances but places in which prostitution is carried on as a means of profit, and the name massage is given to them merely as a blind and a trap to the unwary. A vigorous campaign is now being conducted against the continuance of the practice, by several of the London journals, and already some of the more notorious massage establishments have been prosecuted and their proprietors severely punished. An English society journal speaking of the system says: "In the history of the latter half of the nineteenth century there is nothing more honorable to English womanhood than the work accomplished by our sisters and mothers in the cause of human suffering. Keeping this fact in view, it is obvious that there are few frauds more cruel in the art of imposture than that which has relation to the spurious nurse. . . . The nurse proper is one who nourishes and protects; the sham nurse is one who deceives and ministers to man's grosser animal appetites. Any confusion between the real and bogus is, therefore, calculated to bring misconception of and injury to a vocation which is held in the highest esteem. The pretended nurse utilizes massage as a means of degrading others and herself. We will venture to say that, as in every profession and pursuit, there are black sheep; so among legitimate nurses there may be some few who have strayed from the paths of rectitude. To err is human, but we doubt whether there are, say, four women who have passed through a thorough course of training and obtained a certificate from a hospital authority who play parts in any of the vile massage dens that are a shame and disgrace to our great city." The foregoing sentences are, we understand, a fair summary of the part played by the "masseuses" in London. In Chicago the same condition of affairs is stated to prevail, and it is even said that New York possesses some of these disgraceful establishments. Vice cannot be wholly suppressed, but at any rate it should not be permitted to bring disrepute either upon massage or its many capable and respectable exponents.

Abortion.—Be conservative in the presence of a normally coursed abortion; wait and give nature an opportunity to act. Be radical when dealing with an abnormally coursed abortion; interfere and empty at once.—FRANK A. STAHL.

Puerperal Sepsis.—This is a preventable disease, and we obstetricians have to face this fact, and do our utmost to accomplish it. If we are not doing this, we are failing in our duties and may justly be held responsible. The day has gone by when we can fold our hands and say it is the will of God when our patients develop puerperal fever.—ROBERT JARDINE, Glasgow.

Appendicitis.—I do not believe in operating on all cases of appendicitis. I'd rather have a live man with an appendix than a dead one without one. I do not believe with the witty Frenchman that no case is complete without a post-mortem. If the patient is no worse after forty-eight hours of observation, let him alone; let him get well.—W. W. KEEN, *International Journal of Surgery.*

Oh Don'ts! for Odontologists.—Oh, don't pull the wrong tooth, especially if it is the only really good one the man has left.

Oh, don't put amalgam in a mal gum.

Oh, don't use sorgum for a sore gum. Sweets may be good, but fig or raisin will suffice.

Oh, don't talk the victim to death. Use the gas bag.

Oh, don't tell the patient he has pyorrhœa alveolaris. It will only make him feel worse.

Oh, don't tell a man he must have his tooth out because his dentine is too thin.

Precaution against Errors in Prescription Work.—If, outside of heaven, there is one place where order should reign supreme, that place is the pharmacy. The bottles should not be crowded together, and to avoid this the case should be made as large as space and general appearance will permit. The more powerful drugs—preparations of aconite, belladonna, nux vomica, strychnine, morphine, etc.—should have their special places in the case and should bear a thoroughly distinctive and cautionary label, either below or above the regular label, thus safeguarding as far as possible all liability to error in the employment of these or other potent remedies. The syrups, fluid extracts, and various other preparations which by reason of their bulkiness may not find room in the case should be arranged immediately behind and on either side of the case, thus being as convenient of access as possible.—STERLING BEDFORD, *Merck's Report.*

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Original Articles.

SUPRAPUBIC HYSTERECTOMY WITH INTRAPERITONEAL TREATMENT OF THE STUMP IN PREGNANCY AT TERM FOR OBSTRUCTED LABOR.[1]

BY W. M. POLK, M.D.,

NEW YORK.

THE aims of this society make it possible to present a subject not wholly new, and yet fresh enough to possess interest for the average practitioner. The subject proposed is hysterectomy as applied to the pregnant uterus, and especially the pregnant uterus at term, when it is presented as a substitute for Cæsarean section. The latest statistics (Leopold's) place Cæsarean section within the limit of safe operations. Yet in spite of this showing one cannot banish the belief that this same operation needs a close approach to the ideal conditions therein presented to insure an approximation to the standard there fixed. Having this belief, I incline to the procedure which, taken all in all—including conditions to be faced in its performance—offers the cleanest wound and the smallest surface capable of acquiring sepsis. Therefore I will present to you the claims of hysterectomy. We call it, when applied to the pregnant uterus, Porro's operation. Like hysterectomy for fibroids, it was originally executed so as to leave the stump or cervical portion of the uterus fixed in the lower angle of the abdominal incision; but, like other suprapubic hysterectomies, it has been freed from this imperfection, so that the stump can be treated intraperitoneally, the one being the logical outcome of the other. We find no difficulty in accepting this, if we learn to regard the pregnant uterus under certain accepted conditions as a tumor requiring excision, and banish the thought that pregnancy in itself—that is, the normal condition of pregnancy—adds to the mortality of operations.

One of the most interesting chapters of modern surgery relates to its conquests here, and especially to its achievements upon and in the immediate neighborhood of the pregnant uterus. Take, for instance, the following examples:

A mother of seven children developed, after the birth of the seventh, a cystic kidney on the right side. The combined mass, kidney and growing uterus, caused so much pain in a subsequent pregnancy—the eighth—that it was removed at the sixth month. The kidney tumor was as large as the uterus. It had been crowded well up beneath the floating ribs, and in turn had crowded the uterus downward and to the left. The operation, the convalescence from it, the subsequent course of the case to labor, labor itself, and its convalescence, were uneventful; and so far as present observation upon the offspring goes the child being now about two years of age, it suffered no harm.

Take a second instance, a young married woman, who was sterile, and in consequence insistent for relief. It was evident that an ovarian tumor, some three and one-half inches in diameter, had a bearing upon the issue; therefore its removal by abdominal section was suggested. While considering the advisability of adopting this suggestion, the patient nullified it by becoming pregnant. But another phase of the situation now presented—namely, the possible influence of the tumor in causing abortion; or, if term was reached, its probable interference with delivery. We again advised removal, this time as the best method of obviating both of these risks. This suggestion being promptly accepted, operation speedily rid the patient of a dangerous growth, a dermoid cyst. The smoothness of recovery and the after course of the case were quite as good as in the one first cited.

It is pretty well established that healthy pregnant women bear very well operations which are unattended by severe pain or serious shock. Fibromata have even been removed from the pregnant uterus, and the patients have progressed to term, finally delivering a healthy child. Severe pain and excessive shock will, however, generally cause abortion or miscarriage; and with this complication enters of course an additional risk, but it is one that can be controlled by the ordinary rules of antisepsis.

The bearing of these citations upon the essential subject of my paper is obvious, for they tend to place the pregnant woman requiring a Porro operation upon pretty much the same level as fibromas needing excision.

The Porro operation is presented to us as a necessary measure or as one of election. When before us as a measure of necessity, we are faced by dire complications, such as osteomalacia, a ruptured uterus, a septic uterus—such, for instance, as is met with either in consequence of infection from a dead child or in consequence of a too prolonged or unskilfully treated obstructed labor—uncontrollable hemorrhage either in the course of a Cæsarean section or in consequence of myomectomy, extensive fibroid disease of the uterus, especially if the tumors are located in the lower segment of the uterus, and are large enough to encroach upon the line of delivery. In all of these conditions extirpation is the proper remedy, and no other operation should be considered. This is not the case, however, in the presence of mere contractions, such as undilatable cicatrices of the vagina or cervix, or deformities of the bones of the pelvis. Cæsarean section and symphyseotomy may here be presented as alternatives. Let us first make comparison with Cæsarean section. The sole factor favoring this operation is the avoidance of mutilation. It is more dangerous than extirpation, because the operator—and the poorer he is the greater the risk—deals with a surface more fragile, more liable to sepsis; with an organ, in fact, within which conditions can readily arise that may nullify his best efforts toward the all-essential coaptation of the edges of the wound which he has inflicted. And as this nullification means leakage of a virulent poison into the peritoneal cavity, it generally means death. In all other respects the two operations stand upon an equality. The time consumed in operating and the amount of shock involved are practically the same. The question, then, is narrowed

[1] Read at a meeting of the Practitioners' Society, January 13, 1899.

down to mutilation *versus* safety, and as such it should be presented, certainly to the friends of the patient, if not to the patient herself; and I am clearly of the opinion that the less skilful the operator the greater the preponderance of safety on the side of extirpation.

Turning next to a comparison with symphyseotomy, we realize that the contrast can apply only to those greater degrees of contraction to which symphyseotomy is adapted. When this operation can place the case within the domain of version or the forceps, comparison is out of the question, but when it can place the case only within the domain of embryotomy, a joint presentation of extirpation is imperative. I would cast my vote for extirpation, and with all the greater alacrity the poorer the operator in charge of the patient. It takes more skill properly and successfully to perform symphyseotomy, eviscerate and remove a child from such a pelvis, than it does properly and successfully to deliver a living child and extirpate from above such a pelvis. One has only to feel secure in his cleanliness to find simplicity and ease in the problem presented in the extirpation of a pregnant uterus at or near term from above a contracted pelvis.

Approaching the details of the operation, I will say at the outset that after the delivery of the child the more closely it is modelled upon the operation of suprapubic hysterectomy as now done for fibroids, the better. As between amputation below the cervix or through it, the latter is the easier and, here, the more preferable.

There are always present (especially in contracted pelves) certain conditions which give the operator joy. The elongation of the vagina places the uterus so well out of the pelvis that the point of amputation is easy of access; pregnancy has so enlarged the vessels that they, too, are reached readily; the peritoneum is so loosely attached all about the lower segment that it is easily separated; the ureters, though drawn upward, are proportionately less so than the cervix, so one need have no more concern about them here than in other suprapubic hysterectomies. But if one should be concerned, the "open order" which prevails about the uterus in the subperitoneal planes permits easy isolation of the already-lifted-up uterine artery outside the ureters.[1] I prefer to ligate these arteries as far out as convenient, so as to control as many of its vaginal branches as possible. However, some might prefer to cling more closely to the method followed in removing fibroids, ligating these vessels close in at the utero-vaginal junction, securing others that may be severed as they appear. The uterus is emptied, of course, after it has been turned outside the abdominal cavity, and time is saved by having at hand a plentiful supply of warm, wet, sterilized towels, which can be crowded into the necessarily long abdominal wound, covering the intestines, enveloping the scar and sides of the uterus, even as far down as Douglas' pouch; with others filling the anterior pouch, covering and protecting the regions in front of the broad ligaments.

Time is saved by tearing asunder the uterus, first cutting an opening anteriorly, large enough to admit two or three fingers, choosing for the incision the median line commencing at the fundus. The tissue gives way readily, and when the rent reaches the lowest segment of the uterus one has secured ample space for the removal of the child. As soon as this is accomplished any troublesome bleeding is controlled at once by an elastic ligature thrown about the uterus below the rent. The removal of this organ is then undertaken, as already suggested. In case haste is essential, one may be tempted to fix the utero-vaginal segment of the uterus in the lower angle of the abdominal wound and cut away the superstructure—perform, in fact, the original Porro or extraperitoneal stump operation. This is not necessary. After ligating the uterine vessels and cutting away the uterine superstructure, it is easy to invert the stump and from the direction of the vagina seize and draw down the stump, and with T-shaped clamps or even ordinary hemostatic clamps control all bleeding. This enables the operator to secure a clean peritoneal cavity and close the abdominal wound. I have omitted mention of the attentions required by the child, merely because they differ in no way from such as are familiar to you as a part of such operation—Cæsarean section, for instance.

[1] See writer's article, Dennis' "Surgery," vol. iv., pp. 586, 587.

As a complement to this paper, permit me to report the following cases:

Case I.—For the full report see Transactions of the New York Obstetrical Society, vol. 1893–1894, page 292. I give here a mere synopsis:

The operation was performed April 16, 1893, at the Emergency Hospital, East Twenty-sixth Street, in this city. The condition demanding it was a deformed pelvis (osteomalacia). The deformity affected the right half of the pelvis mainly; there was narrowing of the arch and an encroachment of the acetabular upon the pelvic cavity. As determined during the operation, the transverse diameter midway the canal measured two and one-half inches; the anteroposterior, three inches. The patient was in labor seventy-two hours when operated upon. Her condition was very good, all things considered. The child weighed five and three-quarters pounds. The operation was done in accordance with the suggestions given above. The mother and child made excellent recoveries.

Case II.—I saw this case in consultation with Dr. Cushier, who very kindly permitted me to aid her and consented to operate along the lines described above. It has never been published; therefore, with Dr. Cushier's consent, I present it here.

J. V——, aged twenty-nine years, Italian. She had had but one pregnancy prior to this, and that occurred nine years ago. Delivery was accomplished by means of embryotomy performed at term. Her last menstruation ceased June 4, 1893. The vagina was normal, except near the cervix, where there were several cicatricial bands extending from that region. The cervix was nearly obliterated, and what remained of it appeared to be composed chiefly of cicatricial tissue. The os was closed, a mere depression marking its probable site. Labor began February 21, 1894, and continued till 4 P.M. of the 23d, at which time the patient's condition was such that operation was performed. The certainty that rupture of the uterus would accompany delivery through such a cervix—free incision of the extensive cicatricial plane being essential to such a delivery—determined in favor of abdominal section, and extirpation of the uterus was adopted. The presentation was vertex, L.O.A., and the measurements of the pelvis and the child were as follows:

Measurements of pelvis: Spines, 9⅜ inches; crests, 10½ inches; trochanters, 11 inches; great conjugate, 6½ inches; diagonal conjugate, 4½ inches; internal conjugate (estimated), 3½ inches; circumference of abdomen, 39 inches.

Child's head: Occipito-frontalis, 4½ inches; suboccipito-bregmatic, 3⅜ inches; biparietal, 3½ inches; bitemporal, 2¾ inches; circumference, 13½ inches. Sex, female. Weight, 5 pounds 14 ounces; length, 17½ inches; width of shoulders, 5⅜ inches; width of pelvis, 3⅞ inches.

A living child was removed from the uterus after the organ was turned out of the abdominal cavity.

In this operation the vagina was so greatly elongated, placing the utero-vaginal juncture well above the pelvis, that all that remained of the cervix was removed along with the body of the uterus. The detail of

the operation was in keeping with the steps explained above. Recovery was somewhat slow, probably due to the development of inflammatory exudate about the ligatures controlling the vessels on the right. This appeared on the eighth day; it finally disappeared, however, and the patient left the infirmary in excellent condition, April 29, 1894. The patient was able to nurse the infant during the first few weeks only; subsequently it was fed artificially.

CASE III.—Strictly speaking, this case should not rank with the two just quoted, because it was extirpation of a pregnant fibroid uterus at the sixth month, not at term. The justification of the extirpation at this date was found in the state of the patient and the location of the fibroid masses. The patient required operation because of the unyielding pain and discomfort of the growing mass; the uterus required removal because of the number, size, and location of the fibroid growths. Three occupied the lower segment of the uterus, so as to obstruct entry to the cervix. Myomectomy was rejected, because two of the tumors were lateral and were interstitial mainly. The uterus with contents was removed as if for fibroids, and an uneventful convalescence followed.

ON THE TREATMENT OF "UNAVOIDABLE HEMORRHAGE" BY REMOVAL OF THE UTERUS.

BY LAWSON TAIT, M.D.,

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I HAVE spent most of my leisure during the last few weeks in looking up the authorities on "placenta prævia" for some assured statement concerning its mortality. There is nothing more definite than is to be found in Simpson: "All obstetric authors seem to agree on this point, that there is no one complication in midwifery attended with more anxiety to the practitioner, and few if any, with more real danger to the patient, than cases of unavoidable hemorrhage from presentation of the placenta." He proceeds to give figures which go to show that the fatality is close on forty per cent., but I gather, from the smothered confessions of other writers and the open admission of my friends who have had large obstetric experience, that it really is much higher; and in spite of the sound principles laid down for its treatment and the improvements therein made by Simpson himself, it is probable that more than half the patients die. I have all my life avoided in every possible way contact with obstetric practice, and for thirty years have had no personal association with it save in occasional consultations. Among these have to be included thirteen (now fourteen) cases of unavoidable hemorrhage, and of this the mothers have died in seven cases, and I think only two of the children were born alive. It will, therefore, not be a matter of surprise if I say that I entirely agree with the sentence I have quoted from Simpson's "Obstetric Works." I feel pretty sure that the full mortality of the condition is not yet known. So many patients die of the secondary complications due to the damage of the misplaced placental sinuses, and as these cases are generally not fatal till many days after delivery, they are not returned as cases of "placenta prævia," but as peritonitis, etc. I gather from conversation that only immediate deaths are as a rule entered under the real and primary cause. This is of itself a point of interest about the condition, though not one which concerns me much, though evidently the higher the total mortality is found to be, primary and secondary, the stronger will be my subsequent argument from this point of view.

Another aspect from which "unavoidable hemorrhage" is extremely interesting is that it is one of the few points in the practice of surgery in which our conduct has to be influenced by ecclesiastical authority. The Church of Rome rules that in such a case the living birth of the child is all-important, and when the interest of mother and child conflict, those of the former must yield. In one case to which I was called by the late Dr. Wynne Thomas, this decision, arrived at by mother and father of the child as advised by their spiritual directors, seemed to us to cost the mother her life, though it did save the child. Under such circumstances that part of the treatment directed against the immediate risk from hemorrhage has its influence for good directly contravened and probably entirely annulled by the causes introduced and risks produced of secondary mortality.

All these conditions existed in a case to which I was called on the 21st of December last by Dr. Herbert Simpson, of Rugby. The patient was young and slightly built, and had as bad a history of hemorrhage as a woman well could have. She had always had "something wrong" inside and had been a regular consumer of ergot for years. She had been twice curetted and cauterized. She nearly lost her life from post-partum hemorrhage in her second confinement, and had several miscarriages with seven losses, and I found her in her fourth confinement at the full time with the cervix closed and rigid, the liquor amnii drained off, the uterus firmly contracted over the child, and yet she had been bleeding with alarming profusion for five hours in spite of many other and orthodox points of treatment which Dr. Simpson had employed. The child was easily ascertained to be alive, and the consideration of its interests as superior to that of the mother were not pressed by any one. But I confess that the recollection of previous experience made me hesitate to do what was clearly necessary, the forcible dilatation of the cervix and the extraction of the placenta, whether I followed that by version or not, whether or not I left the after labor to nature and the child to its fate. An alternative occurred to me to which I was prompted by the splendid success which has followed it in my hand, and those of others under different yet very analogous circumstances—removal of the uterus. It had many arguments in its favor: It would save the child. It probably would save the mother. It would cure her of the life of perpetual misery and risk in which she had been living for years and would therefore assist her in properly rearing the children she had, rather than tend to procreate others to whom she certainly showed no likelihood of ever being able to give proper care.

There was no argument against except the familiar one of "mutilation." As I have already characterized that as the argument of the brothel-keeper rather than one for the consideration of the physician, I attach little importance to it. Putting myself in the place of the patient's husband, so far as I could, I felt that the Church of Rome had some reason for its decision, though more as a matter of right than of salvation, that any proceeding which would diminish the mother's risk for fifty or forty, or even twenty per cent. to four or five per cent. must be selected. Finally the argument would have been overwhelming with me as a husband, that my wife would have health and comfort for her after life instead of misery and risk, irrespective of sterility or mutilation or anything else. I therefore proposed hysterectomy, and after full discussion it was accepted by Dr. Simpson, the husband, and the patient. I performed it with the aid of the elastic ligature,[1] by that known in America as the "Tait-Porro" operation. The patient made a straightforward recovery, interrupted only by occasional rectal

[1] "On the Surgical Aspect of Impacted Labor," by Lawson Tait, British Medical Journal, March 22, 1890, p. 657.

distention. A fine female child was born alive and lived for a month, succumbing, unfortunately, a month after birth when the cold weather distributed bronchitis.

This case forms a new departure. Whether it will receive a universal commendation is not the least a matter of doubt. The "mutilationists" will howl against my proposal, but there are others who will follow my example, and to those who do this will surely come the comfort that they will diminish "the anxiety to the practitioner and the real danger to the patient" of this obstetric difficulty which Simpson so graphically tells us has more of both than any other.

January 27, 1899.

THE MEDICO-LEGAL RELATIONS OF TRAUMATIC HYSTERIA.[1]

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THE group of disordered mental states classed under the term hysteria has left important imprints on history. In the dancing and other manias which swept over Europe in the Middle Ages; in the obsessions and casting out of devils; in the contagious hallucinatory delirium which has turned convents into Bedlams and which, even in our day, in seasons of religious revival, converts a multitude of simple negroes into a mob of shouting enthusiasts who see visions or have fits—in these as in many other similar demonstrations which are so often interpreted as evidences of the "supernatural," the critical student has found the same abnormal suggestibility, the same defects in the function of special senses, the same delusions or beliefs which are erroneous because the sensations which give rise to them are perverted, as are characteristic of the disease hysteria. It is hardly probable that in the present organization of society, hysteria can assume the menacing proportions that it has had in earlier times among simpler peoples. It is a disease which feeds on credulity and superstition and spreads by imitation. Education is its enemy. But it remains to-day a disorder of frequent occurrence, which is often misunderstood and oftener maltreated; one of great importance to medicine, with potentialities of great importance to law. Its relations with automatism, with hypnotism, and with abnormal suggestion, with the miraculous cures which made Lourdes a Mecca or which throw a halo around a Schlatter, render hysteria a disease with which the student of sociological and moral problems, to say nothing of the physician, should be familiar. The present paper concerns itself only with the medico-legal questions which arise when it is the alleged result of negligence. But the understanding of the difficulties which are inherent to that question presupposes some knowledge of the nature of the disease itself. It may be well, therefore, to offer a brief summary of what is now known and believed concerning it.

The indiscriminate use of the words "hysteria" and "hysterical" is undoubtedly responsible for much of the confusion existing in the conceptions regarding the disease. In employing these terms as designations for temporary and unimportant emotional disturbances the fact is easily lost sight of that true hysteria is a definite disease different from any other disease, with characteristic and constant symptoms and with an extremely indefinite prognosis. It is in its latter meaning that hysteria is used in this article. The name itself is a misnomer, as every one knows. But while its previously supposed pathological connection with the uterus has been proved false, the truly mental nature of the malady is not so generally recognized as it might be. The patients were thought to be *poseurs* or impostors, or, at best, gross exaggerators; from ceasing to be regarded as a disease of the uterus it has come to be too generally looked upon as not a disease at all. Yet unless the teachings of history, of clinical experience, and of the recent investigations of psychology are wholly at fault, the manifestations of hysteria are entitled to the same consideration and care as are unhesitatingly given to the ravings of mania or to the insane depression of melancholia; and a patient presenting the symptoms of hysteria, although perhaps a silly and attention-loving female, or even a man suing for personal injuries, is none the less the victim of a disorder from which recovery is by no means sure. It is easy to understand why hysteria is often misunderstood and the sufferer from it misjudged. The disease, though essentially mental, finds its most conspicuous expression in physical symptoms which are often perplexingly similar to those caused by diseases of known material basis; and the patient is in general appearance not a lunatic, but a person laboring under some severe bodily infirmity. The most important physical symptoms which hysteria causes are paralysis and defects in the special-sense apparatus of sight, taste, smell, hearing, and common sensibility—so that the patient may seem and believe himself to be paralyzed, or blind, or deaf, or deprived of the use of the other special senses.

These symptoms differ in their mode of origin, in association with each other and with others, from the symptoms due to recognizable injury of the nervous system; but the essential point of difference is that the trouble exists, neither in the sense organs themselves, nor in their direct central connections, nor in the specialized brain regions which have to do with the registration of sensorial impressions. These comparatively simple structures remain normal in their function. The defects are to be sought in far higher spheres; in the neuron systems which have to do with the collection and elaboration of the products of sensorial impressions; in the domain of higher consciousness and personality in regions whose pathological anatomy is yet to be disclosed. From the failure of the normally transmitted and normally registered sensory simili to be transferred to association systems, hence to enter into the practical life of the individual, they fail to attain an intellectual value, and the patient is in the anomalous condition of feeling, seeing, hearing, tasting, or smelling, as the case may be, without being aware that he does so; or, from similar but more complex causes, he may lose the power of originating voluntary motor impulses and be paralyzed. Yet this belief as to his own incapacity is absolute and often so persistent as to deprive him of his usefulness for considerable periods of time. Since the belief is false, and since false beliefs which dominate and disorganize the life of an individual are insane delusions, hysteria deserves to be classed with the delusional insanities.

That the mental states of hysteria are of essentially functional character is shown by their instability. Under the influence of a suggestion or of an emotion, the clinical picture may undergo a complete transformation, so that the symptoms may be changed in character and situation or may entirely disappear. As an example I may cite a clipping from the news column of a daily paper of December 31, 1898. It is not necessary for me to guarantee the authenticity of the story—true or false, it illustrates the typical workings of the multiform psychosis:

"A clergyman in a Western city lay on a bed in an upper room of his residence yesterday, his features drawn and wasted with great bodily suffering. Around him knelt a group of fellow-pastors, lifting up their

[1] Read before the Society of Medical Jurisprudence, February 14, 1899.

voices in earnest prayer, one after another, that God would restore to health and strength and service their brother who had been stricken. The voices were beginning to quiver and tears were flowing freely, when an aged preacher arose from the kneeling circle, walked over to the sufferer, and cried: 'Brother H——, in the name of the Lord Jesus Christ, I bid you rise and walk.' The next moment the stricken pastor lifted himself, placed his feet on the floor, and walked to the door of the room and back again without suffering the slightest pain. Mr. H—— then dressed himself and began moving around the house. To-day he was without pain and said he would preach in his pulpit on Sunday. Six months ago Mr. H—— was the victim of a bicycle accident. His left leg was badly bruised and kept growing worse. For six months the only rest he has had was from the use of opiates. He could not move without suffering the most excruciating pain. He believes that God answered the fervent prayers of his brother pastors and that the healing is permanent."

Without lingering further on generalities, I shall now proceed to a consideration of certain legal questions as they relate to hysteria arising from injury or traumatic hysteria. The significance of the word hysteria, as used here, has already been stated. A word is necessary in regard to the qualifying adjective traumatic. It will be used in its broad sense, applying to both physical injury and mental shock. Etymology justifies this extension from the generally accepted significance of the word trauma; and such an extension is essential if the term is to be applied to a disease which may arise from suddenly acting agencies originating outside the body.

Traumatic hysteria has a medico-legal importance, because the disease itself is not rare and because it is particularly liable to lead to litigation. As to the occurrence of the disease, I have come to believe that it is rather frequent. It is true that it is not among the more usual forms of disease in hospital and dispensary practice, but in private practice one meets with it constantly.

During the past fifteen months nine cases have come under my observation in the general course of my practice. Only one of these has been previously referred to.[1] Two of them dated from elevator accidents, two from injuries (not bullet wounds) received during the recent war, three from accidents on the street, one from a railway collision, and one from a fall from a trolley car. In all but two the physical injuries were insignificant or absent; in these two they were severe enough to cause fractures of one or more bones of the extremities. The diagnosis in each case was made only after a due consideration of the many opportunities of error. It was based upon the character of the accident, upon the association of two or more of the various stigmata of hysteria, and upon the failure of the symptoms to reproduce, by their nature and by their association, the clinical picture of organic disease of the nervous system. Paralysis was present in five cases; anæsthesia, the "barometer of hysteria" according to Janet, the cause of it according to Sollier, distributed differently from the anæsthesia in organic injuries in all; there was a functional contraction of the visual fields in six cases. Convulsive attacks occurred in one case only. Two of the nine patients were army officers; they were the only ones who did not bring claims for damages.

The clinical outline of these cases is given merely as evidence that traumatic hysteria, with pronounced stigmata, is not the curiosity in America that some text books would have us believe. Whatever its place in order of frequency of occurrence as compared with other nervous diseases may be, my experience teaches me that it is among the most frequent which become the subject of litigation. It has characteristics which lead the defendant to suspect fraud or exaggeration; the plaintiff's adviser, on the other hand, either believes in the gravity of the condition or else is confident that the jury will do so· compromise therefore, generally possible in cases of organic injuries, becomes difficult, and the case comes to trial, masquerading under the name of spinal injury, or of concussion of various parts of the nervous system, or paralysis, or what not; rarely in its true guise of traumatic hysteria. Furthermore, the existence of a personal-injury claim furnishes to hysteria, more than to any other disease, the factors best fitted to encourage the patient in the belief in his symptoms and to prevent his recovery. In some diseases, such as neurasthenia, the question of damages seems to be the origination of other symptoms. This is apparently not the case in hysteria. The symptoms often make their appearance before any such question arises. There is, however, good reason to believe that when that question does not enter the symptoms soon disappear, and the disorder instead of becoming serious is of short duration.

An important point in connection with the disease is the question of simulation. As has been said, the most prominent feature of the mental state of hysteria is the causation of physical defects which imitate such as results from organic disease. But when it can be shown that the imitation is not perfect, that the symptoms from their inconsistencies and fluctuations could not depend on any known disease of material basis, the question arises, Is the patient feigning, or is he truly unaware that his symptoms are false? Most laymen and many physicians are unwilling to believe in the purely psychical origin of physical defects and deformities. And, indeed, it may be difficult to trust the ingenuousness of a person who may be seen to move a limb alleged to be paralyzed, or who, supposedly insensible on one-half of the body, is not marked by accidental cuts or bruises such as almost unavoidably result from organic anæsthesia. Yet that the mimicry of hysteria is fundamentally unconscious and involuntary is incontestable. The disease has been recognized since the days of Hippocrates; its symptoms are almost unexceptionally characteristic of hysteria and of nothing else; they have typical modes of development and association, and they occur in a consistent way in persons totally ignorant of medicine, who could not imitate them if they would.

In a large number of cases there is no discoverable motive for simulation. In the cases arising from traumatism such a motive may exist; but it seems to me impossible for any impostor to be sufficiently learned and adroit to simulate the whole hysterical symptom group in a way to deceive a physician who is reasonably skilful and who makes his examination with care; and that the mental state is the only feasible explanation of the apparent inconsistencies in the clinical conduct of a person branded with the stigmata of this peculiar affection.

Both clinical and social factors render traumatic hysteria, when it is the subject of a personal-injury claim, the most difficult of all diseases to be interpreted with judicial fairness. By the methods which at present exit in all States of presenting medical testimony to a jury it is hardly possible for it to be recognized at its true value. Even when every suspicion of dishonesty on the part of witnesses, experts or others, is eliminated, the difficulties standing in the way of arriving at a fair adjustment or verdict are very great. These difficulties arise from three chief sources —first, the lack of precision in knowledge of the hysteria; second, the attitude of physicians who are called upon to testify concerning it; and, third, the attitude

[1] "Accident and Injury; their Relations to Diseases of the Nervous System."

of juries toward a disease which is histrionic and exaggerative in its character and whose nature they are unable to understand. As regards the first, the chief medico-legal importance of any disorder alleged to be the result of another's negligence attaches to causation and prognosis. In the causation of all diseases of the nervous system, and especially of those of functional character, predisposition, either hereditary or acquired, plays a most important part. For hysteria, Charcot made a predisposition a *sine qua non*, teaching that it would not develop unless the nervous system were defective congenitally, or enfeebled by alcoholism, syphilis, the infective fevers, or other exhausting agents. More recent and extended observations show that such predisposing factors cannot be demonstrated with regularity, and that it is by no means rare for cases to present themselves in which the patients, so far as careful inquiry can determine, were healthy men and women until the occurrence of an accident which seems to have been the starting-point of the nervous symptoms. Whatever the psychogenesis of traumatic hysteria may ultimately be shown to be, it cannot for the present be denied that it may be the direct result of an accident, in that had the accident not occurred the patient would never have developed the psychosis. The accidents which are most frequently followed by it are those in which the elements of physical injury and fright are combined. Of these two elements, the mental one is far the most potent. This is shown by the essentially psychic character of the disorder, and is substantiated by a study of the alleged causes of individual cases. The physical element is generally, though not always, very much less in evidence than the mental one—less in evidence than in traumatic neurasthenia. It often amounts to nothing more than such bruising or shaking up as may result from the sudden stopping of a car, or a rear-end collision by which passengers are not thrown from their seats, or a slight blow. Thus, while it is not intended to imply that hysteria never complicates severe surgical injuries, the general rule is that the evident physical traces of the accident are absent or are limited to slight contusions. It is not probable that any physical injury could be severe enough to be followed by hysteria, unless the element of fright were also present. This is, however, a matter of slight importance. But the unquestioned fact that profound nervous disturbances can result from fright or mental shock alone, when the physical factor is entirely absent, is of great importance, especially in New York State, in view of a recent ruling by the court of appeals. In Mitchell *vs.* The Rochester Railway Co. (151 N. Y., p. 107) the plaintiff had been badly frightened by the negligent management of a pair of horses drawing a street-car in Rochester, and the mental shock which she suffered produced unconsciousness and later miscarriage. The court held that the plaintiff could not recover for injuries occasioned by fright, as there was no immediate personal injury. Now, it ill becomes a medical man unversed in law to question the rulings of the supreme court; and I certainly would not permit myself to do so except in so far as purely medical issues were at stake. Therefore, while fully recognizing the wisdom of the foregoing decision so far as the interpretation of law and the general good of society is concerned, it seems to me that the refusal to admit mental shock or fright, when followed by serious symptoms referable to the nervous system, as a cause of action, will result in injustice to many cases of nervous disease, and especially to traumatic hysteria. For in the causation of traumatic hysteria the physical injury is so regularly in the background and so often entirely wanting that, were all the cases in which no physical injury could be proved debarred from litigation, the result would be contrary to the intention of the law regarding the rights of persons who develop disease as the result of another's negligence.

The difficulties encountered in trying to fix upon a definite cause for traumatic hysteria are equalled by those met with when it becomes a question of prognosis. No disease presents so few guiding marks by which the probable outcome may be speculated upon. Hysteria may be cured over night, so that the patient becomes and remains as well as he ever was. On the other hand, it may remain as a distressing and disabling infirmity for ten or twenty years, or, indeed, a lifetime. The prospects of recovery depend almost wholly upon the future environment of the individual; and the physician is as unable to tell what that is to be as he is, in the majority of cases, to control it. It is commonly said of traumatic hysteria that the sufferer from it, as soon as he gets his money, suffers no more. While nothing in the nature of the disease, which is characterized by sudden fluctuations from mental impressions, would permit one to deny this statement, experience shows that it is by no means always true; that many patients are absolutely oblivious to the question of damages; and that the disease drags on after the legal proceedings have ceased to do so. So that the most that can be said regarding the prospects of recovery in any case of traumatic hysteria is that the disease is in no sense incurable, and that, if proper management of the patient is possible, it could in all probability be cured. There is, however, no more reason for a medical expert in a litigated case, when he knows little or nothing of the circumstances of the plaintiff, to say, as is sometimes done, that the symptoms will disappear "like the snow-fall in the river" when the case is finished, than there is for the expert on the other side to testify that the patient is "ruined for life."

Having thus glanced at the uncertainties which are inherent to traumatic hysteria and which become especially conspicuous in litigation, it is now necessary to look for a moment at the way this complex and many-sided disease is regarded by the medical profession in America. In regard to it physicians may be divided into two classes—into those who are familiar with it and those who are not. The first class is restricted. It includes only those who have a certain amount of knowledge of the constituent parts of the nervous system, of their actions in health and of the defects which result when they are diseased or destroyed. Hysteria is a functional disease *par excellence*, and the diagnosis of a functional affection can be arrived at only by a process of observation, criticism, and rejection. The ability to recognize a functional disease presupposes a familiarity with the symptoms of organic disease. Such a familiarity is obtained only by interest, opportunity, and study exerted in neurological fields. To know that a true foot clonus, rhythmical, forcible, and persistent, is rarely if ever observed in hysteria; that a seeming paralysis of the face may be due to an hysterical contracture of opposing muscles; that in the anæsthesia of hysterical paraplegia the genitals escape; that in anæsthetic areas the reflexes may be lost; that unilateral hysterical symptoms are four times out of five on the left side—to know these and scores of others of the peculiar attributes of the psychosis is essential for any one who is to give an interpretation of a given case; but the possession of such knowledge and the ability to utilize it implies an appreciation of the necessity of thoroughness in the examination of nervous cases, a familiarity with technical methods, and above all a familiarity with the symptoms which point unerringly to demonstrable breaks in connecting paths or lesions in nerve cells. This is especially the case for hysteria induced by trauma. In the non-traumatic variety the psychosis is chameleon in the gorgeousness and changeability of

its colorings; seen at the acme of its variations, the most uninitiated could hardly fail to identify it. But traumatic hysteria so often manifests only the sombre hues, so often reveals itself, not by the classic shriekings, gesticulations, exaggerations, and similar efforts at display, but only by a persistent paralysis or anæsthesia, or depressed, inattentive, and apparently unresponsive mental state, that its identity escapes the perception of whoever is not on the alert for the points of difference which distinguish the peculiar mental malady from those disease pictures which it so closely resembles, yet from which it is so totally distinct. If the preceding statements are true—and I think they would be pronounced to be so by those best qualified to judge—it follows as an immediate consequence that medical expert testimony in regard to hysteria or any of the traumatic affections it may simulate, to be of value either in a scientific or judicial way, must be given by some one familiar with nervous diseases. When given by some one who is not so qualified, it almost unavoidably follows that the hysterical symptoms are mistaken for manifestations of organic and, generally speaking, incurable disease—that the patient is made to appear in a much more hopeless state than he really is.

Unless my own experience, slight as it is, has been unusual, and unless the information derived from other sources has been misleading, a large number of the medical witnesses who qualify as experts in litigated cases of traumatic hysteria have no rational conception of what hysteria is and are totally unfitted to give an expert opinion in regard to it. Although such witnesses may be distinguished in their profession, and their expressed views may be honest convictions, they are none the less fatal to all attempts to arrive at the truth of the question at issue.

The third, and perhaps the greatest, obstacle to traumatic hysteria being justly dealt with in court is constituted by juries. In the negotiations which take place between the injured person and the responsible party soon after the accident there are so many legal and economic considerations, in addition to the purely medical ones, that it is hardly worth while to speak of the difficulties of settlement in traumatic hysteria. But when a case is finally brought to court, to the "tribunal to which all citizens may repair with confidence that their contentions will receive rational and impartial consideration," it remains to be ascertained, after the liability of the defendant is established, what the nature, degree, and probability of permanency of the injuries are and the amount of financial compensation to which the plaintiff is entitled by them. These are the questions which the jury has to decide. Under existing conditions, it is almost impossible for a jury to decide them with discernment. The plaintiff is generally brought before it, and he is almost sure to present the acme of all the symptoms he has had. If some of the symptoms had disappeared, they will probably return at the trial. Sollier records the case of a lady who as the sequence of an assault developed, among various other hysterical stigmata, a left hemianæsthesia. This disappeared, but at the time of the prosecution of her assailant, some two years later, it returned again.

The psychosis is nourished upon suggestion and introspection, means for which are so profusely furnished by the excitement and observation attendant upon court proceedings. It is entirely consistent with its nature that existing symptoms should become worse or vanished ones return on such occasions. It is not necessary to assume, in explanation, any voluntary exaggeration or simulation on the part of the patient. The effect of this clinical idiosyncrasy on a jury, however, is disastrous to the cause of the defendant. The twelve jurors have heard from the medical experts of the two sides testimony too often directly conflicting. On the one side the opinion has been expressed that the patient's condition is due simply to nervousness aggravated, if not caused, by the suit, and that the symptoms will soon subside when the legal proceedings are at an end; on the other side, the belief has been sworn to that the injury is of organic and irreparable character, or else, if perchance its functional nature is admitted, that the nervous system has sustained a shock from which it can never recover.

The jurors may be convinced of the honesty of all the views they have heard expressed, and yet they are unable to determine from the character of the testimony which of the opposing opinions is the more likely to be correct. They are, therefore, obliged to rely upon the impression made upon them by the injured person himself. They see a person in an even worse condition, perhaps, than his doctors had depicted. They see an alleged paralyzed limb absolutely motionless; they become witnesses of an emotional outburst more harrowing than any related in the evidence. And they see these things one or two years after the accident has occurred. Their natural inference is that the injuries are permanent. They find it hard to believe that the outlook for a malady which has so long defied the resources of medical skill is anything but hopeless. They are unwilling, if not unable, to believe in the unreality of physical symptoms. They cannot comprehend a part being the seat of paralysis or insensibility unless there is some grave physical defect behind it; they do not know that a limb which is immobile to-day may be in wonted activity to-morrow. Thrown on their own resources by the contradiction in medical testimony, they render a verdict in accordance with their own impressions as to the plaintiff's injury. Their impression is that of a person severely and probably incurably injured; and their verdict, rendered accordingly, is generally in excess of anything to which the plaintiff is entitled.

What has now been said is an essay to outline the difficulties, many of which seem unavoidable in the litigation of a most obscure and capricious disease. No attempt has been made to take into account the many side issues. The dishonesty on the part of witnesses, the subtleties of points of law, prejudice, and similar considerations, are no different in the litigation of hysteria than in other diseases and are, furthermore, questions which do not concern the medical man. It should be the object of every one who sees obstacles in the path of truth to do what he can to remove them, and it is a cause of regret to the present writer that he has no remedy to offer. The question is one which must find its solution with the progress of civilization. When there has been provided a more efficacious means of arriving at trustworthy medical testimony, hysteria will benefit more than other disease. When medical education is more thorough, and especially when graduates are not permitted to leave the medical schools until they are familiar with the more important facts known in regard to nervous structures and functions, the benefit to the general medical profession cannot fail to be felt in the courts.

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Constipation in Children.—Dr. Louis Fischer (*The Canadian Journal of Medicine and Surgery*, January) writes: "An invariable rule followed by me in children is never to permit a child to retire for the night without a movement of its bowels; consequently, if the infant has been constipated during the day I advise the injection of one pint of a mixture consisting of two-thirds warm water and one-third glycerin—the latter to be used to soften hardened accumulations of fæces in the rectum."

HOW TO MAKE MEDICAL MUSEUMS MORE VALUABLE.

By WOODS HUTCHINSON, M.D.,

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A MUSEUM is not merely a place for the safe keeping of curiosities. It is a great object lesson, a book without words. It is not enough that it should contain a fair number of good specimens, in reasonably lighted cases, duly numbered or ticketed. These are simply the raw materials, and it is the way in which they are combined that determines the value or uselessness of the collection. Arrangement is the soul of a museum. Every case of specimens, nay, every specimen, ought to explain itself, to stand for some definite idea, which can be recognized at a glance and which it illustrates and enforces as only the object itself can. Any specimen which requires a reference to the catalogue to discover what it is, is a failure. Objects are displayed in museums to be seen and understood, and not to develop our powers of penetration *à la* Sherlock Holmes. That many of our medical museums do not fulfil these requirements is a statement that needs no demonstration. Some, alas, do not possess even such elementary qualifications as decent light and labels. Not a few of our smaller schools seem to have taken whatever room happened to be left after the lecture-rooms had been provided for, in some cases even the space under the seats of the amphitheatre. And only a few years ago one of our best-known Eastern colleges, that numbers its students by hundreds, housed its valuable collection in a room so badly lighted that many of the labels could be deciphered only with the greatest difficulty, even during the brightest hours of daylight.

In such case is it any wonder that you may go into such museums a dozen times and never find a single student there? It is one of the most deserted and most useless rooms in the building, instead of being, as it should be, the most frequented and most valuable. And the "obstructionist" in the faculty can always meet any plans for improvement with the triumphant and unanswerable argument, "Well, but the students don't care anything about such things."

It seems to me that the inefficiency of many of our museums comes chiefly from an utter lack of any clear conception of their aim. The purpose of a medical museum, I submit, is to help the student, undergraduate and graduate, chiefly the former; to serve as a great illustrated text book of medicine in the widest sense. But you would hardly suspect it, to visit some of them.

Here is one, for instance, which seems to regard itself chiefly as a safe depository for anatomical freaks and pathological curios. It looks like a cross between a back attic and a chamber of horrors. It appears to have owed its existence to a hazy idea that a museum is a proper sort of thing to have, and the more extraordinary the objects that can be put in it the better. We have all visited it. The place of honor is occupied by a large and lurid collection of fœtal monsters, whose goggle-eyes exercise a horrible fascination for the freshman in his first week and ornament his dreams for months after. Then come the tapeworms, some hydrocephalic skulls, the skeleton of the giant, a few murderers' skulls or busts, a lot of dusty and despondent-looking skeletons, some shapeless lumps labelled "Tumors," the fork that was thrust through a man's abdomen, the hardware removed from a sword-swallower's stomach, and, if possible, a two-headed calf.

If the witches of Macbeth could swing up their caldron in the aisle, they would find most of the ingredients of their brew ready to hand. And the worst of it is that there is often a large number of really instructive and valuable specimens in the collection, but so completely overshadowed or crowded on to back shelves by this sensational trash that they are almost worthless to the student.

Then there is the museum which is held as a shrine for the protection and adoration of sacred relics not rashly to be exposed to the profane eye. You go to visit it, and the door is locked, and sometimes the janitor requires a card from the curator before you are permitted to enter. I have even visited one such where I was informed that the curator had gone out of town and taken the key with him. Sometimes when you have effected an entrance you find a valuable and interesting collection; more often, however, its effect is marred and even ruined by an avalanche of ancient atrocities in the way of hideous dry dissections, ghastly jars of pathological pickles, pieces of histological embroidery in mercury and Prussian blue, the handiwork of some departed worthy or sainted founder. Pity they couldn't have been buried with him like a sachem's tomahawk and wampum. This is the kind of museum out of which even the members of the faculty have great difficulty in getting a few specimens to illustrate their lectures. Nor can we lay the flattering unction to our souls that this form of perversion of the museum idea is confined to remote institutions and small colleges. The best rooms of the beautiful new museum of one of our largest medical schools are disfigured by case after case of medical mummies and anatomical wax works, while its best specimens are stored away on twilight shelves, simply because the embalmer of the mummies was an ancestor of two of the trustees of the college. And only a few years ago one of the ablest scientists and most honored members of our profession was driven to resign his directorship because he refused to prostitute the institution to this sort of ancestor worship.

There is another common error in museum administration, also arising out of a lack of definite aim, which points in the opposite direction. In place of doing too little for the visitor, it attempts to do too much, and, of course, fails successfully. Its dominant idea appears to be to display everything in the collection. The whole stock in trade is placed on the shelves at once and arranged on much the same principle as obtains in a dry-goods store. The student is simply invited to pick out what he wants to see and to make his series for himself. And the worst of this class of collections is that either the getting of such an enormous number of specimens mounted and into line has absorbed all the energy of the curator and left him none for properly ticketing and placarding, or the shelves are so crowded that there is neither room for tickets of decent size nor light to read the microscopic scrawls which do duty as labels.

The result is that the poor would-be student, unless he be an expert, is simply confused and embarrassed by the mass of material. It takes him very long to find the specimen or specimens he wants, and when found he often has to go down on his knees or up on a ladder to make out their details or decipher their labels on the crowded shelves. Comparisons of the same organ in other species or the same disease process in other organs are literally so "odious" that after one or two attempts, from sense of duty, to study the specimen itself, he falls back upon the cuts and diagrams in his text book. If the purpose of a museum is to impress the beholder with the richness of its resources, this kind is a success; but if to help the searcher after information, it is a failure.

In fine, the crying defects of our medical museums arise, not from the smallness of their collections nor the inadequacy of their rooms, but their utter lack of aim, and consequently of intelligent principle or method of arrangement.

We think few would be inclined to dispute the position that they are first and foremost teaching agencies

and should be moulded primarily to that end. Mere display of objects, however valuable in themselves, is not enough; they must be arranged upon some intelligent principle of relation to each other and to the whole series. Intelligent purpose, skilful selection should be visible everywhere. If the room is small or the light bad, only as many of the best and most useful specimens as can be comfortably seen and studied should be displayed. The remainder should be resolutely relegated to the storerooms until better days.

Then comes the most difficult question of the whole problem, what to display and what not to display. The great scientific museums of England and the Continent have grappled with this problem for years, but are all now slowly coming to the same solution of it. Of their great collections they only attempt to display the most striking, most typical specimens—just so many as may be necessary to give a clear idea of the subject, group, class, or structure. The remainder of their specimens are stored away in boxes, drawers, and closets, where they can be seen and studied by those specially interested, upon students' permits. Thus all parties are benefited; the public and general student by the clearness and intelligibility of the display-cases, the special student by the opportunity of handling and studying in detail the particular series in which he is interested, and the collection by having its bulk spared the wear and tear and exposure of the show-cases.

We believe that a reasonable application of the same principle would greatly improve our medical collections. Let only such specimens be displayed as are clear, typical, or of special interest or rarity, and a very moderate-sized room, or even series of closets, with shelves and electric light, and a broad table near the window, would both store the residue of a large collection and make it readily available for the use of the special or graduate student.

Now as to the principle upon which the exhibition cases shall be arranged, it is impossible to lay down any hard and fast rule. Any rational plan of display is better than none, and each curator ought to be guided by the needs and interests of his students, the possibilities of his collection, and his own tastes and capabilities. But every case ought to tell a story, to explain the variations of an organ, to illustrate a process, whether normal or morbid, to display a related series of objects.

For instance, in the normal division, the "dry bones" should be made to "live" by illustrating changes and processes. From the skulls should be picked out a series showing the changes due to the progress of life from infancy to old age. A similar series should be formed of pelves, of jaws, and, where space will permit, of entire skeletons. Each specimen should not only be most distinctly labelled, but also its relations to the rest of the series and characteristic differences pointed out either upon the background or upon an explanatory placard placed in some easily readable position in the case. It should never be necessary to refer to the catalogue for anything but the history of any specimen. A well-explained case showing the sexual differences in bones would also be of great value. But it is with the aid of comparative material that the most "speaking" series can be constructed. A well-arranged case of typical dentitions —which need not necessarily contain more than eight or ten easily obtainable skulls—clearly labelled and placarded, will give a better understanding of the meaning and structure of teeth and jaws than fifty pages of book-description and make one of the most interesting displays in the collection.

Another case might be made showing the progress of the stomach from the fish form to the ruminant, and alongside of this a series showing the closely parallel changes undergone by the human viscus from the early fœtal "spindle" to the "paunch" of gastromegaly. Of course the food-changes which condition these variations should be pointed out upon the placard. A group of specimens showing the variations of the cæcum in response to the same demands, and the downward progress of the human cæco-appendix from fœtal to adult life, with its parallel in the comparative series, would be of great value. And scores of similar exhibitions will suggest themselves. The large amount of often very valuable comparative material in our medical museums is almost valueless and utterly uninteresting to the medical student on account of its lack of proper explanation and of arrangement upon any intelligible principle, except the dead-alive one of systematic classification.

But it is upon the larger, more important, pathological side of the museum that the greatest improvement is necessary and possible. The method of arrangement according solely to the organ affected, most in vogue at present, has the great advantage of convenience to the curator or arranger. But is this enough? It is as if we were to catalogue the books in a library solely according to their subject matter, and be left to our knowledge of history or subject to find a particular author. A pathological museum is resorted to at least twice as often for the study of disease process as of separate organs, and we submit that this fact ought to find recognition in the methods of arrangement. At least half, if not two-thirds, of our pathological material ought to be arranged in cases or groups according to the morbid processes which it represents, and if this were done the pathological side of our museum would be more than doubled in both interest and value. For instance, a case as interesting as a battle painting could be made of the Pandora-like lesions of tuberculosis, in lung, in bone, in liver, in lymph node, in meninges. Another could show the variations of this terrible autograph upon the tissues of different species of animals, birds, and fishes, among which we are beginning to find such striking and suggestive differences. Equally fascinating bas-reliefs could be made of the lesions of rheumatism, of typhoid, of diphtheria, of syphilis, and their sequelæ. Next might come the great morbid processes, striking typical examples of the great dramas of degeneration as played in the different organs and tissues, fatty, calcareous, fibroid; of the great processes which can minister alike unto life and unto death, hypertrophy, atrophy, degeneration, inflammation. And as so many of these are morbid only when misplaced, as dirt is simply matter out of place, a parallel series should be placed alongside of each, showing instances of their normal and vital possibilities and value.

In every case or series specimens showing the normal condition of at least the principal diseased organs or regions shown should also be placed for purposes of comparison. We see so much more of the abnormal than of the normal viscera that we are almost in danger of forgetting what the latter really look like. This would be the "author" side of our illustrated library catalogue. Then upon the "subject" side a carefully arranged and copiously explained series should be made of at least the commoner diseases of each organ—of the heart, the lung, the kidney, each with a normal organ in the centre and the points of difference clearly shown. Then would follow a series of the deformities, arrests, and malformations of the foot, the hand, the chest, each fully illustrated by specimens of the fœtal or animal type which they resemble. A series of hare lips and cleft palates, with drawings of the stage of fœtal development at which each of them is an arrest, or better still, if possible, of fœtal faces under low magnifying powers, would be of great value to the puzzled student.

Just a word in conclusion as to the practical art of mounting and displaying the specimens. First and most vital of all is light, and the only thing that can be said about it is, get all the light you possibly can, clearing the windows and cases of every sort of encumbrance, at the point of the bayonet if necessary, and then resolutely refuse to permit yourself to display more than you have good light for. Next comes labelling, upon which almost enough has already been said. Don't be afraid of making labels too large and legible. A good museum ought to be its own catalogue, which he who runs may read. For several reasons the best opinion appears to be opposed to pasting or fastening labels upon the object itself or even upon its pedestal. A number may be pasted upon it in some inconspicuous place to insure its identification and for reference to the catalogue. The number, however, should be only where it can be found by looking for it; the name where it can't help being seen. The best method of labelling is by means of cards held in small wire or tin clips which stand firmly upon any level surface. The "jaws" of the clip are flexible and should be bent so that cards near the bottom of the case slope backward, are perpendicular at the level of the eyes, and overhang slightly above that height. In short, they should be so printed and arranged that an observer standing in front of the case and six feet away from it should be able to read every name in it without moving his head.

Upon the important subject of backgrounds there is, unfortunately, but little unanimity among the great museums. Space forbids any adequate discussion, and I must content myself with saying that, in my opinion, the lustreless, yellowish stone color or dull buff which has been adopted in the Royal Museum of Natural Sciences of Berlin, after years of careful and ingenious experiment by its able and enthusiastic director, is preferable to any other color or shade. It reflects a maximum of light with a minimum of the irritating actinic rays, is singularly unobtrusive, and brings out not merely the profile outline, but the details and color values of the specimens in a most remarkable manner. So unobtrusive is it that in a case whose framework, background, pedestals, and shelves are painted this color the specimens seem to stand out in the air by themselves without either pedestal or case. But it must be seen to be appreciated, and an examination of its effect in some of the newer cases in the Wistar Institute in Philadelphia will, I think, convince the most skeptical of its value.

Lastly, two small details that will add greatly to both the value and appearance of a collection are the use of some color-fixing preservative fluid and of square or rectangular jars. Of the fluids, Kaiserling's seems the one in most general use at present, and although it occasionally fails, yet its failures are no worse than the successes of alcohol, and a really good result is not only a joy to the pathologist, but a positive godsend to the student. I believe that it has a wide field before it of application to normal preparations as a substitute for injections and colored casts. The square jar not only obviates the refractive distortion of the specimen inevitable in the old-fashioned round shape, but it also gets rid of the disagreeable cross reflections and side-lights from the curved surfaces. It is also decidedly advisable to display most specimens in jars upon unglazed shelves, so as to get rid of the confusing cross-reflections between the glass of the case and that of the jar. As for the catalogue, the present Chinese "book of numbers" is about the poorest and deadest form possible, and should be tolerated only as a harmless accessory. The real catalogue should be a card one on the Dewey system, with the specimens listed according to both organ and disease.

In the new medical education the museum must take the place of the lecturer in the old. I am well aware that the carrying out of even the above fragmentary suggestions would involve much hard work and be attended with many practical difficulties, but I think the importance of the task and value of the result would fully justify them.

OBSERVATIONS ON THE PROPHYLAXIS OF OPHTHALMIA NEONATORUM.

By P. C. JAMESON, M.D.,

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THERE is perhaps no subject in ophthalmology of more interest and importance than that of purulent conjunctivitis or ophthalmia neonatorum. The rapidity and unexpectedness of its visit, the deadly quality and virulence of the infective poison, the too often disastrous destruction of an organ poorly constituted to resist such an attack, and the subsequent helplessness of the individual deprived of an organ which above all others is a necessity for human usefulness and happiness, stamp purulent conjunctivitis as being of primary importance in the list of acute eye diseases. A very significant fact is learned from the percentages of blindness present in the various asylums in which purulent conjunctivitis was the productive factor. Haussmann found that in 1882 eight per cent. in Copenhagen, twenty per cent. in Berlin, thirty per cent. in Vienna, and in Germany and Austria thirty-three per cent. of blindness were due to this cause, while in 1871 Dr. Hanlan, in Philadelphia, ascertained that twenty per cent. were attributable to this source. Later, in 1893, Prince found that in the Illinois State Institution for the Education of the Blind twenty-four per cent. were caused by ophthalmia neonatorum. Howe gives 19.5 per cent. as the number of persons in the New York State asylum who had lost their vision from this cause.

Credé, on the other hand, noticed that after the introduction of prophylaxis according to his own method, viz., the instillation of one drop of a five-grain solution of nitrate of silver between the lids, the frequency of this disease was reduced in the lying-in hospital of Halle from twelve to three per cent., while in the lying-in hospital of Leipsic the cases fell from from 7.5 per cent. to 0.5 per cent. The subsequent experience of other observers gives almost the same results. Now, at this time there is a growing sentiment that the use of Credé's method and of other methods of prophylaxis is not necessary, at least in private practice, and in the writer's mind this is responsible for a great many cases of purulent conjunctivitis which, if they do not always terminate in absolute blindness, frequently result in a partial destruction of the cornea, and may leave unsightly opacities or irregularities of its refractive surface, which are the productive factor of markedly deteriorated vision. These injuries and incapacities (which are perhaps ten times the number of cases of entire loss of vision from this source) are frequently overlooked in estimating the ravages of this disease, and they form a very important feature, for, if total loss of vision is deplorable, they are none the less serious as producing partial deprivation of vision. Let us then glance at the injuries to the cornea from this disease and some of the resulting deformities, as the cornea is the structure which occasions us most anxiety.

Purulent conjunctivitis may result in:

(1) Total destruction of the cornea with complication necessitating enucleation.

(2) Total destruction of the cornea, rendering the individual blind from dense opacity.

(3) Partial destruction of the cornea, leaving localized opacities but not depriving the individual altogether of vision.

(4) Partial destruction of the cornea in which no opacity of the organ is visible except with close inspection and artificial illumination, which reveals an irregular refractive surface which deprives the patient of normal vision.

Now all these may be regarded as serious results, and the latter are mentioned because the tendency is to feel that as the percentage of these cases (if treated) which result in total destruction is small, prophylaxis is unnecessary. That may be true, but the proportion of cases which result in the three latter conditions is quite large, if the number of corneal opacities and irregularities from this source noticed in ophthalmological work may be taken as an index. It will be conceded then that any change in structure or contour of the cornea, short of total destruction, which would interfere with the normal vision of the patient should be regarded as a matter of serious import, and if Credé's method is capable of preventing those conditions it is worthy of conscientious observance. I now purpose to discuss some of the objections cited in contradiction of the routine use of prophylaxis for this disease.

I. There being no external evidence of specific discharge from the birth canal before or after labor, why subject the patient to this possibly unnecessary medication? In this connection the first prominent fact we meet is the statement by the genito-urinary surgeon that gonorrhœal infection can exist and is sometimes present without any coexisting discharge or external evidence. That gonococci can remain dormant in some small crypt without external symptoms seems to be an undoubted fact, and as illustrative of the danger of relying upon external evidence as a means of deciding as to whether prophylaxis should be used in a given case, one has but to point to those in which conditions such as would satisfy the most conscientious as to absolute immunity from infection being present were sometimes productive of virulent types of gonorrhœal ophthalmia. These exceptional cases in which there are no external symptoms, it is true, do not occur every day in practice, but when they appear it is usually at most unexpected periods, and they are the source of much worry and anxiety to the doctor and possible disaster to the patient. In private practice questions bearing on this condition are likely to be resented. Statements obtained are not always correct. Efforts to obtain a culture before or after birth are often impracticable, and we have already seen that external symptoms are not to be relied upon, so that it would seem there is no absolute safeguard against ophthalmia neonatorum other than systematic prophylaxis, and to rely upon external appearances and clinical history for immunity from gonorrhœal infection allows a possibility of a subsequent attack of ophthalmia neonatorum.

II. There being no evidence of infection in infants' eyes at birth, is it a necessity that we put the patient under prophylactic medication before such symptoms arise?

When we call to memory that the period of incubation of the gonococcus in gonorrhœal conjunctivitis is forty-eight hours, but frequently longer—sometimes three to five days—and that during this period the eye may present no more symptoms of irritation than is natural to the new-born, but quite rapidly assume all the alarming symptoms of this disease; that at one visit of the attendant the eye may be positively unsuspicious and at the next visit may have assumed a condition which renders it irrecognizable, presenting a picture of œdematous inflammation which may threaten alone to strangle the sources of nutrition to the cornea and render it an easy prey to the ravages of the virulent gonococci—it can then be seen how futile it is to procrastinate until evidences of infection spring up before adopting prophylaxis, since in most cases of delay the disease will be too well rooted to be successfully contended with.

III. The objection to nitrate of silver itself as a remedial agent. The objection which one hears most frequently is the possibility of the introduction of a ten-grain solution into the eye being productive of minute opacities of the cornea.

This, however, cannot be sustained by clinical experience, if the statement by some physicians of large experience who have been using it in our clinics and in private practice for the last twenty-five years is to be taken as an index. By them it has been used and is still being used in varied solution, and, as far as the writer can learn, in cases in which there was no tendency of the disease itself to produce ulceration and consequent opacity none has been noticed. As illustrative of the inability of a five-grain solution, constantly used, to bring about that condition of the cornea, through the kindness of Dr. Hooper I was enabled to see at the Brooklyn Throat Hospital a case of trachoma for which a prescription of five grains of nitrate of silver to the ounce had been given. The patient had been instructed to have the prescription refilled, which she conscientiously had done and used it for some thirteen years, with the result that, while the conjunctiva was stained a deep brown or gray, the cornea was absolutely clear from any defect.

It is reasonable to suppose that in some portion of this long period a cumulative action equal to or exceeding that obtained by a ten-grain solution frequently occurred. It may be said that the adult eye is more capable of resisting a solution of nitrate of silver than that of the new-born, but it will be conceded that an adult eye afflicted with granular conjunctivitis or other conditions which tend to irritate the cornea and soak it in abnormal secretion is not in the best possible condition to resist a deleterious irritant, and yet, as in the above case, no injury could be detected. One cannot but feel that corneal opacities occurring after the use of nitrate of silver in ten-grain solution are sometimes attributed to its use when it is in no way responsible for them.

Perhaps the clearest proof that nitrate of silver as used in Credé's method is not productive of corneal opacity or minute ulcer is the contrast between two clinical pictures. Glance first at that of an ulcerative process of the cornea in its incipiency, for this must be the antecedent to opacity or irregularity, and we have an eye which is the seat of the greatest local disturbance—pain, inflammation, photophobia, lacrymation for an indefinite period. This will occur even if the minutest foreign body lodges on the cornea; but, on the other hand, after the instillation of one or two drops of a ten-grain solution of nitrate of silver it is a simple picture of slight irritation which passes away within from four to ten hours, and it is hardly reasonable to suppose that an ulcerative process could take place within so short a period and with such mild symptomatology. Moreover, investigations past and recent seem to point to nitrate of silver as being the ideal agent in the prophylaxis of these cases. Glancing at its therapeutic capabilities, we see such as are of great value in this disease and not common to any other agent. As a causative feature in this disease we have a virulent type of bacteria. Nitrate of silver is capable of destroying them in a solution as weak as one-half grain to the ounce. There is also present in this disease an albuminous exudate which forms the best possible nidus for the propagation and perpetuation of the germ, but nitrate of silver possesses the physical property of combining with the exudate; it coagulates the albumin, destroys the gonococcus, and renders the nidus of infection sterile.

The conjunctival sac and adjoining tissues are themselves permeated by infection in gonorrhœal ophthalmia. Nitrate of silver again, by means of its affinity for albumin, has permeative properties of its own; it penetrates superficially the infected areas, and not only sterilizes the contents of the conjunctival sac, but so far as possible neutralizes the poison in the tissues of the sac itself. Again, danger to the surrounding structures may be brought about by the application of remedial agents whose tendency is to produce inflammation and subsequent cicatrization. Nitrate of silver, however, obviates this danger in its own use by forming an albuminous protection on the surface of tissue, rendering the penetration superficial. Other agents may be slightly inflammatory in their nature. Nitrate of silver, on the other hand, is markedly astringent and antiphlogistic. This combination of therapeutic capabilities is not possessed by any other agent, and, while it does not interdict prophylaxis by any other means, it points to nitrate of silver as being the most valuable agent.

IV. The statement so frequently heard, that Credé's method, while essential in hospital work, is unnecessary in private practice.

How frequently this statement is made, expressing one's belief in the use of prophylaxis in hospital work, while stigmatizing it as unessential in private practice! It would be quite consistent to adopt a rule of this kind if the diseases which existed in hospitals were not to be found in private practice. It would be quite as consistent to say antiseptic or aseptic measures are necessary in hospital surgery, but are out of the question in private practice. Gonorrhœa, as we all know, is prevalent among both classes of people, and as gonorrhœal ophthalmia is not infrequently met with in the least suspected cases it would seem, if there were any urgency in advocating prophylaxis, it should be even greater in private practice, in which our responsibility is larger and the welfare of the patient possibly of more value to the community. True, in private practice it may be our good fortune to go many years without seeing or treating a case of ophthalmia neonatorum. It may be one's gratification to treat successfully the few that come across one's path, but if it is a question of what is our duty to the best interests of the patient, the community, and, as far as that is concerned, to ourselves if the foregoing argument and reasoning are correct, it would all seem to point toward prophylaxis.

V. Does prophylaxis seem a necessity when we view the fact that few cases occur in individual practice and that these few are generally successfully treated? The negative to this question is not infrequently advanced as an argument in disfavor of prophylaxis in individual practice, and yet it is forcibly contradicted by glancing at the field in the past as a whole. If the percentage of cases occurring in individual practice is small, it amounts to goodly figures in the aggregate. According to the census of 1890 there are fifty thousand blind persons in the United States, and about one-third of these lost their sight from ophthalmia neonatorum. About sixteen thousand people or over, then, are living in the United States to-day who are blind from ophthalmia neonatorum, and if it was possible to ascertain the number of people who have one eye totally incapacitated or both eyes partially so, it would no doubt be increased to one hundred thousand, the above sixteen thousand cases being taken as a basis of calculation since they are but a small proportion of the total number of cases of ophthalmia neonatorum occurring in past years, and do not include the largely predominant number of minor injuries already mentioned resulting in defective vision. With, then, approximately sixteen thousand persons absolutely blind from ophthalmia neonatorum and many times this number also with more or less deteriorated vision from this source, efforts at prevention cannot be out of order even if the physician's individual experience is comparatively small. Careful prophylaxis will do much to relieve the responsibility and anxiety in any event, and also the self-condemnation and the reproach of the patient which would naturally follow should the unexpected result happen of having an eye irrevocably ruined, while feeling and knowing that it might have been avoided had the necessary precautions been taken.

In concluding this discussion as to the necessity of prophylaxis, it is my own conscientious belief, after a good deal of observation on this interesting subject, that Credé's and supplementary methods are an absolute duty we owe both to the patient and ourselves, and I have endeavored to recount in the five headings already discussed some of the means by which I arrived at this conclusion, the essence of which may now be summed up:

I. The absence of external evidence of specific discharge from the birth canal cannot be relied upon as an indication that specific infection does not exist, as infection may be present without external evidence.

II. Reliance upon the condition of the infant's eyes as indicative of a coming attack of gonorrhœal conjunctivitis, and consequent postponement of treatment until symptoms appear, are apt to be deceptive, as during the period of incubation the gonococcus may to a certain extent lie dormant, clinical symptoms may be masked, and precipitation of the disease itself may be abrupt.

III. The objections to nitrate of silver as a prophylactic and remedial agent do not seem to be clinically sustained; on the contrary, it possesses ideal properties for counteracting this disease.

IV. The discrimination between private and hospital patients in the practice of prophylaxis in this manner is thoroughly inconsistent, as the disease is common to both classes.

V. The comparatively small number of cases seen in individual practice, and the subsequent successful treatment of them, cannot be regarded as a contraindication to the general adoption of careful prophylaxis, as the aggregate number of cases of total and partial blindness resulting from this disease is large.

And, finally, what is the best procedure in the practice of prophylaxis of ophthalmia neonatorum? In the writer's opinion it can be divided into three stages—before birth, at the time of birth, after birth. Before birth means should, of course, be employed to render the sterilization of the birth canal as complete as possible.

At the time of birth the careful cleansing of the infant's eyes with a solution of twenty grains of boracic acid to the ounce should be practised; care having been taken to render sterile the surrounding portions of the orbit and also to make use of Credé's method, viz., the instillation of one drop of a solution of nitrate of silver, ten grains to the ounce, between the lids and upon the cornea. After birth, use some mild cleansing wash, preferably boracic acid, in solution of twenty grains to the ounce, three or four times daily; this to be practised from five to six days after birth.

Surgical Sins.—(1) Operating in hopeless cases. (2) Delaying opinion as to the gravity of a disease. (3) Failure to operate in depressed fracture of the skull. (4) Pretending to be clean. (5) Undercharging in order to secure an operation. (6) Stealing patients. (7) Representing capital operations as trifling. (8) Keeping patients too long under chloroform *ariston metron*. Unwise speed is bad; chronic surgery is worse.—EMORY LANPHEAR.

Clinical Department.

A CASE OF NARCOLEPSY.[1]

By CHARLES E. NAMMACK, M.D.,

NEW YORK.

Mrs. C——, twenty-eight years old, born in the United States, came East from Colorado, where she had lived for nineteen years, and applied at the New York Hospital for treatment as an out-patient. When fourteen years old, while watching some cowboys play cards in her father's hotel, she suddenly became oblivious of her surroundings, but continued to sit on a high table. When she failed to answer questions, though her eyes were wide open, it was discovered that she was apparently asleep. After that she was liable to fall asleep at any time during the day, sometimes for a few minutes, often for an hour or two. Her mother remembered that the patient's maternal grandmother had been similarly affected. This grandmother died at the age of sixty, from "liver trouble." During the nights the patient would sleep soundly, without nightmare or night terrors, and has never developed somnambulism. She would fall asleep during the day while waiting on table, but would finish serving, collect the dishes, wash and restore them to the pantry, without breakage or error, although a state of abnormal cerebration would be shown by her apparent unconsciousness of everything but the complicated automatic actions she was performing. While doing embroidery of intricate pattern, she would go to sleep, but continue her work without mistake. She would never originate new work during her sleeping spells. In church she invariably went to sleep. On railways she would often be carried beyond her destination unless she kept herself awake by vigorous pinching. She would ride a horse two or three miles while asleep, without recognizing or responding to the salutes of neighbors or friends. Unlike a somnambulist, she is easily aroused and shows no dangerous emotional confusion or sudden violent tendencies on awakening. Unlike an epileptic, she has no headache or fatigue after a spell, but feels refreshed even by a sleep of five minutes. At the beginning of her ailment her mother put her to bed "to get sleep enough." She slept three weeks, except when aroused to take nourishment, but took only three glasses of milk during that entire period. Her menstruation began at sixteen, two years after the development of her morbid somnolence, and has always been regular, painless, and free. She married at twenty-five, gave birth to a healthy child eleven months later, and has not been pregnant since. She enjoys perfect health and has no complaint to make except of this embarrassing morbid drowsiness.

The patient is a cheerful, well-developed woman and not obese. There are no objective evidences of gout or dyspepsia. The urine does not show the characteristic changes of lithæmia, chronic nephritis, or glycosuria. Search for the stigmata of hysteria is negative. Symptoms and physical signs of disease in the heart, lungs, liver, or stomach are wanting. There is no evidence of organic disease of the brain or its blood-vessels. Dr. William Oliver Moore kindly examined the eyes for me, without finding any marked errors of refraction or any changes in the discs.

The diagnosis is therefore made of idiopathic narcolepsy, probably inherited, although the case differs from some cases of narcolepsy reported, in the feature that the patient is able to perform a series of complicated movements, requiring the use of all the senses. This makes it resemble somnambulism, which is itself analogous to the hypnotic state of double consciousness.[1] The case also requires differentiation from minor epilepsy, for although sudden and short attacks of intense sleep without convulsive movements occur in petit mal, such attacks should not be termed narcolepsy, which is a totally different condition, although highly suggestive of epilepsy.[2] George W. Jacoby[3] makes the following distinctions between narcolepsy and sleep epilepsy: In narcolepsy there is always consciousness of what is going on during the attacks, the patient is never obtuse when awakened, and he at once has full possession of all his intellectual faculties; sensibility and motility are normal, and the attack can be cut short by any severe stimulus. Hysteria is differentiated by the same writer by the presence of stigmata, especially hemianæsthesia or retraction of the visual field; and in addition the attacks in hysteria occur in consequence of psychic influence, and are prolonged, lasting several hours or more.

P. Blocq[4] distinguishes narcolepsy from hypnotic sleep by the absence of neuro-muscular hyperexcitability, absence of catalepsy and of attudinizing, and absence of that complete isolation of the person which places him in relation with the operator only.

Our case, then, would seem to belong neither to the epileptoid nor to the hysteroid, but to a third class in which no etiology can be discovered other than a special morbid necessity for sleep due to an inherited neuropathic constitution. The patient has never had the attacks of dizziness which suggest epilepsy, as in Gelineau's case.[5] Neither has she ever had headache before or after her attacks, nor vertigo alternating with somnolence, as in the cases reported by R. H. Porter.[6] In other words, the case is one of fatigue neurosis, thus bringing it into line with that theory of the physiology of normal sleep which assumes that the true cause of normal sleep is doubtless some nutritive changes in the cells of the cortex, probably the direct effect of fatigue. This theory is borne out by the researches of Hodge on the nerve cells of birds after great muscular effort.[7] It has more in its favor than has the theory of changes in size and shape of the neurons, which is adopted by Sanger Brown as furnishing the best explanation of the phenomena of sleep.[8] In fact, it has been stated that more recent investigations apparently indicate that the present neuron conception of the nervous system is not an established truth.[9]

Feré[9] reminds us, however, that it is only by a process of induction that we may arrive at the flattering conclusion that we know something about the pathology of paroxysmal sleep, and that therefore we have no bases for a rational method of treatment.

In a case of Gowers', no drugs did so much good as a combination of caffeine and nitroglycerin, which almost entirely arrested the attacks. Nearly all authors speak of the value of change of climate and surroundings, and our patient will certainly have the benefit of change, as she comes to the Atlantic coast from Leadville, Col., "the city of the clouds," with an elevation of nine thousand feet above sea level.

Loshtshiloff[10] records the opinion that narcolepsy is a special genuine neurosis which may happen by it-

[1] Patient presented before New York Academy of Medicine, Section on Neurology and Psychiatry, October 28, 1898.

[1] Wharton Sinkler, in Loomis-Thompson's "System of Practical Medicine," vol. iv., p. 726.

[2] Sanger Brown: "Twentieth Century Practice," vol. x., p. 841.

[3] New York Medical Journal, May 20, 1893, p. 544.

[4] "Brain," 1891, vol. xiv., p. 119.

[5] Gazette des Hôpitaux, 1880, pp. 626–635.

[6] Medical Record, 1880, vol. xviii., p. 610.

[7] Wharton Sinkler, in Loomis-Thompson's "System of Practical Medicine," vol. iv., p. 717.

[8] Stewart Paton: New York Medical Journal, September 3, 1898, p. 329.

[9] Medical Week, Paris, 1893, vol. i., p. 535.

[10] Vratch, 1895, vol. xvi., p. 637.

self, but three of his four cases decidedly resemble sleep epilepsy.

Lamarcq[1] doubts that narcolepsy is a definite genuine affection, but regards it as an attenuated form of coma, and therefore always significant of some one of the diseases which have coma as a terminal stage. He further states that there is not one indisputable observation of narcolepsy on record, and against this *ex-cathedra* utterance we can only modestly offer the present case.

Major C. Ewen, United States army,[2] records a case which would seem to be hard to dispute, and it is listed in the bibliography of Lamarcq's article.

The writer is indebted to Dr. Boleslaw Lapowski for abstracts of recent articles on this subject in languages other than English.

42 East Twenty-Ninth Street.

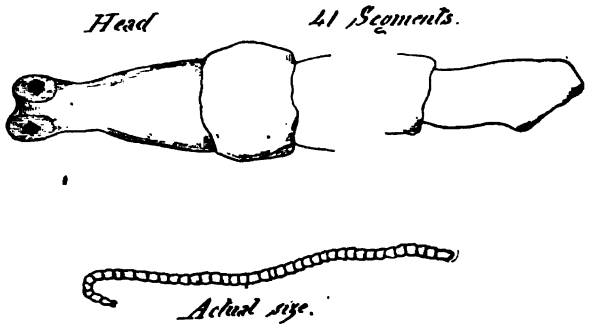
A TÆNIA IN THE MUSCLE OF A FOWL.

By HENRY B. LATHROP, M.D.,

Fresno, Cal.

The parasite, the microscopic drawing of which accompanies this note, was removed by me from the muscular tissue of a chicken. It was found embedded in the intercostal muscle near the spine, and between the second and third rib. A bulging of the pleura costalis simulated sacculation, the animal itself being free among the muscles of the back. I submitted the specimen to Mr. Twinning, an expert microscopist, and he agrees with me that the specimen is unique. I have searched many works, but can find no mention of a true tænia in the muscular tissues.

Everybody knows that cysticerci are frequently found in the flesh of animals (and perhaps fowls), but I have



failed to find any record of a fully developed worm outside of the intestinal canal.

T. nana, described by Townsend in Starr's "American Textbook" (page 550), seems to come nearest the specimen presented; but mine has only two suckers, separated by quite a deep sulcus, and has no rostellum or hooklets, whereas T. nana has four suckers with rostellum and hooklets. It will also be observed the neck of my specimen is thick and broad. Tænia necks, as described by authorities, are long and thin. The proglottides of my worm are broad and the sexual organs poorly developed. The uterine system will be seen to be imperfect also. It seems to me possible that I have discovered a new species of tænia, one of the inhabitants of the intestinal canal. I am of the opinion that the reason for the non-development of the cysticercus of the chicken in man is because, as a rule, chickens are very thoroughly cooked.

The specimen was interesting to me, and when I presented it to the Fresno County Medical Society it seemed interesting to the members. I therefore send in this short note, hoping it may prove valuable.

[1] Rev. de Méd., Paris, 1897, vol. xvii., pp. 699–741.

[2] Boston Medical and Surgical Journal, 1893, vol. cxxviii., p. 569.

A CASE OF GASEOUS GANGRENE COMPLICATING A COMPOUND FRACTURE OF THE RIGHT FOREARM.

By C. P. GILDERSLEEVE, M.D.,

Brooklyn, N. Y.

On the 28th of last September I saw in consultation with Dr. Hill and Dr. Pettit a boy, ten years of age, who had fallen forty-eight hours previously and sustained a compound fracture of the right forearm. The accident happened on the meadows back of Gravesend, Long Island. The bones protruded and came in contact with the mud. The boy was at once taken home; an anæsthetic was given, the fracture reduced, and a splint applied and the patient kept in bed. The following day the arm was in good condition; on the morning of the second day he began to complain of pain, and early in the afternoon the forearm began to swell and became rapidly emphysematous and gangrenous. I saw the patient about 6 P.M., and at that hour the forearm from the finger-tips to an inch above the elbow-joint presented an appearance such as I had never seen before. It was so swollen from gaseous distention that it seemed as though the integument would rupture, and was absolutely dead. The arm above the gangrenous line was dusky up to the shoulder-joint, and the crepitation could be distinctly felt over the scapula behind, and beneath the clavicle in front. The patient was at once anæsthetized, and several long incisions were made through the forearm and along the back of the hand, and as each incision was made the force of the escaping gases was sufficient actually to blow the dead muscular tissue out through the wounds. A weak creolin solution was then applied and the arm laid back in the same splint. The following day the patient was removed to St. Peter's Hospital. I then applied a solution of the chloride of zinc, 1 : 1,000 over the forearm, and 1 : 2,000 above it, and the condition of the arm above the line of demarcation began to improve, which I have no doubt was largely due to the escape of the gas through the incisions which had been made, thereby relieving the compression upon the blood-vessels; at the end of three days the tendency toward improvement ceased, and on the fourth day I amputated the arm at the junction of the upper and middle third. I left the wound open and it is now about closed. There has been no sloughing, but the wound has been extremely indolent, the granulation being pale and unhealthy. I believe that the gangrene in this case was due to the mechanical pressure upon the blood-vessels, caused by gas formation, which resulted from the presence of the bacillus aerogenes capsulatus. My reasons for so believing are: 1st, the appearance of the forearm would indicate that such was the case; 2d, the fact that the gangrene did not extend after the incisions were made, which relieved the pressure, by providing an avenue through which the gases escaped.

Dr. John F. Erdmann reported a case of this infection occurring in a boy, seven years of age, who had fallen from the fourth floor of a house to the ground on the 19th of September, 1896. The history of his case was as follows: The boy fell September 19th at 3 P.M., and sustained a compound fracture of the right humerus at about its middle. He was seen two hours later; every antiseptic and aseptic precaution was taken and the patient put to bed. At 8 P.M. the temperature was 100° F., pulse 130, respiration 44. September 20th the temperature was 101° F., pulse 130 to 140, respiration 30 to 42, and the patient was unconscious. September 21st, at 2 P.M., which was forty-seven hours after the injury, the temperature was 104° F., pulse 144, respiration 44. The dressings were removed and the arm and pectoral regions of the right side were found tense, of a greenish-bronze color. Incisions

were made, but as the process had extended to the chest amputation was not performed. The patient died at 3 P.M., just three days after the injury. In addition to this case sixteen others were reported by Welch, Flexner, and Dunham. Of this number twelve died and four recovered. It is generally admitted that many of the cases reported as malignant œdema, air embolism, and emphsyematous gangrene are due to the presence of this bacillus. In view of the rapid and fatal nature of this infection, its early recognition is extremely important. As regards treatment I would follow the same plan in another case that I did in this. I would make free incisions, render the parts as aseptic and antiseptic as possible, and follow the same rule regarding amputation that I would follow in any other case of gangrene.

Progress of Medical Science.

Marriages between Cousins.—In an effort to compare one hundred cases of marriage between cousins-german with one hundred average marriages where no relation existed, the author took by lot from a physician's case-book, who had practised in a town of fifteen hundred inhabitants for thirty years and knew their family histories well, the names of one hundred families, and had this physician give him the record of these one hundred marriages with regard to sterility, pulmonary, mental, and congenital diseases. These were then compared with the marriages of cousins. The latter showed a lower percentage of sterile marriages and a slightly lower percentage of mental diseases. In pulmonary and congenital diseases there was about the same percentage of difference in favor of the former. In all other particulars the difference amounted to as little as any such comparisons can. In the one hundred cases of those not related, seventeen per cent. were sterile; in the cousins-german, fourteen and a half per cent. These figures agree very nearly with Huth's investigations.—DR. JOHN INGLIS.

Sympathectomy in Epilepsy.—Dr. Laborde (*Gaz. hebd. des Sci. Méd.*, January 8, 1899) made a report to the Biological Society of his experiments in the treatment of epilepsy. He renders guinea-pigs epileptic by the hemisection of the spinal medulla; then he removes the whole chain of the greater sympathetic with its ganglia. This does not remedy experimental traumatic epilepsy. On the contrary, the epilepsy becomes more intense. The results are the same when one operates in the inverse sense; removing the sympathetic first provokes a consecutive epilepsy. Dr. Chipault has removed the superior cervical ganglion and reports some success, and in no case an aggravation of symptoms. This operation gives inverse effects from those of sympathectomy. It may open the way to the treatment of a number of mental mala dies having as a cause intermittent or chronic congestion of the brain.

Penetration of Iodide of Potassium into the Ocular Globe.—Drs. Uley and Frezals (*Gaz. hebd. des Sci. Méd.*, January 1, 1899) report experiments made in order to compare the respective quantities of iodide of potassium which penetrate into the ocular globe when the drug is deposited on the conjunctiva and when it is taken internally. The results summarized are: (1) Iodide of potassium deposited in aqueous solution on the conjunctiva penetrates to the aqueous humor. (2) We do not find it in the vitreous humor except when the iodide has passed into the general circulation (its presence may then be noted in the urine). (3) When the average clinical dose of iodine is administered by way of the mouth, the humors of the eye do not give the reaction for iodine. Only quantities inappreciable by these reagents pass. (4) The simultaneous administration of iodine by way of the stomach and as an eye-wash permit a considerable quantity of this drug to pass into the anterior chamber of the eye.

The Treatment of Burns.—Dr. Dakhyle (*Le Progrès Médical*, January 7, 1899) remarks that two methods of treatment for burns may be recommended, the antiseptic and the keratoplastic, which hastens cicatrization by topical applications. Of all keratoplastic topics, picric acid is the best. It has no toxic effects upon children and is inoffensive to adults. Its application is recommended from superficial burns to those of the third degree; it is contraindicated in deep, old, or suppurating burns, and in very young children. The technique of applying picric acid ought to be followed minutely. It consists of antiseptic cleansing of the burn in a picric-acid bath of one per cent., with a careful preservation of the epidermis. This washing is to be repeated, taking all possible care to avoid raising the epidermis. When burns are very superficial, remarkable cures have been effected by painting with ether or alcohol saturated with picric acid. In old or suppurating burns one can use picric acid and iodoform, thyol, and ichthyol. Picric acid may also be applied to burns occasioned by caustics or vitriol.

The Therapeutic Utility of Antistreptococcus Serum.—There is as yet no unanimity of opinion with regard to the therapeutic utility of antistreptococcus serum. Thus Baum (*Medicine*, January, 1899, p. 23), on the basis of his own experience and from an analysis of the literature, reaches the conclusion that in cases of pure streptococcus infection the serum undoubtedly exercises a favorable influence on the course of the disease. In cases of mixed infection the influence of the serum has been demonstrated, but further trial of the remedy as an adjunct to other treatment is desirable. Considering the grave character of complications of non-streptococcus origin, all indicated therapeutic measures should be employed in addition to the serum. It may be assumed that the serum exerts a direct bactericidal action upon the streptococci, and not merely a stimulating influence upon phagocytosis. The initial dose should be twenty cubic centimetres to be followed by ten or fifteen cubic centimetres every twenty-four hours, according to the indications. Mackie (*British Med. Journ.*, January 21, 1899, p. 142) reports four cases of generalized septic infection treated with antistreptococcus serum. In none did the injection of the serum appear to have the slightest effect, beneficial or otherwise. Two of the cases, however, presented mixed infection with streptococci and staphylococci; and two a pure staphylococcus infection.

Thyroid Medication in Rheumatic Affections and in Arterio-Sclerosis.—Drs. Lancereaux and Paulesco (*Gaz. hebd. des Sci. Méd.*, January 8, 1899) regard arthritis, and also myxœdema, as due to active trouble of the sympathetic nervous system. In accord with this reasoning they have tested thyroid medication, which produces good effects in myxœdema. They have administered thyroid extract in the form of iodothyrin of Baumann in several cases of chronic rheumatism or gout manifested by arterio-sclerosis, in vasomotor and trophic troubles of the extremities, scleroderma, etc., and the results were so remarkable that it was well worth while reporting them. They have treated with from two to four grains daily a young lady affected with generalized scleroderma of the entire cutaneous surface, a woman aged thirty-two affected with vasomotor trouble of the extremities, and a man

aged thirty years affected with chronic rheumatism, gout, and arterio-sclerosis, with considerable arterial tension, hypertrophy of the heart, and albuminuria. The results thus far have been very encouraging in these cases, and a further amelioration of their condition is hoped for under continued treatment.

Dietetic Treatment of Arterio-Sclerosis.—Dr. H. Bock (*Zeitschr. f. diätet. u. physikal. Therap.* ii.; *Deutsche medizinal Zeitung*, January 19, 1899) makes the following statements: As far as concerns the consumption of food and drink in arterio-sclerosis, we must consider not only the proper quantity, but very particularly also the quality. The latter must be such that no irritation of the vessels is produced by an accumulation of deleterious products of metabolism (leucomains, ptomains) or through the administration of nucleo-albumin in certain kinds of meat, and, furthermore, that by decomposition in the intestines the production of gas does not become excessive. These qualifications are best fulfilled by white meat, veal, chicken, lean ham, lamb, well-cooked beef, or as a substitute therefor, lime-containing substances which possess a minimum of albumin, such as lung, liver, spleen, kidney, soft cartilages of young animals, the gums of oxen. Of vegetables, the following produce the least amount of gas in the intestinal tract: spinach, cauliflower, fresh string-beans, sprouts. Leguminous substances are to be avoided. Albumin in non-voluminous form may be administered in the shape of artificial preparations. If the food is to be diminished, we use sugar, egg, and soups of medium strength, compotes. Milk, which is not to be withheld in arterio-sclerosis, may be given in the form of sweet, sour, and buttermilk. In reference to the quantity, it must be observed that not too great an amount of food is taken at any one time; therefore small and frequent portions must be administered. The arterio-sclerotic patient should never altogether satisfy his hunger. Strong coffee and tea are absolutely prohibited. Alcohol in the form of small quantities of Moselle or red wine is sometimes permissible, at other times contraindicated. As to water, fresh well-water and such mineral waters as contain a minimum amount of carbon dioxide, or such as produce an increased excretion of urates (alkaline mineral water, Vichy, Fachinger) are allowed. Eating and drinking must be distinctly separated; only in exceptional instances is it permissible to take any fluid during the meal, and the consumption of fluids must be carefully regulated in such a way that for two days all the fluids (water, beer, wine, coffee, soup, etc.) and the corresponding excretion of urine are measured. The smaller sum is subtracted from the larger, and the remainder represents how much more fluid the organism retains or excretes in excess of that which was administered. In advanced arterio-sclerosis the evening meal must be very much diminished and taken rather early; no more than a plate of soup with one or two eggs or a small piece of meat with a roll is advisable. In obesity, fats and carbohydrates must be diminished as much as possible. In addition to the foregoing, exercise plays an important part in the treatment of arterio-sclerosis; foremost are the walking and climbing methods as well as passive gymnastics (Zander's apparatus). In walking, the patient must not hold his breath, but must inspire and expire regularly. Movements must never be carried out when the stomach is filled. After his meal the patient is to rest for from half an hour to an hour; smoking and sleeping are not allowed. For summer resorts, the mountains are advised in early cases, the seaside in advanced instances; Italy in the spring, North or East Sea in the summer, Abruzzo in the fall, and Egypt in the winter are advocated. The baths of Wildbad, Baden-Baden, Teplitz, and in severe cases the carbon dioxide baths of Nauheim and Marienbad work very favorably. Bicycle riding is permissible only in the very earliest stages, if at all. All mental and physical exertion, as well as excitement (especially sexual) are to be avoided.

Treatment of Eclampsia.—During the attack itself, administer chloroform. As soon as the attack passes off give hypodermically fifteen drops of the fluid extract of veratrum viride, and a drachm of chloral in solution by enema. Place upon the tongue two drops of croton oil diluted with a little sweet oil. Induce diaphoresis by hot packs and extra bedclothing. Inject by gravity under the breast a pint or more of decinormal salt solution, or several quarts of the solution by enema. If convulsions recur, repeat the veratrum in five-drop doses if the pulse is quick and strong. If the face is congested and the pulse full, employ venesection enough to reduce the pulse. The chloral may be repeated during the attack two or three times. Use stimulants if the pulse is weak and rapid. If the convulsions cease and the patient is in a stupor but can be aroused enough to swallow, give dessert-spoonfuls of concentrated solution of Epsom salts every fifteen or thirty minutes until free catharsis takes place. These condensed directions should be carried in the pocket-case of every obstetrician.—Dr. Barton C. Hirst.

Neuritis Gravidarum and Neuritis Puerperalis.—Dr. Carl Marhold (*Deutsche Medizinal-Zeitung*, January 19, 1899) makes the following remarks: "Under the above title are understood those forms of neuritis which attack an otherwise healthy woman at the end of a normal or pathological pregnancy or a normal or complicated puerperium. Neuritis gravidarum is a rare disease. If it occurs during a normal pregnancy it can be explained only on the ground that during this time toxins are produced which give rise to degenerative changes in the nervous system. This theory is corroborated by the relatively frequent occurrence of albuminuria in perfectly healthy pregnant women; the relatively frequent combination of neuritis and hyperemesis also tends to substantiate this explanation. The neuritis of the lower extremities, namely, sciatica, is probably caused by compression of the pelvic nerves. In normal pelves this explanation, however, is hardly tenable. Clinically, the neuritis of pregnancy is characterized by the fact that no particular nerve course is preferred, and that the purely motor form seems to be the rule. The disease begins for the most part during the early months of pregnancy, and disappears with the birth of the child or immediately thereafter. The mildest form of neuritis gravidarum is the paræsthesia which attacks most frequently the fingers, hands, and toes. Neuritis puerperalis may be a continuation of a neuritis which began during pregnancy, or it may arise from puerperal infection; furthermore, the confinement itself may be the etiological factor. Among the latter, pressure of the child's head upon the sciatica, application of the forceps, version, extraction, etc., enter into question. The most frequent paralysis due to forceps delivery is that of the peroneal nerve. All these traumatic neuritides are limited to the lower extremities. Finally other forms of neuritis—partly local, partly general—for which no satisfactory explanation can be given, occur during the puerperium; they give mostly a bad prognosis. Therapy is practically the same as in other forms of neuritis. The electrical current must be used with caution during pregnancy. Only the application of the faradic current to the finger tips is permissible. In some instances the induction of premature labor may result. In neuritis puerperalis electrical treatment is advisable."

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MOVABLE KIDNEY.

OPINION has greatly changed within the past few years with regard to the prevalence of movable kidney. At one time it was thought to be a rare affection, and we must thank the Germans for having laid bare the true facts of the case. Some German statistics, collected after examination of a large number of persons in several hospitals, show that a certain degree of mobility of the kidney is present in about one in two hundred and fifty patients. According to Leonard Bidwell, F.R.C.S. Eng., the condition is extremely rare in males, and the right kidney is affected much more frequently than the left. The same authority also remarks that in the case of floating kidney, with which neither a belt nor a truss can be worn, and in practically all cases of dislocated kidney, the question of operative interference must be considered. As to nephrectomy, the operation is in the large majority of instances unnecessary and should not be undertaken except in a case of floating kidney with a distinct meso-nephron, in which the whole of the kidney substance has been destroyed by long-continued hydronephrosis. In all other cases the operation of nephrorrhaphy should be performed. Dr. Charles Noble, of Philadelphia, read before the Pennsylvania State Medical Society, in May, 1895, an excellent paper in which he gave the results of his experience with respect to movable kidney. His conclusions are identical in the main with those of Bidwell, but he also laid especial stress on the need of physical exploration in order to arrive at an accurate diagnosis, and pointed out as well that the examination should as a rule be conducted with the patient in a standing position. In the *American Journal of Obstetrics and Diseases of Women and Children*, of about a year and a half ago, Dr. Noble published another paper on the same subject, strongly confirming his previously expressed views as to the necessity of examination of patients in a standing position. He says: "I would like to draw attention anew to the importance of examining patients in the standing position, not only for the diagnosis of movable kidney, but for the estimation of the degree both of its displacement and of its movability. For some years, in the more or less systematic examination of office patients, I looked in vain for a case of movable kidney. My interest in the subject was stimulated anew partly by Dr. Edebohls' original paper on the subject, and more especially by a private interview with him in 1893, after which I began systematically to look for movable kidneys in all cases having the rational symptoms of this disorder. These examinations were all made with the patient lying on the back upon the office examining-table, and were entirely fruitless. Finally it occurred to me that the examination of the patient in an erect posture would give better results, and experience has shown this to be the solution of the problem of diagnosis." Details as to the exact method to be employed in examination are then given, and the remainder of the paper deals with the various modes of treatment now in vogue.

Dr. Max Einhorn, in the MEDICAL RECORD of August 13th of last year, contributed an article on movable kidney, in which the condition is sketched fully and concisely. As to diagnosis, Dr. Einhorn remarks that its recognition is quite easy, and recommends bimanual palpation in the recumbent position as practised and described by Dr. Hare. After referring to the operative treatment and after citing the opinions of several authorities advocating this method, Dr. Einhorn declares himself decidedly in favor of medical treatment, and gives the following reasons for his views:

"(1) The results of internal dietetic-mechanical treatment are very favorable if the gastric and intestinal symptoms are treated according to modern methods, if attention is paid to promoting nutrition, and, if necessary, the wearing of an appropriate abdominal bandage is recommended.

"(2) As is generally known, very many cases of movable kidney are unaccompanied by symptoms. We find a large percentage of digestive disturbances in patients affected with floating kidney, because these ailments afford us the opportunity of examining the patient. If we were to examine all healthy persons, it would soon come to pass that digestive disturbance in subjects of floating kidney perhaps do not occur much more frequently than in those whose kidneys are in a normal position. These digestive disturbances in the vast majority of cases, therefore, do not depend upon the movable kidney, but upon general causes; hence an operation upon the kidney would not in the least remove the trouble. Moreover, movable kidney is only one of the manifestations of a general enteroptosis, and suture of the kidney would not remove the ptosis of the other organs.

"(3) The results of nephrorrhaphy are in no respect better than those of rational medical treatment. According to the statistics of Sulzer, the results were unsatisfactory in about one-third of the cases subjected to operative measures; aside from this, there are the risks of the operation, which still has a mortality of two per cent."

That surgeons are in many cases of floating kidney too ready to resort to operative measures is undoubtedly correct, but, on the other hand, that surgical interference is on occasions indicated is equally true. With regard to diagnosis, we are of the opinion that Dr. Charles Noble's method of examining patients in the standing position is, for those surgeons who have not become skilled in searching for movable kidney, the most reliable mode of arriving at an accurate diag-

nosis. When, however, the medical man has gained sufficient knowledge from long experience, he will in all probability be able to diagnose floating kidney as well with the patient in a lying as in a standing posture.

BRAIN WEIGHTS AND INTELLECTUAL CAPACITY.

Dr. Joseph Simms writes in the December *Popular Science Monthly* on the above subject, and points out that many investigators have observed that men with the largest brains are not necessarily those possessing most brain power, talent, or intellect. Many persons with brains of unusual size have never risen beyond mediocrity, while on the other hand some of those men who have risen to great eminence by reason of their powerful intellectual development have had brains smaller than the average. Esquirol asserted that no size or form of head or brain is incident to idiocy or to superior talent, and with this statement of opinion the author agrees. Dr. Simms some years ago announced that he had made the discovery that the natives of cold climes had larger brains than those dwelling in tropical regions, and supports this contention with numerous statistics. In one table are arranged the names of sixty renowned men drawn from different parts of the earth whose brains varied in weight from seventy-one to forty ounces. In the next table it is shown that the brain capacity, in cubic inches, of individuals of various races ranged from one hundred and one hundred and two for Swedes and Lapps to eighty and seventy-eight for Egyptians and Bengalese. According to other tables, the fact is demonstrated that brains are smallest in the hottest countries, while to Scotland is conceded the honor of reaching the highest average in the matter of cranial capacity. Yet another table is given containing the brain weights of one hundred and twenty-five persons of ordinary or weak minds, idiots, and criminals, whose brains were on the whole larger than those of the sixty beforementioned eminent men. About nine or ten per cent. of men examined in asylums registered a brain weight of more than 55 ounces, while those of Daniel Webster, Lord Byron, Bacon, General Skobeleff, and of many other renowned men were between 53.6 and 50 ounces. The average brain weight of the sixty famous men was found to be less than the estimated brain weight of all men, and the ten most weighty brains in the list of famous men averaged more than nine ounces less than those of the ten heaviest belonging to the idiotic, criminal, and ordinary class. The writer then proceeds to demolish several other long-held beliefs. The fallaciousness of the theory that the external dimensions and shape of the head are a criterion of the size and shape of the encephalon is demonstrated by some notable examples to the contrary, and it is asserted in explanation of these facts that the skull and brain are developed independently. Dr. Simms also denies that many and large convolutions of the brain exert any influence on intellectual capacity, but holds that such occurrences are merely accidental, and that a high degree of intelligence may appear in either kind of brain. Next, the theory that the degree of mental capacity depends upon the amount of gray matter in the hemispheres is declared to be untenable, and Daniel Webster is again brought forward as an instance in point, his brain containing gray matter to the depth of only one-sixteenth of an inch, while the brains of negroes, murderers, and persons of a low type in almost every case had a far thicker layer of gray matter. Lastly, the collected facts disproved—at least to Dr. Simms' satisfaction—the theory that cultivation of the intellect gives shape and size to the brain within, thus affecting to a somewhat similar extent the skull without. Whether Dr. Simms is correct in all his deductions would be hard to say; it is a matter on which it would be unwise to be too dogmatic. Still, as he has made a lifelong study of the subject, his opinions should carry much weight. However, there can be little doubt that, in so far as he maintains that large brains do not of necessity indicate that their possessors are persons of exceptional intellectual power, he is quite right.

EMETICS AND COUNTER-IRRITANTS AND THE RESPIRATORY ORGANS.

That some relationships exist between the functions of respiration, especially in diseased conditions, and the act of vomiting has been the common clinical knowledge of most general practitioners. The student fresh from college accepts his elders' say-so, but with increasing experience he learns that emetics do help some forms of bronchitis and other respiratory ailments, and his text books give him some mechanical theories to account for this action. The matter has been quite extensively and exhaustively studed by Albert Robin and Maurice Binet ("Études cliniques sur le chimisme respiratoire"—I. "Action du vomitif sur les échanges respiratoires," and II. "Action du vésicatoire sur les échanges respiratoires," *Archives générales de Médecine*, December, 1898, page 641).

In the first one of these clinical studies, which is the ninth of an extremely interesting series, they show that the act of vomiting—

(1) Increases the respiratory chemical activity in all its elements; thus the elimination of CO_2 is increased (in the case given) from 3.2 to 3.8 per cent.; the amount of oxygen taken in, from 4.2 to 4.6 per cent.; the capacity of the lung increased from eighty-four to one hundred and forty-three cubic centimetres; the total oxygen consumed from 3.56 to 6.65 per cent.; and the oxygen absorbed by the tissues, from 0.85 to 1.14 per cent.

(2) This action is more or less powerful, varying with the nature and gravity of the malady; that is to say, according to the degree of infection of the bronchi.

Under the general heading of the pathological physiology they show that the action of emetics is multiple. Emetics not only aid by mechanical clearance of the tubes, and contribute thus to their antisepsis, but also aid in the contractility of the tubes and incite

more active secretions. They excite the respiratory phenomena, evacuate the toxic residual air, and finally aid in the oxidation and solution of the toxins.

The second series of observations deals with the action of vesicants on the respiratory chemistry, and the authors show that by their use the respiratory interchange is increased, that greater oxidation takes place, and that therefore the toxins are affected. Such an increase in the oxidation and following improvement in the disease have been shown by the authors to be present in the crises of typhoid, pneumonia, and pleurisy. Thus an increase in the gaseous exchange with consequent increase of oxidation powers is an adaptation for defence on the part of the organism; and agents which tend to heighten such powers of oxidation are curative. Therefore vesicants, which perform these very functions, are legitimate and useful remedies in diseases of the bronchi and alveoli, especially when these are due to microbic action.

News of the Week.

Honors for Dr. Bransford.—The senate committee on naval affairs made a favorable report, on Saturday last, on a bill for the advancement of Passed Assistant Surgeon John F. Bransford to be a surgeon in the navy, and for his retirement from active service with the rank and pay of the latter grade. Dr. Bransford entered the volunteer navy last May, and was on the *Gloucester* in the naval engagement with Cervera's fleet. As the marksmanship of the Spanish gunners gave him no opportunity to do any professional work, he occupied his time in serving a gun in the fight which the *Gloucester* had with the Spanish torpedo-boat destroyers. He was highly commended by Lieutenant-Commander Wainwright, of the *Gloucester*, and the naval board on promotions recently recommended that he be advanced in numbers for his conduct in the action.

The Hospital Ship "Relief" which left Thursday was to have sailed from this port two weeks ago for Manila, but was detained by a blizzard, which interfered with her loading, and by the necessity of supplying her with a new propeller, a new tail-shaft, and a fresh coat of paint on her hull. In addition to her regular working crew and nurses, the *Relief* carries one hundred and fifty hospital-corps men and six physicians, who are to be stationed at various points in the Philippines. Medical supplies of all kinds, such as bandages, dressings, and drugs sufficient for the needs of twenty-five thousand men for one year, also form part of the cargo. Major Bradley remains as surgeon-in-chief of the ship.

A Physician Committed for Insanity.—A Toronto physician was recently committed by a magistrate for examination as to his sanity. His nurse, who made the complaint, said that the doctor was addicted to morphine, and that his relatives in Toronto had decided to send him to Scotland, his native country, to have him cared for there. His ticket had been bought, but the steamship would not take him because of his condition. The physician assured the magistrate that he was perfectly well able to take care of himself if allowed to go. He said he had accepted an offer to go as ship's surgeon on a vessel about to sail for the West Indies. He declared that he was not insane, but was of a very nervous temperament, and was in the habit of taking small doses of morphine for a disease he was troubled with. The magistrate, however, committed him for medical examination.

The Health of the Tsar is said to be far from good and a cause of grave solicitude. According to the reports, the malady is of such a character as to forbid all intellectual labor.

Can Grant Diplomas in Surgery.—By a decision of the supreme court of Pennsylvania, the action of the lower court has been sustained, granting permission to the Medico-Chirurgical College of Philadelphia to amend its charter so as to issue diplomas and confer degrees in dental surgery.

"The Journal of the American Medical Association."—At a meeting of the board of trustees of the American Medical Association, held in Chicago, February 17th, Dr. George H. Simmons, of Lincoln, Neb., was elected editor of the *Journal*, to fill the vacancy caused by the death of Dr. John B. Hamilton at Christmas.

Typhoid Fever in Cuba.—According to reports from Havana, there are thirty cases of typhoid fever in the second division hospital in General Lee's camp, and there is some fear that the fever may become epidemic. When the camp was laid out the plan provided for underground sewers, but this design was not carried out, and the camp has sinks of the same general pattern and as little protected against the visits of infection-spreading insects as those in camps in the United States during last summer. Typhoid also exists in the tenth regular regiment, encamped in the parks of Havana. Five cases from one company are now on the hospital ship *Missouri*.

Philadelphia Neurological Society.—At a stated meeting, held on February 27th, Dr. F. Savary Pearce presented a case of ataxia for nosological diagnosis. The condition was thought to be one of congenital syphilis. Dr. G. E. de Schweinitz read a paper on "Retrobulbar Neuritis and Facial Palsy Occurring in the Same Patient," and reported cases. Dr. Wendell Reber read a paper on "Unilateral Argyll-Robertson Pupil." Drs. W. M. Sweet and W. G. Spiller reported a case of cerebellar tumor and exhibited the specimen. The patient was a girl of twelve, with stellate degeneration of the optic disc and loss of knee jerks. Dr. M. W. Zimmerman reported cases of reversal of the perception limits and exhibited charts.

The Ambulance Surgeon Again.—The newspapers recently published an account of a man with a fractured skull, whom a New York Hospital ambulance surgeon refused three times in ten days to take to the hospital, and the superintendent wrote a letter of expostulation

to the police for calling the ambulance unnecessarily so many times. The police called the ambulance once more, and this time the surgeon took the man to the hospital, where his skull was trephined, and he died. He might have died in any case, but the ten days without treatment certainly did not improve his chances.

Dr. James M. French has been appointed chief surgeon of the Cincinnati police department, and Dr. A. I. Carson assistant surgeon.

A Leprosy Journal.—A trilingual periodical, to be entitled *International Archives of Leprosy*, is projected. The prospectus states that papers may be written in English, French, or German; if in any other language, a summary must be given in one or other of the languages mentioned. Those interested in the project, and seeking further information, are requested to communicate with Prof. Albert Neisser, Museumstrasse 11, Breslau, Germany.

A British Hospital for Rome. — The members of the British colony in Rome have decided to found a hospital for the benefit of their countrymen who may be taken ill in that city. Only a small proportion of the estimated cost of the erection and equipment of the institution still remains to be raised. The hospital, it is expected, will be ready for patients early next year.

The New York County Medico-Pharmaceutical League.—A meeting was called for February 24th, at Robert's Club Rooms in East Broadway, to organize an association with the above title. The object of the association is stated to be the encouragement of operations at home where practicable, the regulation of lodge-contracting, of dispensaries, hospitals, and other medical charities, and the discussion and regulation of other matters of mutual interest to the medical and pharmaceutical professions.

A Municipal Crematory in Boston.—Mayor Quincy, of Boston, has suggested that the city should build a municipal crematory in which to incinerate the bodies of paupers, criminals, and others whose burial devolves upon the city. The idea is to do away altogether with the Potter's Field. It is asserted that the city could cremate bodies at a cost of only $1 each, while it costs $3 to dig a grave. The present Potter's Field will be filled before the expiration of the present year. The burials now amount to about five hundred a year, and increase in number yearly.

Zealous Hygienists.—A bill has been introduced in the legislature, directing the board of education of New York City, on and after July 1, 1899, to burn all school-books which have been in use for six months or more in the public schools of the city, and to destroy, at semi-annual periods, after that date, all books having been in use continuously the preceding half-year. Which leads us to remark that it is, indeed, beautiful to contemplate the tender regard for the health of the dear people which our rulers have recently begun to manifest. It is impartial, too, for if the safety of the travelling public demands that the elevated road shall suffer, does not that of the innocent children call for measures to enrich the school-book publishers?

Typhoid Fever at Yale.—There have been several cases of typhoid fever recently among the students of Yale University, and an investigation has been undertaken to discover, if possible, the source of the infection.

Dr. William T. Jenkins has been appointed by Governor Roosevelt as a member of the State board of health. It has always been the custom to appoint the chairman of the sanitary committee of the New York City board of health a member of the State board, and in appointing Dr. Jenkins the governor followed this custom.

Malpraxis Suit against a Dentist.—Dr. Gustave Adler, a dentist of this city, was recently the defendant in a suit for $2,000, brought by a former patient for alleged malpractice in extracting one of her teeth. The justice in the city court, before whom the case was tried, dismissed the suit, holding that the dentist had not been guilty of negligence, and he accordingly instructed the jury to return a verdict in his favor.

New York State Medical Examiners.—At a meeting of the State board of regents in Albany, on February 21st, Drs. George Ryerson Fowler, of Brooklyn, and A. Walter Suiter, of Herkimer, representing the Medical Society of the State of New York, and Drs. Arthur R. Tiel, of Matteawan, and J. P. Nolan, of New York, representing the Eclectic Medical Society, were reappointed on the State board of medical examiners.

Indignity to a Christian Scientist.—A Christian science healer was recently committed in a police court here for examination as to her sanity, because she expressed the conviction that Mrs. Eddy, the plutocratic founder of the delusion, was God. As Mrs. Eddy claims to have cured caries, tuberculosis, cancer, "tubercular diphtheria," and a host of other trifling ailments of the sort by just thinking, it seems natural enough for anybody who believes her to believe also that she is the Supreme Being. The healer just committed is no more insane than her associates; she is only more logical.

Smallpox in Porto Rico.—The official reports made to Dr. Hoff, surgeon-in-chief of the United States troops in Porto Rico, show that there were, in the two months ending February 14th, five hundred and fifty-one cases of smallpox in the island—three hundred and sixty-three in and near Ponce, one hundred in and near Ciales, twenty-three at Sabonetta, and the others scattered. The disease is now practically exterminated at Ciales, and is diminishing at Ponce. Only two soldiers have died of it. Smallpox is not prevailing to any greater extent in the island now than it always has—indeed, the number of cases is probably less than formerly, but the systematic treatment of all cases now brings to public attention what, under the old régime, would have been largely unknown.

Locking up Chlorate of Potassium.—The Turkish government, just before the recent religious fêtes, sent police officers to all the druggists' shops to seal up the packages of chlorate of potassium, the object being to prevent the manufacture of explosives.

Death on the Wheel.—In a bicycle race at Sydney, N. S. W., in January last, the winner died of syncope the instant he crossed the tape. There were fifty starters for a mile race, but two soon distanced the rest. The leader, who was about half a wheel ahead, was seen to relax his hold on the handle bars a few yards away from the end, but he kept on the wheel until just as he crossed the tape a winner, when he fell and was picked up dead.

The Water Supply of Hazleton.—The board of health of Hazleton, Pa., having recently received many complaints of the water, the health officer was sent to make an investigation of the source of supply. He found that the contents of an abandoned dam, with old lumber and other decaying material, had got into the reservoir, and that in its course to the city the water received the flowings of barnyards. Samples of the water have been sent to the Pennsylvania State board of health for analysis.

The Japanese Red Cross Society.—The ninth annual meeting of the Red Cross Society of Japan was held in Yokohama on December 28th. Prince Komatsu presided, and the Empress opened the meeting with a brief address. It was stated that the membership of the society had doubled within two years. The staff now comprises one hundred and eighteen surgeons, three hundred and fifty-nine nurses (male and female), and six hundred and forty-eight assistants. Two steamers of over three thousand tons gross each have been ordered in England to serve as transports, and are now nearly completed. They have been named the *Haku-ai* (universal love) and the *Kōsai* (general aid). Following the formal meeting there was a sham battle, including an artillery duel and cavalry charges, at Oji, in the presence of the Empress, and after the combat the services of the ambulance and medical corps of the society were called for.

The State Consumptive Hospital.—A hearing was had last week before the finance committee of the New York senate, upon the bill appropriating $200,000 for the establishment in the Adirondacks of a State consumptives' hospital. At the hearing, representatives of the State Medical Society and of the New York City charitable organizations appeared and urged the committee to report the bill. They asserted that consumption was curable and preventable, and that a State hospital for consumptives in the first stage of the disease would do much to stamp out this disease, from which fourteen thousand people die in this State annually. One of the speakers incidentally criticised another pending bill, appropriating $50,000 for the care of consumptives at a private sanatorium in the State at the rate of $12 a week, saying that patients were cared for at another institution, equal if not superior to the one named in the bill, at $7 a week.

The Atlantic County (N. J.) Medical Society.—At a recent meeting of this society the following officers were elected: *President*, Dr. A. D. Cuskaden; *Vice-President*, Dr. W. Reynolds; *Secretary and Treasurer*, Dr. William Edgar Darnall; *Reporter*, Dr. E. Marvel.

Increased Quarantine in Japan.—A bill has been introduced into the Japanese Diet, widening the provisions of the quarantine law. Under the provisions of the present law for the prevention of contagious diseases, measures for medical inspection can be taken in the case of plague and cholera, but the new bill extends this list to include smallpox and some other diseases.

Corps of Medical Cadets.—Survivors of the Corps of Medical Cadets, United States army, are requested to inform Dr. Frederick A. Castle, 51 West Fifty-eighth Street, New York, of their present address (postal card preferred). After many efforts an authentic roster of the corps, together with the information related to it of record in the office of the surgeon-general, has recently been acquired through the favor of the secretary of war.

The Increasing Population of England.—During the week ending January 14th, in thirty-three of the largest English towns 6,580 births and 3,995 deaths were registered. In London the death-rate was 18 per 1,000, and averaged 18.5 in the thirty-two provincial towns. The lowest death rates in these towns were 11 in Brighton, 11.8 in Derby, 12.6 in Cardiff, and 12.9 in Leicester and Hull; the highest rates were 22.4 in Manchester, 22.5 in Gateshead, 23.2 in Oldham, and 24 in Sunderland.

Philadelphia Pediatric Society.—At a stated meeting held February 14th Dr. H. M. Shriner described an easy method of milk modification, depending upon the use of certain factors in determining the amount of milk, cream, water, and sugar necessary to secure desired proportions of fat, proteids, and sugar. Dr. J. P. Crozer Griffith exhibited a large graduated beaker with the aid of which home modification of milk is easily carried out without the necessity of burdening the memory with formulas or figures of any kind.

Another Pure-Beer Bill has been introduced in the legislature of this State. It provides that no substitute for hops, or pure extract of hops, shall be used in the manufacture of ale or beer sold or offered for sale in this State. All ale or beer shown to contain any substance used as a substitute for hops, or pure extract of hops, is declared adulterated. Whoever violates the provisions of this act is declared guilty of a misdemeanor, and upon conviction shall be liable to a fine of $100 or to imprisonment in the county jail for three months, or both. The State board of health is charged with the duty of enforcing the provisions of this act.

The King County (Washington) Medical Society.—At the annual meeting of this society, held in Seattle Monday, January 16th, the following officers were

duly elected for the ensuing year: *President*, Dr. Montgomery Russell; *Vice-President*, Dr. R. W. Schoenle; *Secretary*, Dr. William L. Ludlow; *Treasurer*, Dr. C. B. Ford; *Trustees*, Dr. George M. Horton, Dr. William A. Shannon, Dr. Alfred Raymond. Stated meetings of the society are held the third Monday of each month. The membership now numbers about fifty.

Pathological Society of Philadelphia.—At a stated meeting held February 9th Dr. H. F. Harris read a communication entitled "Some Remarks on the Technique and Relative Value of Paraffin and Celloidin Embedding" and one on "An Easy and Rapid Method of Preparing Hæmatein Solution," consisting in the addition of mercurous oxide to hæmatoxylin solution. Dr. H. L. Williams reported a case of primary carcinoma of the right suprarenal gland, and Dr. John B. Shober one of villous tumor of the rectum. Drs. H. C. Masland and W. Wayne Babcock, Jr., read a report of Paget's disease of the nipple of thirteen years' duration without carcinomatous involvement of the mammary gland. Drs. Llewellyn and Sailer reported a case of meningitis and endocarditis.

Artificial Purification of Air.—The Paris correspondent of *The Medical Press* writes that, at a recent meeting of the Académie de Médecine, M. Laborde read a paper on a chemical substance which by its simple contact with air vitiated by respiration regenerates it completely, restoring to it its first qualities. In other words, this substance removes absolutely the carbonic acid from the foul air, as well as the water vapor and irrespirable products, and renders to it in exchange the exact quantity of oxygen required. From the first series of experiments it was discovered that six or eight pounds of the substance would keep alive in a space hermetically sealed (a submarine boat or a diving bell, for instance) a healthy man during twenty-four hours. Besides, the product was capable of rendering good services to medicine, as with a few grams of it a dozen litres of oxygen could be obtained instantaneously.

German Degrees for Women.—No mean triumph was scored by the German women on Saturday last when Fräulein Elsa Neumann was made a Master of Arts and Doctor of Philosophy, *cum laude*. Women have been knocking at the doors of the German universities for years, only to be told by the ungallant old professors that they couldn't come in, or at least could come only to listen. Now, however, the professors have been routed, and in bestowing the diploma on Miss Neumann the dean, while maintaining that the most dignified position of a woman was that of high-priestess of home, was yet forced to admit that that position did not exclude her from participation in the scientific work of men. Fräulein Dr. Neumann is twenty-seven years of age and studied at Göttingen and Berlin.

Vital Statistics of Philadelphia.—For the week ended February 11th there were reported to the Philadelphia board of health 569 deaths, 57 more than during the preceding week and 63 more than during the corresponding week of the previous year. Of the whole number, 149 occurred in children under the age of five years. The principal causes of death were as follows: Pneumonia, 90; pulmonary tuberculosis, 67; typhoid fever, 47; heart disease, 36; apoplexy, 22 (paralysis 9); diphtheria, 20. There were reported also 339 cases of typhoid fever, 70 of diphtheria, and 35 of scarlet fever. For the week ended February 18th, there were reported to the Philadelphia board of health 527 deaths, 42 less than during the preceding week and 78 more than during the corresponding week of the previous year. Of the whole number of deaths, 161 occurred in children under five years of age. The principal causes of death were as follows: Pneumonia, 88; pulmonary tuberculosis, 50; heart disease, 47; kidney disease, 45; typhoid fever, 38; convulsions, 21; marasmus, 19; apoplexy and inflammation of the brain, each 17; old age, 15. There were also reported to the board 287 cases of typhoid fever, 51 of diphtheria, and 13 of scarlet fever.

Medical Practitioners in Japan.—It is said that of the forty thousand practitioners now holding diplomas in Japan, nearly twenty-seven thousand, or two-thirds, are disciples of the old Chinese school.

Obituary Notes.—Dr. C. S. Gray, of Little Rock, Ark., died at his home in that city on February 14th, of pneumonia. Dr. Gray was born in Missouri in 1850. He was a graduate of the St. Louis Medical College in 1872. After about twenty years passed in general practice, he took up the study of diseases of the eye, ear, nose, and throat, and then established himself as a specialist in Little Rock, where he speedily obtained recognition as an authority. His many excellent personal qualities won for him the esteem and friendship of his patients and professional brethren.—Dr. John E. Ward, of Brooklyn, died at St. John's Hospital, on February 25th, from the result of a surgical operation. He was born in Epsom, England, in 1846, and was a licentiate of the Royal College of Surgeons. He came to this country in 1869, and for a time he had a drug store in Centre Street in this city, and later went to live in what was then the town of Gravesend.—Dr. Daniel L. Reeve died at his home in Jersey City on February 25th. He was born in New York in 1822, and was graduated from the New York University Medical School in 1845. He had practised in Jersey City since 1858.—Dr. Willard Avery Heacock, of this city, died on February 24th, of septicæmia contracted while opening an otitic abscess. He was born at Gloversville, N. Y., in 1866, and was graduated from the medical department of Columbia University in the class of 1892. He leaves a widow and two children.—Dr. Daniel F. Harkins died at Allentown, Pa., on February 27th, as a result of a sandbagging received in New York City several weeks ago, while physician in the hospital on Blackwell's Island.—Dr. Daniel M. Tindall died at Morton, Delaware County, Pa., on February 21st, at the age of eighty-one years. He was born in Camden County, N. J., and was graduated from the University of Pennsylvania in 1839. For forty years he was engaged in the practice of medicine in Philadelphia.

Therapeutic Hints.

Hypertrichosis.—

℞ Tinct. iodi ..... 3 parts.
Olei terebinth..... 6 "
Olei ricini..... 8 "
Spiritus..... 48 "
Collodii..... 100 "
M. S. Paint once a day for three days.

—PUTTE.

Sciatica.—

℞ Olei hyoscyami,
Olei terebinthini.....āā 5
Ceræ alb..... 2
Unguent. simpl..... 40
M. S. Apply.

—HIRSCHKORN.

Pernio.—

℞ Acid. citrici..... 2
Bals. peruvian..... 5
Ung. zinci..... 45
M. ft. ung.

—EICHOFF.

Bronchitis.—

℞ Apormorph. hydrochlor..... 0.03
Morphinæ hydrochl..... 0.02
Acid. hydrochlorici diluti..... gtt. v.
Syrupi aurant. corticis..... 15
M. S. Take during the day.

—NEUSSER.

Cathartic Pill.—

℞ Extr. aloes,
Extr. rhei,
Pulv. rad. rhei.....āā 2
Extr. colocynth..... 0.3
M. ft. pil. No. lx. S. Three to four pills before retiring.

—NOTHNAGEL.

Ozæna.—

℞ Potassii iodidi..... 0.5
Iodi puri..... 0.3
Glycerini..... 40
M. S. Apply locally.

—LEOP. V. SCHRÖTTER.

Hysteria.—

℞ Camphor. monobrom.,
Extr. valerian.....āā 3
M. ft. pil. No. xxx. Obduc. fol. argent. S. One pill three times a day.

—KRAFFT-EBING.

Melæna Neonatorum.—

℞ Liq. ferri sesquichlor..... gtt. x.
Aquæ destil..... 70
Syr. cinamomi..... 20
M. S. Teaspoonful every hour.

—WIDERHOFER.

Perniones.—

℞ Acidi nitrici puri..... 3
Aquæ destill..... 60
M. S. Apply locally.

Or:

℞ Iodi puri..... 0.5
Collod. elast..... 20
M. S. Pencil.

—GUSSENBAUER.

Eclampsia.—

℞ Chloral hydrat..... 6
Mistur. gummi..... 100
M. S. Half the mixture as an enema.

—SCHAUTA.

Cocaine Poisoning. — Recumbent position; amyl-nitrite inhalations; aromatic spirits of ammonia in water, to be slowly sipped.

Heroin.—This new derivative of morphine possesses a sedative effect upon the respiration, more powerful than that of morphine, and decidedly greater than that of codeine. One milligram decidedly lessens the respiratory movements in the rabbit, while with codeine we must increase up to a centigram to get the same results. The fatal dose of heroin is placed at one hundred times that of the medicinal dose. One centigram is an efficacious dose for cough in the adult. It is said to be useful in all subjects who breathe badly, either from recent pneumothorax or pneumonia, and in heart disease.—DRESER, *Gaz. Hebd. de Méd. et de Chir.*, No. 82, 1898.

Permanganate of Potassium for Fissures of the Nipple.—Dr. Dombrowski (*Le Progrès Médical*, January 7, 1899) advises to paint the nipple three or four times daily with a solution of permanganate of potassium, two per cent. to five per cent. The fissures will disappear under this treatment in less than a week. This remedy causes considerable smarting at first, but this soon disappears. Nursing is not interfered with, but the breasts should be washed before each feeding with warm sterilized water, and a compress covered with a permeable cloth should be used.

Society Reports.

THE PRACTITIONERS' SOCIETY.

One Hundred and Forty-Fourth Regular Meeting, Held on Friday, January 13, 1899.

W. GILMAN THOMPSON, M.D., PRESIDENT, IN THE CHAIR.

A Case of Osteitis Deformans.—This case was presented by DR. V. P. GIBNEY. The patient was a man, fifty-nine years old, a carpenter by occupation, who first came under Dr. Gibney's observation in January, 1890. At that time the chief symptom complained of was a marked degree of bow-legs, which had first been noticed over twenty years previously, coming on without inflammatory signs or any acute illness of any kind. He also complained of weakness in his limbs. The following notes of the case were made by Dr. Gibney in 1890: "There was over each thigh, on its upper and outer aspect, a mass resembling a fibrous tumor. It was connected with the muscles—apparently with the tendo-vaginæ femoris. These masses, which were symmetrical and painless, increased in size when the muscle was put on the stretch. There was laxity of the knee-joint; the tibia presented a curve; there was no pain on handling the knees. His arms were strong, and he thought they had increased in size; also that his elbow-joints had become altered in appearance. The inner condyles of the humeri were quite sharp and seemed unusually prominent. His head had grown larger, the patient formerly wearing a $6\frac{7}{8}$ hat and now a $7\frac{1}{8}$."

Since 1890, Dr. Gibney said, this patient's symptoms had gradually grown worse. All the bones in the skeleton, including those of the face and skull, seemed to have become enlarged, and the long bones were curved. The following measurements, taken in 1890 and again in the present month, were interesting for comparison:

	1890. Inches.	1899. Inches.
Distance between knees, inner borders	6	9
Distance between the inner borders of the patellæ.	11	14½
Distance between the tubercles of the tibia	9	16
Distance between the spines of tibia, upper portion	13	15
Distance between the spines of tibia, middle portion	10½	12½
Distance between the malleoli	1¾	3
Distance from anterior superior spinous process, right	31¾	29½
Distance from anterior superior spinous process, left	31¾	29½

Dr. Gibney said he regarded the case as one of osteitis deformans, which was first described by Sir James Paget. With the exception of a number of attacks of rheumatism and an attack of typhoid fever while serving in the Civil War, the man had always enjoyed good health. His daughter stated that he was at present able to walk only a block or two at a time.

Dr. Francis P. Kinnicutt said the involvement of the bones of the skeleton in this case seemed to be uniform and not confined to any single bone or region of the body. The prominence of the lower jaw was suggestive of acromegaly, but otherwise the conditions present were not in common with that disease.

In reply to a question, Dr. Kinnicutt said he had never seen a condition similar to this occur in connection with rheumatism.

Dr. Herman M. Biggs said the case seemed to be perfectly characteristic of Paget's disease, with the exception that there was no enlargement of the extremities of the long bones. The speaker said that he regarded the case as one of rarefying osteitis rather than deforming osteitis. In the latter, there was a new formation of bone around the joints. Paget, in his description of these cases, spoke of the triangular shape of the cranium, as in the case under discussion, with the apex of the triangle at the chin. The speaker said he did not think the disease bore any relation to rheumatism.

Operation for Relief of Deformity of Nose.—This case was presented by Dr. Joseph D. Bryant. The patient was a man, aged twenty-six years, a lumberman by occupation, who came under Dr. Bryant's care on October 8, 1898. His family history was good, and his personal history negative, with the exception that he was born with a "mother's mark" on the nose. In childhood the nose gradually increased in size for some years; it then remained stationary until six years ago, when he was struck on the nose by the limb of a tree; after this the organ increased rapidly in size. Shortly before the patient came under observation he had several severe nasal hemorrhages, coming on without apparent provocation; after his admission to the hospital he had one very severe hemorrhage, which was checked by pressure. When the patient came under Dr. Bryant's observation, the nose was very much enlarged, bluish in color, and covered with sebum and exfoliated epithelium. The organ was very vascular, especially on the right side, and pulsation of the vessels could be both seen and felt. The enlargement was regarded as either a pure angioma or an angio-sarcoma. The fact, however, that the deeper structures—the framework of the nose—were not involved was regarded as strong evidence of its benign character. On account of the danger of hemorrhage, it was decided not to remove a piece for microscopic examination.

An operation to reduce the size of the nose was done by Dr. Bryant on October 14th. After cleansing the parts as thoroughly as possible, an effort was made to prevent hemorrhage by clamping the tissues on either side of the nose from (and including) the upper lip up to the angle of the eye by means of forceps; in addition to this, pressure was made on the frontal bone by means of a saddle-shaped appliance especially contrived for the purpose. An incision was then made in the median line, from the upper to the lower end of the nose down to the bone and cartilage; the angiomatous growth was then dissected off on both sides until sound tissue was reached. In order to check the hemorrhage, which was profuse, in spite of the precautions taken, the tissues were tied off close to the bone with strong silk, using the cobbler stitch, and further oozing was prevented by pressure. After the operation, a large granulating surface was left which was covered with skin-grafts. The healing of the wound was uneventful. Since the operation, galvano-puncture had been used a number of times in order to reduce some of the over-abundant granulations and angiomatous structure at the end of the organ which remained in spots.

The following measurements of the nose, taken before and after operation, were given by Dr. Bryant:

Length—before operation, $4\frac{7}{8}$ inches; after, 3 inches. Projection—before, $2\frac{5}{8}$ inches; after, $1\frac{7}{8}$ inches. Width—before, 3 inches; after, $2\frac{1}{4}$ inches.

Dr. William T. Bull said the result obtained by Dr. Bryant was very satisfactory, especially from the point of view of skin-grafting, the resulting cicatrices being remarkably smooth and even. At the tip of the nose, however, there was still considerable angiomatous tissue which could be removed at a secondary operation. A secondary plastic operation, perhaps, would give a more perfect contour to the extremity of the nose.

Dr. Bryant, in reply to Dr. Bull, said he hoped to reduce the angiomatous tissue which still remained by means of galvano-puncture, which had thus far acted very satisfactorily.

Total Extirpation of the Uterus as a Substitute for Porro's Operation and Cæsarean Section.—This paper was read by Dr. William M. Polk (see page 305).

Dr. H. F. Walker said he thought the operation described by Dr. Polk was a most desirable one, especially so in cases where one had to deal with a contracted pelvis. A woman recovering from a Cæsarean section was very likely to become pregnant again and perhaps give parentage to children who would be afflicted with a similar deformity. For this reason it would be better that such women should be deprived of the power of bearing more children. The reason why more women suffered in labor and need instrumental assistance was less due to the increased size of children's heads than to the fact that many female children had been delivered alive by skilful physicians. Their progeny had perpetuated the narrow pelvis. Left to nature, the child would have died, perhaps the mother, and the law of survival would be maintained. For the race the best treatment was the removal of the uterus.

Dr. Andrew H. Smith said that, instead of laying down a general rule in this class of cases, he would limit it to the individual. In one instance coming under his observation Cæsarean section had been done three times on the same woman: it should not have been done more than once. Such a woman should be deprived of the power of again becoming pregnant.

Dr. Polk, in closing, said he was glad to hear Drs. Walker and Smith take the stand they did in regard to the desirability of this class of women becoming pregnant a second time. The speaker said he had purposely avoided this aspect of the subject in his paper, because, after all, this was a question in the decision of which the woman herself should be given a voice. On the other hand, if we disregarded the wishes of those who were not averse to bearing more children, we took a decided step toward preserving their lives. The mortality from the Porro operation, as it was now done, was practically *nil:* the surgeon chose his own time for operating, and the operation was done with almost as much ease as an ovariotomy, the only difference being the size of the incision required.

Dr. Polk said that if the view taken of this question by Drs. Walker and Smith would be generally accepted it would certainly help the obstetrician very much, especially in doing away with symphyseotomy, the harm resulting from which was more lasting than many suppose. Many women upon whom this operation had been done were still suffering from a movable symphysis, even in cases in which the operation was

properly done. The primary reason for introducing symphyseotomy was to reduce the mortality, but the operation has been done by so many inexperienced men that more harm had resulted from it than if they had resorted to Porro's operation instead.

Dr. Polk said that personally, in the treatment of these patients, he had very little use for any operation except the Porro.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 16, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

The Serum Treatment and Its Results.—DR. HERMAN M. BIGGS read a paper with this title. He said that his first paper on the antitoxin treatment of diphtheria, read before the Academy in 1895, had aroused much opposition, but since then there had been sufficient knowledge and experience accumulated markedly to alter many of the opposing views then expressed. On January 1, 1895, the New York Health Department had begun the use of antitoxin prepared in its own laboratory. All the preparations of serum at that time had been of low grade, and their use had long been discontinued now in this city. From January 1, 1895, to October 1, 1896, 1,256 cases of diphtheria had been treated with the antitoxin, with 198 deaths, or a mortality of 15.8 per cent. If 80 cases, moribund at the time of the first injection and dying within twenty-four hours, had been deducted, the mortality would have been 10 per cent. From October 1, 1896, to January 1, 1898, 1,195 more cases had been so treated, with 163 deaths, or a mortality of 13.6 per cent. From January 1, 1898, to January 1, 1899, 626 additional cases had been subjected to this treatment, with 68 deaths, or a mortality of 10.8 per cent. If 21 moribund cases were deducted, the mortality for last year would be 7.7 per cent. Thus, during the whole period from January 1, 1895, to January 1, 1899, 3,073 cases had been treated with diphtheria antitoxin, with 429 deaths, and an average mortality of 13.9 per cent. If 172 moribund cases were deducted, the mortality would be 8.8 per cent. The cases referred to had been treated, as a rule, in the most unfavorable tenement districts, and many of them had not received the antitoxin until the later stages, when they had been considered by their attending physicians wellnigh hopeless.

Large Initial Dose Best.—The city had been divided into districts, each being placed under the care of an inspector. After the first year, the initial dose had varied from 2,500 to 4,000 units, experience having shown that the best results were obtained from a large initial dose. As a rule, the patients had been seen at the end of twenty-four hours, and, if necessary, a second dose administered. The serum had generally been of high grade, containing from 300 to 800 or more units in each cubic centimetre. With the earlier and lower grades of serum rashes had been more common, but no reliable data as to the percentage of cases in which they had occurred were available. No case had come under observation in which any serious and permanent damage, properly attributable to the remedy, had occurred. All the cases in which the bacteriological diagnosis had indicated false diphtheria had been excluded in compiling the foregoing statistics.

Immunization.—Immunization with the serum had been practised on 5,108 persons in nearly two thousand families, with the result that 26 cases of diphtheria had developed within the first twenty-four hours; 20 cases after twenty-four hours and within thirty days; and 2 cases after thirty days. Out of the large number treated, only four died, one from the grippe within twenty-four hours after the injection, one from scarlatina and diphtheria on the second day, and two from diphtheria developing respectively on the thirty-sixth and fifty-fifth days after immunization. The protective influence of the immunizing injection could generally be depended upon for three or four weeks, although sometimes it lasted much longer. With the high-grade serum of the present day it was necessary to use on an average only about fifteen or twenty minims of serum for immunization, so that the treatment could not be considered objectionable.

Decrease of Diphtheria.—Dr. Biggs then called attention to the fact that, whereas in 1894 there had been 2,874 deaths from true diphtheria in the boroughs of Manhattan and the Bronx, in 1898 there had been only 923 deaths from this disease. The number of cases of diphtheria and croup that had been reported in 1898 was less than for any year since 1893. These figures were in marked contrast with the statistics from London, where diphtheria antitoxin had been used only to an inconsiderable extent. In the Paris hospitals, 2,355 cases had been treated in 1894, with a mortality of 35.5 per cent, and in 1897, 1,683 cases, with a mortality of 15 per cent. In the Berlin hospitals, 2,890 cases had been treated in 1894, with a mortality of 27.7 per cent., as against 1,947 cases in 1897, with a mortality of 13.5 per cent. In Chicago, as a result of the antitoxin treatment, there had been a clear gain of 1,100 lives. The large reduction in the number of cases of diphtheria in New York City was probably due to several factors, *e.g.*, the quite general use of antitoxin, its employment as an immunizing agent, thus largely diminishing the number of secondary cases, and the introduction of a system of medical inspection of schools and greater care in the inspection of tenements. In two hundred and sixty-six German towns having a population of fifteen thousand, for the nine years preceding 1895 the average number of deaths per ten thousand of the population had been 100; in 1897 it had fallen to 35. While antitoxin was almost universally employed for the curative treatment of diphtheria, it was not so commonly used for immunization. It had been early employed for this purpose, however, in New York City, with results that had fully justified a continuance of the treatment. The inspectors had treated 826 cases of laryngeal diphtheria, with a mortality of 26.4 per cent, or if the 94 moribund cases were deducted, with a mortality of only 16.9 per cent. Intubation had been performed in 204 of these laryngeal cases, with a mortality of 36 per cent. If the moribund cases were deducted, the mortality would be reduced to 28 per cent. in the operative cases. The mortality from diphtheria and croup had continued to decrease. The speaker said that the evidence as to the value of diphtheria antitoxin had never been successfully assailed; on the contrary, it had steadily grown in favor.

Antipneumococcus Serum.—Dr. Biggs said that since 1894, when A. Fraenkel had first separated the pneumococcus from fresh cultures, numerous bacteriologists had endeavored to induce immunity from this disease. The unusual difficulties in the technique of animal experimentation with the pneumococcus had deterred many from continuing this line of research. Some experiments that had been made in the New York health department, though not yet complete, had given some grounds for believing that success would be ultimately achieved. The practical results in the treatment of human beings with the antipneumococcus serum had been as yet indecisive. It was essential that the remedy should be administered at a very early stage.

Serum Treatment of Cholera.—In both the preventive and curative treatment of epidemic cholera

encouraging results had been obtained by Haffkine's inoculations with dead cultures of the cholera bacillus. Haffkine's method required two inoculations, to be made at an interval of about eight days, to secure complete immunity. In certain tea-gardens, 7,500 coolies had been inoculated with these cultures. Of these, 63 had developed cholera and 28 had died, giving a death-rate of 3.73 per thousand. Among the coolies in the same gardens who had not been inoculated, the death-rate was 7 per thousand. In the Hindoo cholera hospital the mortality from cholera had been apparently reduced twenty per cent. by the use of the serum. In the cases in the hospital in which the serum had been used quite early, the mortality had been only fourteen per cent., as against about seventy per cent. by other methods of treatment.

Serum Treatment of Bubonic Plague.—Still more encouraging results had been secured in the treatment of the bubonic plague. The experiments had been conducted by dividing the people into groups and inoculating only a certain proportion of them. Among 875 persons who had not been inoculated, 133 cases of the plague had developed, and 102 of these individuals had died, whereas in 167 inoculated persons, 32 cases of the disease had developed, and 18 had died—in other words, the mortality had been reduced nearly eighty per cent. by the inoculation treatment At Bombay, of 8,000 inoculated persons, 18 had been attacked with the plague, of whom 16 had recovered, and 2 had died. The two fatal cases had been ill with the plague at the time of the inoculation. The efficacy of this prophylactic treatment had been shown to depend largely upon the grade of the serum employed and the dose.

Serum Treatment of Typhoid Fever.—Wright and Semple had employed Haffkine's method of inoculations in typhoid fever. The strength of typhoid fever vaccination depended upon the number and virulence of the typhoid bacilli. With small doses the symptoms had been comparatively slight, *i.e.*, slight chilliness, restlessness, and slight elevation of temperature lasting not more than twenty-four hours. With the larger doses all of the symptoms had been more severe and had been associated with local tenderness. In four out of the eleven cases inoculated with the larger doses, there had been marked nausea and vomiting, lasting for several hours. In some of the cases the symptoms had continued for a good many days. The blood of these inoculated patients had given a fairly satisfactory Widal reaction. As the typhoid vaccinations had been made with dead bacteria, it had been claimed that the injections were no more dangerous than an injection of morphine The method was liked that employed by Haffkine in cholera, and this investigator had given an exceedingly large number of vaccinations without a fatal result. The method was especially applicable to the immunization of young soldiers, nurses going to attend cases of typhoid fever, or persons living in a district in which this disease was epidemic.

Serum Treatment of Yellow Fever.—It had been claimed that Sanarelli's serum was inimical to the yellow-fever germ, but not to the diffused poisoning which came on later in the disease. The application of the serum should, therefore, be confined to the early stage. The beginning dose was twenty cubic centimetres, repeated as required. The injections were usually given subcutaneously, but in urgent cases they should be made directly into a vein.

Antivenomous Serum.—This serum was obtained by the inoculation of animals with increasing doses of snake poison. The results so far obtained had certainly been encouraging.

Antileprous Serum.—Experiments with this serum had been, for the most part, indifferent.

Antistreptococcus Serum.—The protective power of the antistreptococcus serum was specific, and did not exist in the normal serum or in the serum of animals immunized against other micro-organisms. Unfortunately this serum deteriorated, often losing its power in the course of six weeks. Its action also varied greatly with the different varieties of streptococci and was far more efficacious when injected into animals prior to the infection of the streptococci. Experiments had been carried on at the New York health department, and while undoubtedly in some instances the serum had proved of value in human beings, in the majority of instances it had apparently been of no benefit. This accorded with the experience of other investigators, and was to be expected because many preparations of the serum were probably inert, and because many had not originally possessed sufficient activity in the doses employed. There was not much evidence to show that this serum exerted a marked beneficial influence in the presence of severe streptococcus infection. The use of this serum had never been encouraged by the health department, although the serum could be obtained on application. A large proportion of the cases of septic infection supposed to be due to the streptococcus had been shown by bacteriological examination to be the result of infection with other organisms.

Present Position of Serum Therapy.—The present position of serum therapy was briefly summarized as follows: There was no satisfactory evidence, the speaker said, that in either leprosy or tuberculosis anything very definite had been accomplished by the use of serum. In rabies, tetanus, and diphtheria in the human being and in rinderpest and anthrax in animals it had proved very efficient. It was also probable that such treatment was capable of conferring immunity from snake venom. There was strong evidence of the practical value of protective inoculations against cholera and the plague. The serum treatment of typhoid fever and pneumonia was yet purely in an experimental stage. In diphtheria alone had serum therapy proved a complete success.

Antitoxin Rashes Not Entirely Avoidable.—Dr. W. H. Park said that he was completely in accord with all that had been said by the reader of the paper regarding the serum treatment of diphtheria. He had studied diphtheria very attentively for a number of years and felt certain that diphtheria antitoxin would cut short the disease if given early in sufficient doses, and that it would be beneficial in a large number of cases even when given later. Immunity could be so easily obtained for a period of from two to four weeks that it should certainly be used. The rashes following the injection of curative doses were sometimes harmful. Every effort had been made at the laboratory to eliminate these rashes, but so far these efforts had not been altogether successful because of the individual peculiarities of the horses. It was the serum and not the antitoxin that produced the rashes. Many unpleasant results had been attributed to the antitoxin which had, in all probability, been dependent upon other causes—in other words, they were mere coincidenecs. Regarding the use of the many other serums, it should be remembered that if progress were to be made in serum treatment, it was of the greatest importance that our knowledge should be increased regarding the special micro-organisms present in each case.

Antistreptococcus Serum Harmless and Useless.—Dr. W. R. Pryor spoke of the use of the antistreptococcus serum in puerperal fever. The president of the Obstetrical Society of London, he said, had shown in 1897 that the deaths from puerperal fever in England and Wales were more numerous now than they had been many years ago. Strange to say, the increase in

deaths had been since the introduction of antiseptic midwifery. There were no available statistics in this country bearing on this point. After the administration of the antistreptococcus serum there was often a fall in the temperature, but a very transient one. The pulse rate was not affected. The serum appeared to be both harmless and inactive. The danger from its use lay chiefly in the tendency to the coincident neglect of well-recognized and valuable surgical procedures.

Examination for Streptococci.—There was but one way of determining whether streptococci were present, and that was by exposing the cervix with a speculum and obtaining the discharge directly from the interior of the uterus by aspiration. Unless so obtained, and under the most careful technique, the examination was absolutely worthless.

Statistics from the Foundling Asylum.—Dr. W. P. Northrup said that he had examined the records of the New York Foundling Asylum for 1898. The statistics collected for this year included only those cases in which the diagnosis of diphtheria had been confirmed by bacteriological examination. There had been sixty-seven cases of pharyngeal diphtheria, with four deaths; twenty-four cases of laryngeal, nasal, and pharyngeal diphtheria, with nine deaths—a total of ninety-one cases, with thirteen deaths, or a mortality of fourteen per cent. The antitoxin used was that prepared by the New York board of health. There had been no joint complications and no pains, and at the present time the rashes were but rarely observed. Immunization had been found, in that institution, of greater efficacy in saving lives than the curative treatment. The cases of diphtheria developing in this institution, the speaker said, had been, of course, treated early, but there had been many children brought in from outside, sometimes with the disease far advanced. Of the thirteen fatal cases, five had been under one year of age, five between one and two years, and three between two and three years old. None of the fatal cases had been eliminated in compiling the statistics. In all, the bacteriological diagnosis had been that of true diphtheria. Many of these children had been affected with rickets and other diseases and had been poorly nourished. Considering the poor material, the results seemed to him exceedingly satisfactory.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, February 7, 1899.

Joseph Collins, M.D., Vice-President, in the Chair.

Two Cases of Partial Spinal-Cord Injury. — Dr. Pearce Bailey presented two cases of this kind. The first was that of a man who, on December 9, 1898, had fallen several feet, striking on his head, and becoming unconscious. On recovering consciousness there was tingling in both upper and lower extremities. There were no disturbances of the bladder or rectum, and there was no real paralysis. He soon afterward left the hospital, but since then had been troubled with pain and stiffness in the neck, and with numbness in the extremities on the right side. Examination at the present time showed anæsthesia of the right forearm and right leg, more marked in the latter. There was also a difference in the palpebral fissures. The left pupil was the smaller and was less responsive. There were no clonus, no paralysis, and no twitchings. There was a distinct prominence in the cervical region, but the stiffness of the neck was rapidly diminishing. The case was looked upon as one of slight unilateral hemorrhage in the sixth cervical segment, with possibly some contusion.

The second case was that of a man, forty-three years of age, who had been squeezed between two heavy masses in an elevator shaft last November, and while thus caught the elevator had descended upon his head and pressed him down to the floor. He had not regained consciousness until after reaching the hospital. There were then severe pain in the neck and tingling in the fingers. He had control over the bladder and rectum. Examination at the present time showed anæsthesia over the right deltoid region and exaggeration of all the reflexes, but the right patellar reflex was not so lively as that on the left side and there had been a left foot clonus. The case was an incomplete type of Brown-Séquard's paralysis. In view of the forcible flexion of the neck, it was almost certain that there had been a hemorrhage into the cord.

Dr. Edward D. Fisher said that he had at present under observation a case giving a rather striking history, yet he had not been able to convince himself of the existence of a serious lesion within the spinal cord. His patient, a boy, while playing football, had been seized by the chin and the head dragged forcibly down on to the chest. He had lost consciousness for about an hour. Following this there had been complete loss of sensation about the shoulders and considerable difficulty of respiration. When seen by the speaker, one month later, the right arm had been very much more affected than the left; there had been evident wasting of the hand muscles; the reflexes had been greatly exaggerated, and sensation of all kinds had been considerably modified. This condition had improved for several weeks, but about eight weeks after the injury the left side had shown marked wasting, while the right had improved. The boy had then been placed in a spinal support, and had greatly improved, although the reflexes were still exaggerated. His diagnosis of the case had been meningeal hemorrhage and possibly a slight hemorrhage into the spinal cord, but because of the history just given he could not feel that there had been a very serious loss of substance in the spinal cord. The condition of the reflexes seemed to indicate some compression outside of the cord, either the result of hemorrhage or of slight dislocation of the vertebræ. Three months had now elapsed, yet the boy was only just able to move around. Unless there were paralyses associated with atrophy, he did not feel sure of the existence of a large hemorrhage into the cord.

Dr. George W. Jacoby said, in this connection, that he believed cases of this kind were examples of subarachnoid hemorrhage, and the diagnosis could be made by lumbar puncture. If pure fluid, free from admixture with blood, were drawn off, there was evidently no subarachnoid hemorrhage. He also thought that this procedure possessed some therapeutic value.

Dr. Bailey said that the diagnosis in his cases had been based mainly on collateral evidence. The records of autopsies showed that extradural hemorrhages were extremely rare, except when associated with mutilation of the cord. In the examinations that he had made on spinal cords of several persons who had met violent death from general traumatism, he had found small hemorrhages into the cord without any fracture of the vertebræ. This was particularly true of injuries in the cervical region.

A Case of Spinal-Cord Lesion with Anomalous Symptoms.—Dr. W. M. Leszynsky presented a man, thirty-five years of age, a native of Sweden. He had first come under observation in May, 1898, but had returned on January 21, 1899. In June, 1896, he had fallen from a considerable height, and this had been followed by paralysis of the lower limbs. There was an area of anæsthesia on the right buttock, and he also had retention of urine. He now complained of frequent numbness and burning sensations in both feet and legs, often with incontinence of urine. There

was no previous history of alcoholism or syphilis, and he was a well-developed, healthy-looking man. On attempting to stand there was marked clonus of both lower extremities. In the sitting position he could fully extend both legs. While in the prone position, voluntary flexion of the legs on the thighs was impossible. All of the paretic muscles were flaccid, and electrical examination showed decrease in faradic irritability. Ankle clonus was well marked and persistent on both sides, as was also the Achilles reflex. The left knee jerk was absent, and the right knee jerk was barely perceptible. There was, however, a contraction of the vastus externus. Sudden and forcible pressure downward on the gluteus medius muscle on both sides produced a persistent clonus. There was a mild cystitis present. Over certain areas on both legs there were complete analgesia and marked impairment of the temperature sense. The preservation of the tactile sense and its bilateral distribution substantiated its spinal origin. The abdominal reflex and the left knee jerk were the only reflexes absent. Perhaps the most peculiar feature of this case was the presence of ankle clonus with loss of the knee jerk. The lesion evidently extended irregularly from about the tenth dorsal to the upper sacral segment.

Demonstration of the Brain of a Case of Sensory Aphasia.—Dr. Joseph Collins reported the case of a negress who had had sensory aphasia. The patient when first seen had had a moderately typical hemiplegia, and at intervals of eight months she had had attacks of epilepsy. The most striking defects of spontaneous speech were amnesia of words, particularly of nouns, and paraphasia. She could usually tell her name, but not the names of members of her family or her residence. It was impossible for her to repeat the simplest sentence after it had been spoken.

She could sing the airs of popular tunes, but could not get the words in right. There was loss of comprehension of written and printed words. After repeated examinations it had been finally decided that right lateral hemianopsia existed. There was a slight degree of word deafness, which became more apparent the longer the case was studied; it was due apparently to functional word degradation. There was apparently a lesion of the visual centre and subjacent white substance. If she were asked to say "B," she might say "C" instead, and in other ways she presented many instructive contrasts in connection with her aphasia. She died about two months ago. On postmortem examination the brain was extremely small, and the left hemisphere was distinctly smaller than the right. There were also three areas of softening in the left hemisphere—one involving the middle third of the ascending parietal convolution; a second area situated in the posterior end of the inferior parietal convolution, and involving the entire angular gyrus, except its inferior portion; and a third area in the posterior end of the supratemporal convolution. The first area of softening measured three centimetres perpendicularly and one-sixth centimetre at the widest part. The second area was the largest, measuring in its antero-posterior diameter two centimetres, and one and one-half centimetres vertically. The most conspicuous alteration of the superior temporal convolution was its shrinkage, until, as compared with the other side, it looked like a ribbon. The pia was not adherent except one portion on the left side, and over the posterior end of the fissure of Sylvius. When the pia was stripped from the fissure of Sylvius it was seen that the destruction of tissue in the areas referred to had been greater than had appeared at first sight. The cuneus had remained intact. The base of the brain showed no abnormalities, except the relative smallness of the left hemisphere. The optic nerves and chiasm were normal; the blood-vessels were not thickened, and there was no evidence of meningeal inflammation. The medulla oblongata and cerebellum were normal in appearance and relationship. These findings seemed to him exceedingly interesting, in view of the clinical history and the diagnosis made during life. He expected, on dividing the brain, to find that the optic radiations had been severed, thus giving rise to the homonymous hemianopsia.

Dr. Fisher expressed his surprise that in a case lasting only three years there should have been such a marked difference in the two hemispheres.

The Relation of Infantile Spinal Paralysis to Spinal Diseases of Later Life.—Dr. William Hirsch read this paper. He said that various theories had been propounded to explain the relation between the infantile paralysis and the later disease. Charcot had expressed the opinion that there existed in some individuals a certain vulnerability of the ganglion cells of the anterior horns which, in some period of life, might give rise to a poliomyelitis anterior, and at another period cause progressive muscular atrophy. Another view was that the old scar produced by the inflammatory process in the gray matter of the anterior horns formed a latent, but permanent, inflammatory focus, which might be rekindled at any time. But the very varying clinical aspects presented by the nine cases on record would seem opposed to such a theory.

The following case had come under his own observation: A tailor, forty-five years of age, had presented himself in October, 1895. He denied having had syphilis, and gave a good family history. He had been in perfect health up to three years before, when his left leg had become stiff and weak. This steadily grew worse, and after a time the right leg became similarly affected. There were no sensory symptoms at this time, or disturbances of the functions of the bladder or rectum. There was an atrophic condition of some of the muscles of the trunk and upper extremities. There were also fibrillation of the muscles of the trunk and shoulder, and diminished excitability in the deltoid and supraspinatus. There was no atrophy in the lower extremities. The tendon reflexes of the lower extremities were considerably increased. Abdominal clonus often came on spontaneously, to the great annoyance of the patient. The reflexes of the upper extremities were not increased. The muscular sense was not impaired. Speech was not at all affected. There was no nystagmus, and the reaction of the pupils to light and accommodation was normal. The deltoid muscle had almost disappeared, and the biceps and triceps and pectoral muscles were greatly wasted. According to the statement of the patient, this condition of the muscles had existed since childhood. Apparently, when about two years old he had had an attack of infantile paralysis, which had left behind the condition of the left upper extremity. The case had been presented by the speaker to this society on October 1, 1895, and he had then maintained that the lesion was apparently in the left anterior horn of the cervical cord. The diagnosis then had been amyotrophic lateral sclerosis. The spastic condition of the lower extremities had become gradually worse after that time, so that since January, 1897, walking had been impossible, and since last March the patient had been forced to remain in bed. The lower limbs were exceedingly rigid, and he suffered much from shooting pains. The paralysis of both upper extremities became more intense, until these extremities could be moved but little. Sensation remained perfectly normal. In April he experienced some dysphagia, and within a month could not swallow any food. He died on April 14, 1897.

The autopsy was made a few hours after death, the brain and spinal cord being the parts examined. The central convolutions were of the same size on both sides. Coarse sections of the medulla oblongata showed noth-

ing abnormal macroscopically. The brain, medulla, and cord were hardened in five-per-cent. formalin solution, and serial sections made throughout the cord. The left anterior horn of the second cervical segment showed marked shrinkage, and there were scarcely any ganglionic cells left here. On the right side the ganglionic cells were present, but were atrophied, and in a chromophilic condition. There was a proliferation of the blood-vessels in the gray substance, and the perivascular spaces were enlarged. This condition of the blood-vessels and perivascular spaces was found throughout the cord. In the third and fourth cervical segments there was a proliferation of connective tissue, starting from the left anterior horn and extending into the white substance. In the fifth cervical segment the left anterior horn was considerably smaller than the right, and the gray matter was more vascular. The proliferation of connective tissue was more marked here than in the previous segments. The further downward the examination was made, the more extensive was this connective-tissue proliferation on the left side and the proliferation of blood-vessels. The same condition of connective-tissue proliferation existed to a lesser degree on the right side. Below the second segment no normal ganglion cells were found in the left side until the eighth segment was reached. On the right side all of the ganglionic cells of this segment appeared normal. On the left side were to be seen groups of muscle cells, but in an atrophied state, except those corresponding to the outer group of the upper extremity nucleus. At the sixth dorsal segment the entire gray and white substance was destroyed by connective tissue, so that the specimen looked like one taken from a case of transverse myelitis, except that the peripheral zone had remained intact. The blood-vessels were numerous, and the perivascular spaces enlarged. Emboli and small hemorrhages into the cord were frequently observed. At the eleventh and twelfth dorsal segments the cord became more nearly normal, but the fan-like proliferation of connective tissue was still visible in the left horn. In the first lumbar segment all of the muscle cells were present, but they were more or less atrophic. At the third lumbar segment the fan-like proliferation disappeared and the white substance became entirely normal. In the fourth lumbar segment no cells were found in the left anterior horn. Examining the cord from the second cervical segment upward, it was found that the connective-tissue proliferation involved especially the pyramidal tract. The cell layers of the cortex, over all parts of the brain, had been carefully examined, and found to be perfectly normal. Nothing abnormal was found in the optic thalamus or the corpus striatum.

The microscopical examination, Dr. Hirsch said, therefore confirmed the diagnosis made at the time of presenting the patient to the society. The clinical course of the disease had certainly been in favor of this diagnosis, giving, as it did, the three stages described by Charcot, viz.: (1) atrophy, (2) rigidity with muscular contractures, and (3) bulbar symptoms. However, the pathological findings did not support the diagnosis of amyotrophic lateral sclerosis. This must be looked upon as a systemic disease—a primary degeneration of the motor neurons. Was this case, then, a neuron disease, or was it an example of some other pathological process in which the neurons had become affected secondarily? He was disposed to accept the latter view, and his reasons were: (1) That the connective-tissue degeneration and the enormous proliferation of the blood-vessels did not indicate degeneration of the neurons; (2) the topography of the inflammatory process—the spreading in all directions without regard to systems, and especially shown in the dorsal region; and (3) the atrophy of the ganglionic cells, which was not in proportion to the changes in the surrounding tissue. The case was apparently one of interstitial myelitis, probably of vascular origin. Recent investigations in cases of infantile paralysis, he thought, had made it clear that the disease was not a systemic one, but a specific inflammatory process. The anterior horns were affected because of the abundant blood supply of these parts. The atrophy of the cells was dependent upon the distribution of the smaller branches of the central vessels. As to the question of the relation between infantile paralysis and the later affection, Dr. Hirsch said that the theory of the old scar of the infantile palsy forming a latent inflammatory focus seemed to apply to the case just reported by him. It did not seem necessary to assume that there had been a new infection to explain the rekindling of this inflammation. In his case the fact that the cortical cells were normal gave weight to the statement that the case was not one of systemic disease, but a local inflammatory process, *i.e.*, a myelitis.

Dr. Edward D. Fisher said that he certainly agreed with the reader of the paper that it was not a case of amyotrophic lateral sclerosis. The point had been very clearly brought out that many cases formerly diagnosticated as systemic diseases were really various forms of diffuse myelitis. Many cases of poliomyelitis were met with which extended over a long period, and yet they did not give rise to the condition found in the case just reported; hence the direct relation of the inflammatory condition to the original poliomyelitis could not be definitely established. It would seem fair to assume that some irritation might be the cause of it. The theory of Strümpell, that there was a virus which could remain latent for many years and then exert its influence, seemed to him very far-fetched. He would like to ask whether there was any direct connection between the bulbar symptoms and the spinal symptoms which were present primarily. The clinical picture of poliomyelitis was almost perfect, so that no other diagnosis could be expected under the circumstances. The paper was an exceedingly valuable contribution to neurology.

Dr. Leszynsky said that he had had under observation for eight years a lady forty-eight years of age, who during her childhood had had a poliomyelitis. This had left her with an incompletely paralyzed limb. Some years later she had developed loss of power in both lower extremities, and when first seen by him some years ago there had been all of the signs of a progressive chronic poliomyelitis in both lower extremities. It had progressed, although very slowly, since that time. This seemed to indicate the possibility of a direct relationship between the old lesion and the later one, but this was the only case of the kind that he had ever encountered.

Dr. George W. Jacoby asked if cases of encephalitis occurred at all, or frequently, in later life after cerebral hemorrhage in childhood. He had seen one such case, in which an encephalitis occurred in an adult who had had a cerebral hemorrhage in childhood. There seemed to be an analogy between this and the case reported in the paper, and he would like to hear further along this line.

Dr. Joseph Collins said that it did not seem to him that there was any relation between the poliomyelitis and the diffuse myelitis occurring later in life in Dr. Hirsch's case. He could not imagine how the previous scar could have anything to do with starting the later inflammation from which the patient died. According to clinical experience, with the bare exception of keloid, scars were not the starting-point of such pathological processes. The whole thing seemed to him a mere coincidence. In spite of the great care exercised in the examination, he had not been convinced that any definite relation between the two dis-

eases had been demonstrated. It was naturally very gratifying to him that Dr. Hirsch's study had confirmed his own observations regarding the allocation of function of the posterior group of cells in the eighth dorsal segment. The explanation offered by the reader of the paper for not having found changes in the Rolandic cortex also seemed very plausible and trustworthy. He certainly agreed with Dr. Fisher that it was ridiculous to suppose that a scar could lock up a poison for half a lifetime, and then allow it to come out and produce disease.

Dr. Hirsch closed the discussion. Regarding the connection of the bulbar symptoms and the spinal-cord symptoms, and the relation between the infantile spinal paralysis and the later disease, he said that he had quoted theories largely, but it seemed to be an actual fact that the pathological process started from where the so-called scar of the poliomyelitis had been. This had been proved both by the clinical symptoms and the pathological findings. The fan-like proliferation of connective tissue into the pyramidal tract accounted for the rigidity of the limbs at the beginning of the later disease. The order of development of the symptoms seemed to point to the origin of the later disease from the left anterior horn. Strümpell had compared the "scar" to a tuberculous focus—evidently not an absurd comparison. He had found the report of a case of infantile poliomyelitis, in which encephalitis occurred in later life.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, February 20, 1899.

Frederick Holme Wiggin, M.D., President.

A Case of Acromegaly.—Dr. William Leszynsky presented a case of acromegaly occurring in the person of a policeman, thirty-six years of age, a native of the United States. His father, who was over six feet in height, and who had remarkably large feet and hands, died at the age of fifty-four years from some disease, the nature of which was not known. The patient himself had been on the police force eleven years, and at the time of his marriage, nine years ago, had been in perfect health. For many years he had drank whiskey to excess. For the past year there had been complete sexual impotence. Although his companions had frequently joked with him about his large hands and feet, he never suspected that this was the result of disease until he visited the Manhattan Eye and Ear Hospital because of failing vision. One year ago he had first been troubled with blurred vision, and this had gradually become worse, until during the last three months he had been unable to read. He had had more or less headache for some time, but this had recently become very intense. There had been neither vertigo nor vomiting. Up to two months ago he had had what he called a "fierce appetite," and experienced great thirst. Lately he had been somnolent in the daytime. He had suffered from numbness of the hands. About five years ago he had first noticed that his hands and feet were growing large, but he thought they had not grown much during the last two years. Somewhat later he noticed a protrusion of the lower lip and lower jaw, and during the past two years the sense of smell had been absent. His height was six feet one inch, and his weight two hundred and forty-five pounds. The lower jaw was considerably enlarged, and projected half an inch beyond the upper jaw. The lips were thickened and everted. The tongue was two and one-half inches wide, and its surface was corrugated. The alveolar processes and hard palate were enlarged, as were also the vocal cords, epiglottis, and the faucial pillars. The bones of the face generally were enlarged, and the occipital protuberance was enormous. From the photographs presented it was evident that the disease had not been present in 1887. At present, both clavicles and the sternum were enlarged; the pulse was 84 and regular; the heart, lungs, and other viscera presented no evidence of disease. The bony enlargements were really hypertrophies or giant growths. There was enlargement of all of the bones of the feet, and the length of the foot from the tip of the great toe to the heel was eleven and one-fourth inches. Skiagraphs of both hands were exhibited, together with the visual fields. Examination of the eyes showed the reaction of the pupils to be very sluggish, and one side of the retina was insensitive to light, while the other side remained responsive. The central vision was $\frac{2}{10}$ in each eye. The visual fields for white, red, and green were considered to be especially characteristic. The sense of smell had been absolutely abolished. The general condition of the man was such as not to interfere with his duties, which were, for the most part, indoors.

Dr. Leszynsky said that the disease had been first described twelve years ago, and that since that time one hundred and forty cases had been reported. All of the phenomena of the disease had been attributed to changes in the pituitary body or apophysis, and the theory had been advanced that this gland possessed a function analogous to that of the thyroid gland in myxœdema. In all of the autopsies the apophysis had been found diseased, and therefore it had been assumed that its secretion normally inhibited bone development. In the case presented, the visual disturbance afforded unmistakable evidence of the involvement of the apophysis. The chief points in the early diagnosis were the peculiarities of the visual field, the preservation of central vision, the loss of the sense of smell, the headaches, the sexual impotence, and the slight enlargement of the terminal phalanges. The conditions likely to be confounded with acromegaly were giantism and pulmonary hypertrophic osteo-arthropathy. In the latter the enlarged and club-shaped fingers and toes and the enlargement of the wrists were invariably associated with pulmonary disease. It had been supposed that the tubercle bacilli had entered the circulation, producing some reaction in the terminal portions of the body. Many forms of treatment for acromegaly had been attempted, without success. Thyroid gland had been tried, but it had had no effect on the disease. The desiccated pituitary gland had also been used in a few instances, and with apparently some benefit.

Allied Affections.—Prof. Oliver T. Osborne, of the Yale Medical School, was invited to discuss the subject. He said that he had studied very carefully a case of acromegaly that had come under his own observation. A large number of photographs and skiagraphs of this case were exhibited. A case of acromegaly, he said, could be distinguished from one of osteo-arthropathy by the hands alone. In the former the fingers were large and the nails were large in proportion, whereas in the latter the fingers were sausage-shaped and the size of the nails was not proportionate to that of the digits. At the autopsy on his case, a tumor had been found in the sella turcica, which was apparently of the adenomatous type. There had been no optic symptoms during life, probably owing to the bony formation of the sella turcica, which prevented pressure forward. The thyroid gland was that of myxœdema, the enlargement consisting mostly of connective tissue. There was also present a "thoracic thyroid." He believed that, without any question, the cause of acromegaly was to be found in the growth of the pituitary body. The thyroid gland was always

found diseased. He was of the opinion that giantism was only a part of this condition—possibly it was the result of an increased normal output of the secretion of the pituitary body, whereas acromegaly meant an abnormal output of the secretion. In giantism one side was generally larger than the other, and if the giant lived long enough he usually developed acromegaly. In the early part of the disease, owing to the enlargement of the soft parts, there was often a resemblance to myxœdema. In acromegaly the thyroid gland might become cystic, and this might be associated with rapid cardiac action, palpitation, and other symptoms of thyroid disease. Some observers had claimed to have found a persistence of the thymus gland in this disease, but he believed this to have been an error of observation, the mass not being a thymus gland, but a thoracic thyroid. This thoracic thyroid was a typical new growth of the thyroid gland, while enlargement of the thyroid itself was perfectly typical of that found in myxœdema. A patient with acromegaly rarely sought advice until some symptoms arose as a result of the brain pressure. His patient had been insane and maniacal for two months, after which he had suddenly recovered his mental condition, and it had never recurred. Ordinarily the headache was very intense; in his own case it had been directly over the pituitary body, and the autopsy had revealed a plate of bone making pressure at this very point. To him the subject was exceedingly interesting, because it brought up the study of the internal secretions.

Dr. R. Abrahams said that one year ago he had seen an incipient case of acromegaly. The patient, a woman, twenty-five years of age, had been presented to the Eastern Medical Society. The study of the subject had impressed him with the fact that in a good many reported cases of acromegaly diabetes had been present.

Dr. Leszynsky said that three specimens of urine from his patient had been examined, but they had all been free from both albumin and sugar, and, although the quantity voided had been somewhat excessive, there had been no marked variation from the normal specific gravity. Microscopical examination had shown that the anterior portion of the pituitary gland possessed the larger amount of physiological function. Probably in his case it was the anterior portion that was specially involved. When there were no eye symptoms and the acromegaly was not well marked, it might be that the posterior portion was more involved than the anterior.

Address of the Retiring President.—Dr. George Tucker Harrison delivered this address. He said that he did not agree with those who thought quackery was on the increase; on the contrary, he was of the opinion that the public was becoming more and more familiar with the requisite qualifications of an educated and competent physician. He besought the younger members especially not to be diverted by any specious arguments from the path of truth, honor, and rectitude; no profession held out higher rewards for those who were properly equipped, although it could not be denied that often the compensation was to be found chiefly in the sense of gratification at the good accomplished. He had heard that eminent divine, the late Dr. John Hall, declare that he envied Dr. J. Marion Sims for the feeling of supreme happiness that he must have had when he thought of the noble work that he had accomplished in the relief of human suffering. It was impossible to divorce the medical profession from sentiment, and it could never be placed on a commercial basis

Inaugural Address of the President — The Code of Medical Ethics Not Narrow or Antiquated.—Dr. Frederick Holme Wiggin, the newly elected president, embraced the opportunity afforded by his inaugural address to enlighten both physicians and laymen regarding certain important aspects of the code of medical ethics. He particularly disclaimed any intention of stirring up old strifes, asserting that he had selected this topic solely because he had long been impressed with the fact that there existed quite generally certain misapprehensions on this subject. For example, within a few months he had been told by a high official of the Homœopathic State Medical Society, that when the American Medical Association and its affiliated societies were ready to open their doors to those entertaining different views from the majority concerning the action and dosage of drugs, he, for one, would be willing to leave his organization, discard his sectarian title, and apply for membership. This gentleman was not the only one who seemed not to know that this very position had been taken by the American Medical Association years ago. Although the code of medical ethics had been freely criticised, and often roundly abused, the fact still remained that the medical profession had dwelt in harmony under its guidance from 1848 until 1882. In the latter year the New York State Medical Society had sounded the first note of discord by adopting a different code. As this was directly opposed to the bylaws of the national organization, the judicial council of the latter society had, by a unanimous vote, excluded the New York delegation. This, of course, left those members in New York State who did not approve of the innovation without representation in the national body. They were accordingly forced, in self-defence, to organize the New York State and the New York County Medical Associations. The speaker said that such divisions were always to be deplored, but in this instance it was especially unfortunate, because the action of the New York State Medical Society arose from a misunderstanding, and hence was wholly unnecessary. With a view to restoring harmony and clearing up all doubts regarding the main question at issue, that of consultations with homœopathic practitioners, the American Medical Association had adopted, in May, 1884, a series of "explanatory declarations." These made clear the fact that the national code of medical ethics contained no provision in any wise inconsistent with the broadest dictates of humanity and the exercise of the most perfect liberty of individual opinion and practice, and asserted that the true ground for declining professional fellowship with any class of practitioners was not a belief in any particular dogma, but the adoption of sectarian names as trademarks and the formation of organizations antagonistic to the great body of the profession. Certainly, Dr. Wiggin said, this interpretation of the code had opened the door for the return to the national association of the members of the New York State and county societies. That the members of the County Medical Society, and presumably of the State Society, had at last realized this fact, seemed evident from the following passage taken from the inaugural address in 1897 by the president of the County Society, Dr. Arthur M. Jacobus, who, in referring to certain sectarian practitioners, said: "If they will but drop the sectarian title for that of 'physician,' pure and simple, and let the old and new school questions die out, I am sure we will welcome them with open arms." In closing his address, Dr. Wiggin predicted that, although possibly the profession might have to wander a little longer in the desert of disorganization, there would soon arise a Moses who would lead them into the promised land of union and strength; and he expressed the earnest hope that when the time should come for all educated physicians throughout the State to join hands, the larger reorganized society would adopt as its motto this paraphrase of the watchword of the famous "Musketeers" of Dumas: "The profession for the individual practitioner, and the individual practitioner for the profession."

Some Observations on Warburg's Tincture.—Dr. Von Beverhout Thompson read a paper with this title. He said that a person under the influence of Warburg's tincture would, according to Reynolds, be drenched with perspiration and the skin would exhale a peculiar aromatic odor. Personally he had not noticed such profuse perspiration or the peculiar odor, but it should be noted that our tincture differed in certain important particulars from that used in India, and it was not improbable that its composition was very dissimilar. There were at least ten different tinctures made and sold under the name of Warburg's tincture. Most of them contained ten grains of the sulphate of quinine to the fluid ounce. There was also a modified tincture containing only three ingredients beside the alcohol, *i.e.*, cinchona, cinchonidia, and chinoidin. The great variability of its composition would, in all probability, explain the different therapeutic results observed. He had been informed that a great deal of the Warburg's tincture found in our market contained only quinine, aloes, and camphor.

Dr. Thomas H. Manley remarked that the genuine Warburg's tincture was a proprietary medicine, and its manufacture was completely controlled by the British government. It cost in this city one dollar per ounce.

Dr. Wickes Washburn said that the Cuban fevers seen by him at Montauk Point had not seemed to yield so well to Warburg's tincture as to a combination of the bimuriate of quinine with urea.

Dr. Thompson, in closing the discussion, said that his object in presenting the paper was to call attention to the fact that much of the so-called Warburg's tincture in the market was nothing more than a mixture of quinine, aloes, and camphor. The tincture had been originally a proprietary preparation, but its composition had been published in the London *Lancet* in 1875.

Prolonged Sleep in the Treatment of Chorea.—Dr. Louis Lichtschein read this paper. He said that the duration of chorea was usually from sixty to ninety days, and that the idiopathic cases usually recovered without treatment. In a small minority the disease lasted for years, the patient becoming anæmic and even impaired mentally. In view of the fact that choreic movements generally ceased during sleep and returned slowly after awakening, it had seemed to him reasonable to suppose that the disease could be controlled by artificially induced sleep. He had found that patients under the continued influence of chloral hydrate craved food and assimilated it readily. To produce the desired somnolent condition it was necessary to use large doses—ten or fifteen grains at first. The sleep should be superficial enough to allow the patient to respond when spoken to loudly, and still sufficiently deep to keep him quiet. If strychnine were given coincidently, in small doses, the depressing action of chloral hydrate on the heart could be prevented. He had treated according to this method three cases of chronic chorea, all of them with excellent results. A number of authors were quoted to show the good effects obtainable by this treatment, and its comparative harmlessness. If possible, the patient should not be awake more than half an hour at a time. In one of the cases reported, the patient had been kept asleep for three weeks, and had received during that time a total quantity of one hundred and sixty grams of chloral. During this period the chorea had been controlled, and she had gained over twenty pounds in weight.

Strychnine and Chloral Antagonistic.—Dr. A. Jacobi was invited to discuss the paper. He said that he was heartily in accord with the treatment, and as proof of this cited the fact that he had recommended it in his published writings. It was true that a large dose of chloral was requisite, but the dose must be determined for each case. It was a mistake to give strychnine with chloral, for these drugs were antagonistic. Children affected with chorea should be kept asleep for periods of from fourteen to twenty-four hours. It should be remembered, however, that no one treatment could be recommended for all cases of acute chorea, as the etiology was quite various.

Dr. Washburn asked what would be the objection to giving bromide of potassium with the chloral with the object of reducing the quantity of chloral needed. He had used this combination with much benefit in delirium tremens, and thought it might be applicable to cases of chorea.

Dr. O. T. Osborne said that from the physiological action of the drug he would feel, with Dr. Jacobi, that part of the effect of the chloral would be lost by giving strychnine with it. Both bromide of potassium and chloral hydrate were depresso-motors, and both produced sleep. He had not personally used chloral in such large doses as had been mentioned in the paper, but was glad to know that it could be used in this dosage. Personally he would feel safer to use a combination of bromide and chloral rather than such large doses of chloral alone.

Dr. Lichtschein said that he had not been aware of the physiological antagonism mentioned by the speakers. Regarding the use of bromide of potassium and chloral, he said that his objection to this combination was that it interfered with the patient's appetite.

The Present Attitude of the Medical Profession toward Illegal Practitioners.—Dr. Thomas J. Hillis read this paper in abstract, owing to the lateness of the hour. He discussed chiefly the evils arising from the methods of abortionists and advertising quacks, and recommended that the regular medical profession fight them with their own weapons, remembering that they were shrewd and unscrupulous, and well supplied with money. It was very difficult, he said, to send these lawbreakers to the penitentiary, when the district attorney and prominent clergymen gave testimonials as to the efficacy of the treatment they had received from these very offenders against public morality. As officers of the law claimed that they could not deal with these persons because they could not get the necessary evidence, it was evidently the duty of the profession, and particularly of the County Association, to procure this evidence for them.

Quackery not Increasing.—Dr. A. Jacobi, being invited to open the discussion, said that the author of the paper had presented a singularly vivid description of the doings of certain illegal practitioners. When the so-called educated classes were found on the side of clairvoyants, Christian scientists, and quacks in general, as they were, it was obviously very difficult to eradicate quackery. Even in Europe they had not succeeded in doing this. The courts of justice could do a good deal, but, in his opinion, the medical profession could do a great deal more. He was positive that if the profession thought more of itself, there would be less illegal practice. In Europe the medical profession was ruled by the government, and was told what should be its ethics. He did not believe quackery was on the increase here, and if the entire medical profession would work together a great deal more would be accomplished. The County Medical Society had been doing most excellent work in this direction for many years, and if the improvement that had been going on for the last fifteen or twenty years in medical education and morals was continued, still more would be done in the way of successfully combating quackery.

Reasons for the Existence of Quackery.—Dr. L. Duncan Bulkley said that at the present time, as physicians received their degrees from a State board,

they were as much State officers as were lawyers. For years the County Society had paid legal counsel for the express purpose of prosecuting illegal practitioners. The remuneration for such services had, in one year, amounted to as much as $3,000. He did not believe the laity were anxious to be humbugged, and the reason they were humbugged so easily was because of lack of knowledge as to the requirements of properly educated physicians. Another reason was to be found in the present great tendency toward therapeutic nihilism. We could not fight the advertising quack with his own weapons, as had been advised by the reader of the paper, for advertising by the regular medical profession was the beginning of a long train of evils. Much of the work of the manufacturing chemists of the present day was really a secondary form of quackery, and the profession should steadfastly set its face against it.

Dr. Hillis, in closing the discussion, said that in stating that these illegal practitioners should be fought with their own weapons, he had simply meant that they should be fought with the same energy as they themselves displayed.

Report of the Committee on Legislation.—Dr. E. Eliot Harris, the chairman, reported that the committee had under consideration no less than ninety-six bills relating to medical subjects. Among these were two bills for controlling dispensaries—one being the dispensary bill of last year, and the other a measure providing for a board of control. The latter was generally known as "the dispensary managers' bill," and had been practically abandoned in favor of the older bill with certain modifications.

Committees Appointed.—The following committees were appointed: *Committee on Medical Charities and Public Health:* Drs. Louis Fischer, Charles Ignatius Proben, Wickes Washburn, M. C. O'Brien, and J. H. Woodward. *Committee on Ethics and Discipline:* Drs. J. Harvie Dew, J. Blake White, John A. Wyeth, J. E. Messenger, and Dwight L. Hubbard. *Committee on Legislation:* Drs. John T. Nagle, Douglass Hunt Stewart, George D. McGauran, William T. Jenkins, and E. Eliot Harris.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

OBSTETRICAL SOCIETY—PRESIDENT'S ADDRESS—EPIDEMIOLOGICAL SOCIETY—CEREBRO-SPINAL MENINGITIS—PARLIAMENT—LUNACY LAW—THE LATE THOMAS COOKE.

London, February 10, 1899.

Dr. Cullingworth delivered his farewell address as president at the meeting of the Obstetrical Society on the 1st inst. He remarked on the further slight falling off in numbers and urged fellows of the Society to bestir themselves to keep up the supply. He regarded as the most important event during his year of office the issue of a code of rules to be observed by midwives holding the society's certificates. Not that he expected those rules would meet with universal approval, but he thought it would be admitted that they go a long way toward meeting the requirements. The curious thing on this subject is that the preparation of those rules should have been left to the year 1898. As to the examination of midwives, Dr. Cullingworth admitted that the society still labors under a certain amount of professional opprobrium, which he thought undeserved, though it may account for some of the falling off in numbers. He declined to argue the matter on such an occasion, but declared the society had undertaken the work only from a sense of duty and as a temporary expedient until Government will move, when they would gladly relinquish a task which only a government could properly perform. Can you imagine a more lame excuse? What business has a private society to take up a task that belongs to Government alone? Sense of duty indeed! Sense of profit—for the society has made hundreds of pounds out of the sale of its sham diplomas. Its disgrace is only surpassed by that of the Medical Council, which once resolved to put an end to this sham diploma trade, and afterward meanly withdrew from the position it had taken up rather than act against a few consulting accoucheurs in the way it would have done against general practitioners. This connivance with consultants contrasts forcibly with the prosecution to the death and after of the late Mr. Hunter.

As to the scientific work of the past session, Dr. Cullingworth gave it an excellent record. There were ten obstetrical and five gynæcological papers, and these he briefly reviewed and concluded with thanks for the support he had received in the discharge of his duties and a compliment to his successor in the chair, Mr. Alban Doran.

After the usual votes some remarks were made by fellows on the midwives' examination, the unpopularity of which is evidently forcing itself on the attention of the fellows.

The Epidemiological Society meets only once a quarter, and, although some subjects have been partially withdrawn from it by modern advances, there is much to attract attention to its objects. At the last meeting Dr. Bruce Low read a paper on cerebrospinal meningitis which was full of information on the various epidemics that have been observed in Europe and America. A more detailed account of outbreaks in the British Isles followed. Dr. Bruce thinks many deaths attributed to influenza have been due to this disease, and the occasional alleged recoveries from tuberculous meningitis are suggestive of this confusion of diagnosis. The disease is generally admitted to be infectious. The "tetracoccus" is characteristic and distinguishes the disease from other forms of meningitis. This organism is so constantly present in the nasal mucus that many regard that as the source of infection. Animals are susceptible, and the epidemics of "influenza" among horses are regarded as cerebrospinal meningitis. The Irish epidemics among pigs, called "purples," are perhaps of the same nature, and some cases in puppies are probably included in the several maladies comprised under the term "distemper." How far the disease may spread by the intervention of domestic animals, and how long the tetracoccus can maintain an extra-corporeal existence, are problems we may hope soon to solve.

Professor Notter remarked that all the cases he had seen in India occurred in crowded barracks. Mr. Stott said the herpetic eruption was considered in America to be diagnostic. Dr. Washbourn objected to the term epidemic, as the disease is often sporadic, especially in children. Dr. Still had found the tetracoccus in all the cases he had examined of post-basilar meningitis in infants, and regarded it as identical.

Several speakers mentioned the differences between the tetracoccal and pneumococcal forms, which can be distinguished by lumbar puncture, and this, Dr. Low said, is devoid of danger if performed below the end of the cord.

The opening of Parliament gives an opportunity to quidnuncs to guess and for the hopeful to prophesy. The Queen's speech had nothing about medical matters except a reference to the plague in India, which is by no means of an encouraging kind, and a word on London water and the adulteration of food. The vac-

cination act is likely to be discussed in the House of Commons; so is the question of tuberculosis. The promoters of the Midwives Bill are busy lobbying, and there are a few whose faith embraces the possibility of an amendment of the medical acts.

Our lunacy laws are so stringent that it is a risky thing for a medical man to receive as a boarder a person of unsound mind. Yet there are many cases that would be best placed under the care of a doctor, and there are practitioners who are glad to devote their talents to such practice. Still, in case of any untoward event the commissioners are sure to intervene, and the result is likely to be harassing and costly to the doctor. A recent case illustrates this. A young lady was placed under the care of a medical man and eventually committed suicide. The doctor was prosecuted and, although exonerated, suffered loss as well as anxiety. A subscription has been begun to indemnify him, but is not at present very successful. This is not very surprising considering that he must have known that there was a distinct risk of such a result. It raises again the question of allowing this kind of practice, but experts are much in favor of it. Every now and then, however, some one gets prosecuted, and either the law should be modified or the practice abandoned. Surely there should be no doubt about the law, and doctors would be well advised to be extremely careful to abide by it in the minutest detail.

I much regret to have to record the death of Mr. Thomas Cooke, F.R.C.S. Eng., M.D. Paris, whose school of anatomy has done much for several generations of students. He was a most successful teacher and took delight in the work and the success of his many pupils. He was also a neat and even brilliant operator and a man of many accomplishments. His agreeable manners and unfailing courtesy were, perhaps, partly the result of his double education, English and French; but still more should be attributed to his sincerity and kindness of heart. He was demonstrating in his dissecting-room the day before yesterday when he suddenly expired. He was for many years on the surgical staff of the Westminster Hospital—the sternest and most thankless stepmother of London schools, which has driven into exile many of her officers and deserves the thanks of none. Mr. Cooke had good grounds for resenting the treatment he received there, but his amiability and modesty led him to bear the injustice with fortitude.

THE NEW PHARMACOPŒIA.

To the Editor of the Medical Record.

Sir:—In the Medical Record of the 11th, you state that the "Committee on United States Pharmacopœia of the State of New York has formulated six propositions," etc. One of the propositions is to exclude from the list in the new edition of the Pharmacopœia the following drugs: "Absinthium, allium, amylum, anthemis, apocynum, asclepias, bryonia, calamus, calendula, cascarilla, castanea, caulophyllum, chenopodium, chelidonium, chondrus, coccus, crocus, cusso, cypripedium, dulcamara, eunonymus, granatum, guaiaci lignum, hedeoma, humulus, inula, iris, juglans, kamala, lappa, macis, marrubium, matricaria, melissa, menispermum, oleum sesami, pepo, phytolacca fructus, phytolacca radix, picrotoxinum, pulsatilla, rhus toxicodendron, rumex, sambucus, santalum rubrum, santonica, stillingia, sumbul, tabacum, tanacetum, and xanthoxylum." If the committee in their wisdom would advise the profession to acquaint themselves with materia medica, I am quite certain that they would hesitate to make such a clean sweep of drugs, some of which are required in daily practice. Is the maxim of Horace, "Vestigia nulla retrorsum," out of fashion in modern medicine, or is the maxim, "Vestigia semper retrorsum," now to be adopted?

T. Griswold Comstock, M.D.

St. Louis, Mo.

OVARIAN TRANSPLANTATION.

To the Editor of the Medical Record

Sir:—In your journal of February 4, 1899, under the caption "An Experiment in Ovarian Transplantation," Dr. J. H. Glass, of Utica, N. Y., tells of having removed an ovary from a young woman of seventeen years "needing the operation" and anchored it "fast in proper position" in another woman who had suffered "double oöphorectomy," and in consequence the beneficiary had an "erotic dream and a slight menstrual flow." He does not say what the benefactress had, but I think she should have had some interest at least in the recipient's progeny had any ever "showed up." Solomon with all his wisdom could not have told to whom the baby belonged by his cleaver process, because neither woman would have "tossed the sponge." Surely it is a "squatter's" claim against a "jumped" claim.

X. B. Haynie, M.D.

Gallatin, Tenn.

CLINICAL NOTES FROM KOREA.

To the Editor of the Medical Record

Sir:—While it is in the every-day cases from which we ought to learn the most, there are none of us who are not prone to interest ourselves in anything rare and unusual. To pander to this craving is what leads me to mention the following several instances.

In the first place, medical missionary work in general is rare work, combining in its scope many interesting features, and by its very virtues, in ministering to a soul diseased, it precludes much scientific work. After getting a grasp on the language we must train some native assistant, and in it all must do all the work in training others that druggist and doctor ever have. And then dental work, as much as one is able, is also a duty. After a year or so, however, one whose idea is to train others instead of doing it himself can have a fairly competent assistant who can fill prescriptions, pull teeth, and attend to certain very wearying duties. I modelled the little institution over which I preside after the hospital department of the United States army, and, though I have had but two assistants and an experience of but three years, I am reporting having seen over twenty-five thonsand patients in the dispensary and about one thousand in the in-patient department in that time. This is outside of several hundred cases of cholera seen and reported on previously. As to how the hospital appeared to a layman, I can best tell by quoting from this letter, which appeared recently in an American religious publication:

". . . I looked out upon the quaint city and its curious folk, and then turned to go into the unpretentious building of mud and cornstalks, stayed by a few beams, roofed with heavy tile, in front of which we had been standing. It was almost the most modest hospital I had ever seen. And yet every week things were done there that were to the simple Korean people as miracles of God. There were no cots; Koreans do not use cots. The floor is the best of beds. There is no rolling off. Moreover, what could be warmer than the mud and stone floor covered with oiled paper? There were a dozen in-patients, several of them cataract cases. It is with these Dr. Wells has had great success. Through the dispensary flows a constant

stream, a thousand a month. And Dr. Follwell, of the Methodist Mission, who has a dispensary inside one of the distant city gates, treats almost as many. This is a specimen list of cases which I dotted down in my note-book as I watched the long line passing through: (1) A young woman nursing a child suffering from eye trouble caused by dirt. The child was tied on the mother's back in such a way as to leave it free to crawl around a-straddle of the mother's hip and to reach her breast, left exposed, as is the case of all Korean married women, between the skirt and a little jacket over the shoulders. (2) A man with a nameless disease (syphilis), his nose eaten off and a great putrid hole in his leg. (3) An old woman with a horribly swollen eye. (4) A man suffering horribly from the itch. (5) A boy with a painful tooth, but howling with fear. He went off in great triumph with the tooth in his hand. (6) An old man with inflammation of the eyelids. (7) Another of the same sort, only much worse, with pus filling the eyes and overflowing. (8) A case of fistula in ano. 'We cut right in, without any preparation, out here,' said the doctor. (9) A case of hernia. No treatment possible. (10) Dysentery.

"And so the stream poured along—the maimed, the sick, the halt, the blind. All who had friends needing healing brought them with divers sorts of diseases and laid them at the doctors' feet. . . ."

Such is part of the pen picture of this little institution as given by Mr. Robert E. Speer, of New York. The above is the usual thing. The unusual is the small amount of money needed to run it, and this averages about $600 a year, $150 of which is obtained from the natives as part payment for their medicines.

I have seen but one case, to recognize it, of heart on the right side. The patient came for some slight trouble, and on looking at his chest I noticed the apex beat on the right side. On examination, we found it one of those rare cases and so enjoyed it. The man was seen by another doctor and a layman.

A boy has a fistulous opening a few inches below the scapula. The fistula extends around to below the navel under the deep tissues, and though we chloroformed him once with the intention of opening it up, it looked too much to attempt, and so it remains as it was, causing but little discomfort and no pain.

The native fever here, a rapid running disease, beginning with a temperature of 106° F. usually, yielding in a few days, with entire recovery in a week or ten days to quinine and phenacetin with baths, is interesting. That there is some malaria with it is sure, for malaria is everywhere on this peninsula, though it is mountainous, differing from the great flats of China. I noticed a list of the five most useful drugs some society had decided on after voting, and quinine was not one of them. I wonder where those doctors lived.

There are not many eye diseases here as compared with places farther south, but on account of a few successful cataract operations patients are beginning to come long distances here. Last year I did seventeen operations for cataract. Since October this year, and in that time I was absent a month, I have done fifteen. There is no preparatory treatment, except sometimes I use eserine five minutes before, with of course rigid cleanliness with soap and bichloride. Iridectomy for obstruction of sight by corneal cicatrices is often necessary. I have done it about a hundred times in the past three years. Strange to say, I haven't had a single enucleation. There were appropriate cases, but as neither the patients nor missionary funds can provide glass eyes, what was the use? I did not have any acute cases needing it.

The most remarkable recovery we've had was the following, though one almost gone with pneumonia nearly approaches it. But this recovery wasn't from pneumonia. A young man had concluded to "go over," as the Koreans say, and so chose the sickle plan. He tried to disembowel himself; harakiri, as it's called in Japan, though there are different degrees of the incision. This man made a small opening just below the navel. The intestines came out, or rather part protruded. He was brought in that condition to the hospital. In my absence Dr. Miss Fish and my Korean assistant enlarged the opening and reinserted the gut. It adhered, however, to the side of the opening. A portion of the intestine ulcerated off, and an artificial anus was formed. The adhesions around prevented any fecal matter passing into the abdominal cavity. This was the condition of the patient when I saw him. All the discharges were passing through the artificial opening. The father and friends were very anxious for me to "do something." The condition was well enough, so I let it alone. I applied nitrate of silver to the edges, gradually withdrew the tube, and finally closed the opening and compelled the passages to go out the natural channel. I applied more silver, and soon had the opening closed and sent the boy home well.

I was called to see a case of compound, complicated, comminuted, complex, and complete fracture of the tibia and fibula; abscesses—rot—all but gangrene—terrible! I advised amputation as the only chance. The patient wouldn't consent, but put on dirty dressings and treated it as crudely and as improperly as possible. The man got well, though, with only a slight crook in his leg.

There is much about this necessarily loose way in which we have to practise, with its remarkable recoveries from typhoid and other such severe diseases, and the apparently careless way in which so much of our ministering to them must be done, and the prompt recoveries which seem to follow, that forces one to think a good many things about medicine and drugs and diet and rest and "accepted notions" that one wouldn't like to write for a medical journal or read before a medical society. I am trying to evolve some of the ideas which my experience with the thousands out here are pushing me with, and some time in the future I may write some confessions.

DR. J. HUNTER WELLS.

PYENGYANG, KOREA.

"NEW METHOD OF ABDOMINAL HYSTERECTOMY."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of the MEDICAL RECORD, February 4, 1899, a notice is given, on page 164, to a supposed "New Method of Abdominal Hysterectomy," published in the November number of *The Cleveland Medical Gazette*, by Dr. Elmer C. Myers.

I have no disposition for controversy or a desire to dispute another's claims, but in this instance I cannot resist the temptation to enter a protest against the assumptions of Dr. Myers, and for two reasons: First, that he states nothing that has not been thoroughly exploited by others, and, in particular, by Dr. E. H. Pratt, a homœopathic surgeon of Chicago; second, that the method proposed is visionary, impossible of successful performance, and misleading. The claims advanced, without proper crediting by Dr. Myers, were exhaustively treated and circulated by Dr. E. H. Pratt in 1893. The latter described and widely published his method of enucleating the uterus without entering the peritoneal cavity, and asserted that all that was necessary in removing the organ was to sever the cervico-vaginal attachment, and, by a process of peeling, extricate the uterus without entering the peritoneal cavity and without the necessary ligation of any blood-vessels. All this, he said, was possible because

of the plexiform arrangement of the blood-vessels and the possibility of separating the organ from its surrounding serous attachments by working underneath the vascular network. This sounds well on paper and would be ideal were it possible to follow; but, on application, we meet with an anatomical arrangement which precludes any such separation. The muscular fibres composing the outer muscular layer of the uterus arise from the under surface of the peritoneum covering the organ, and, this being the case, any talk of an easy separation of the peritoneum is incredible; and, referring to my own experience, I am compelled to say, impossible. Another remark among the advocates of enucleation, which increases our incredibility, is the often-referred-to cellular tissue over the top, front, and rear of the body of the uterus. This, as we all know, is almost completely absent, with the exception of its presence over the site of the uterine attachments of the broad ligaments, the space between the bladder and the uterus, and at the attachments of the recto-uterine ligament. Reading their papers, we get the idea that the subserous uterine tissue loosely covers the organ, and that all that is necessary is to gain access to it; and by a little work one can, in a very little while and in the most beautiful bloodless manner, produce the uterus entirely released of its environments. Each one tells us how he prefers to do it. Dr. Myers now comes forward and tells us that he prefers to enter the peritoneal cavity through the abdomen, and, with vulsella, seize the uterus at its fundus and by traction draw it near to the abdominal opening, and, while being held in this position, making two elliptical incisions immediately in front and to the rear of his insertion of the vulsella, carrying the incisions, as he says, across the fundus and through the peritoneum and cellular tissue, and by little snips he accomplishes a complete enucleation in the same manner as has been described by Dr. Pratt. To those who have made a study of the peculiar arrangement of the serous and external muscular layer of the uterus, Dr. Myers' assertions will appear impossible and imaginary. We understand that the bladder and the uterine attachments of the broad ligaments may be separated and the pelvis closed in the manner described by him; but to this Dr. Myers would lay no original claim, and hence we are unable to concede any originality in the propositions discussed in his paper. Our opposition is not on account of the lack of originality only, but because of the promulgation of what seems to us an entirely imaginary operation. We believe, at the present day, owing to the frequency of hysterectomy, that it would be impossible for any one to come forward and lay claim to a so-called "new method."

JOHN S. PYLE, M.D., LL.B.

2123 ASHLAND AVENUE, TOLEDO, OHIO,
February 15, 1899.

Flies as Spreaders of Disease.—In the *Indian Medical Gazette* for November, 1894, Surgeon-Major R. Macrae published an important paper concerning an outbreak of cholera which occurred in the Gaya jail in which it was suspected that the contagion was spread by means of flies. In conjunction with M. Haffkine certain experiments were carried out which resulted in proving that milk which had been "exposed to flies" for a short time in various parts of the jail became infected with comma bacilli. As the result of his observations Dr. Macrae came to the conclusion that "flies should be looked upon in the light of poisonous agencies of the worst kind during cholera epidemics, as it is clear that if they find access to poison they will carry and distribute it, and every possible means should be taken to prevent their getting into contact with either food or drink of any kind."

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 25, 1899:

	Cases.	Deaths.
Tuberculosis	281	194
Typhoid fever	18	7
Scarlet fever	170	18
Measles	217	3
Diphtheria	184	24
Laryngeal diphtheria (croup)	12	9
Cerebro-spinal meningitis	0	9
Chicken-pox	43	0

Albuminuria.—In cystitis the amount of albumin never exceeds 0.1 to 0.15 per cent., while in pyelitis, when the pus is abundant, it sometimes rises to 0.3 per cent. and over.—DR. ROSENFELD.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending February 25, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, Los Angeles	February 17th	35*	7
Sacramento	February 1st to 17th	1	
San Diego	February 19th	1	1
San Francisco	February 1st to 17th	1	
Dist. of Columbia, Washington	February 15th	4 new.	
Washington	February 16th	1 "	
Washington	February 23d	1 "†	
Kansas, Peabody	February 16th	1‡	7
Missouri, Carroll County	February 13th	33	5
St. Louis	February 13th	15	2
North Carolina, Chowan County	February 16th	3	
Columbus County	February 16th	2§	
Ohio, Cincinnati	February 16th	2‖	
Columbus	February 1st to 9th	10¶	
Pennsylvania, Bedford County	January 23d to February 11th.	1	
Liberty Township	January 23d to February 11th.	3	
Philadelphia	January 23d to February 11th.	1	
Tennessee, Jackson, Madison County	February 14th	7	
Memphis	February 11th to 16th	6	
Texas, Laredo	February 2d to 11th	42	16
Virginia, Alexandria	February 8th to 23d	24	
Norfolk	February 13th to 22d	70	
Portsmouth	February 4th to 18th	15	

* Since date of outbreak. Origin believed to be Arizona. Twenty-five cases in hospital. † In all 21 cases.
‡ Fifty-six cases in fifteen families. § From Sumter, S. C.
‖ Marine Hospital. ¶ Varioloid.

SMALLPOX ON VESSELS.

Japanese steamer *America Maru*, from Yokohama for San Francisco via Honolulu, January 25th, 2 cases.
United States steamer *Costa Rica*, from Hongkong for San Francisco, 2 cases at Hongkong; arrived February 9th.
Steamer *Hatteras*, February 11th, from Smithfield, Va., for Norfolk, 1 case.
Steamer *Lucy*, February 7th, from North Carolina for Norfolk, Va., 1 case.
Sloop *Mary Pace*, February 10th, from James River for Portsmouth, Va., 1 suspected.

SMALLPOX—FOREIGN.		Cases.	Deaths.
Brazil, Rio de Janeiro	December 31st to January 6th.	10	4
Egypt, Cairo	January 19th to 26th	..	1
England, South Shields	January 22d to 28th	1	
France, Paris	January 28th to February 4th.	..	1
India, Bombay	January 17th to 24th	..	2
Singapore	December 1st to 30th	..	13
Mexico, Chihuahua	February 4th to 11th	..	1
Chihuahua	February 11th to 18th	..	1
Ciudad Porfirio Diaz	February 11th to 18th	6	
Mexico	February 5th to 12th	2	
Nuevo Laredo	February 11th	40	
Vera Cruz	February 2d to 16th	..	1
Russia, Odessa	January 28th to February 4th.	4	1
Warsaw	January 22d to 28th	..	3
Turkey, Constantinople	January 23d to 30th	..	8
Smyrna	January 15th to 22d	..	3

YELLOW FEVER.

Brazil, Rio de Janeiro	December 30th to January 6th.	16	11
Mexico, Vera Cruz	February 2d to 16th	..	3

CHOLERA.

India, Bombay	January 18th to 24th	..	3
Calcutta	January 1st to 7th	..	78
Calcutta	January 7th to 14th	..	35
Madras	January 14th to 20th	..	3

PLAGUE.

India, Bombay	January 17th to 24th	..	456
Calcutta	January 7th to 14th	..	2

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Original Articles.

THE RELATIONS OF MOVABLE KIDNEY AND APPENDICITIS TO EACH OTHER AND TO THE PRACTICE OF MODERN GYNÆCOLOGY.[1]

BY GEORGE M. EDEBOHLS, A.M., M.D.,

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DURING the fourteen years in which the writer was engaged in the general practice of medicine he occupied himself, among other things, with the then universally current, and almost as universally unsuccessful, attempts to cure the special ills of womankind. He painted the vaginal vault, the exterior and interior of the cervix with iodine and other drugs; occasionally even ventured to attack the mucous membrane of the uterine body with applications of more or less critically and judiciously selected medicinal agents; distended the vagina to a greater or less degree with medicated tampons of cotton, sheep's wool, etc.; fitted and refitted pessaries for ante-, retro-, and latero-flexions and versions and prolapsus of the uterus; solemnly prescribed more or less endless vaginal douching with water, plain or medicated, at exactly such and such a temperature, etc. The end of treatment was never in sight for the unfortunate woman who once began it; the "local treatment" habit became chronic or recurrent with many. Leaving out of count those cases cured by the surgical removal of abdominal and pelvic tumors, but a comparatively few of the luckier women escaped the endless slavery of the gynæcological chair by successful plastic surgery of the cervix, vagina, and perineum, and that only when plastic surgery constituted the correct and only indication in their particular case.

For the gynæcological sins of commission and omission of this portion of his professional career the writer has ever felt the most profound contrition—a slight and altogether inadequate atonement, but still the only one that the nature of the case admits of. In extenuation of his offences he can plead only the then prevalent ignorance and misconception of the science and art of gynæcology under which he in common with so many others labored.

Early in my career as a specialist, having entirely abandoned general practice and devoting my time and energies exclusively to the study and practice of gynæcology and abdominal surgery, I became convinced and predicted that the development of gynæcology in the immediate future lay in the direction of surgery. How completely this prediction has been verified is matter of medical history. With attention to major pelvic surgery, repair of genital lesions, curettage, permanent correction of uterine and ovarian malpositions by operative measures, etc., meeting the indications in each case more and more clearly and fully by the light of increasing skill in diagnosis, greater perfection of operative technics and conscientious study of results, a proportionately greater degree of therapeutic success was obtained as compared with the local-treatment efforts of general practice. Still it must, in all truth and humility, be admitted that less than one-half of the women who presented themselves as patients for gynæcological treatment, and were properly accepted as such, could be made perfectly well by attention, even of the most skilful order, to their pelvic organs, and full and satisfactory surgical correction of all disorders and abnormalities thereof. In other words, a great many of the symptoms usually regarded as pertaining to, or emanating from, the genital sphere, of which these women complained, persisted even after the condition of the pelvic organs was found unexceptionable by the most critical expert. In still other words, the practice of gynæcology as a specialty concerning itself exclusively with the pelvic organs, including as such the bladder and rectum, was far from satisfying in its results to either patient or physician. Very soon the importance of the rôle played by a movable kidney in the perpetuation of symptoms usually ascribed to diseased conditions of the female pelvic organs began to dawn upon me. With the aid of nephropexy added to operative procedures more distinctly gynæcological in character, an increasing number of my patients were fully cured. A few years later still, after I had learned how to diagnosticate chronic appendicitis, the frequent association of that condition with symptom-producing movable right kidney, the apparent dependence of the former upon the latter, and the important part played by the appendix in matters gynæcological, arrested my attention. With the added resource, when indicated, of appendectomy, I finally found myself in a position fully and permanently to cure by surgical measures almost every patient who came to me as a proper subject for gynæcological treatment, and who was willing to accept all the measures I considered indicated to meet fully the requirements of her case. Working along these lines and with the ability acquired by increasing experience and observation of results to establish clearly and from the beginning the indications presented in each case, modern gynæcology, so far as applied to the cure and relief of existing diseased conditions, has finally almost approached the ideal of an exact science, and its practice has become as completely satisfying as that of any other branch of the healing art.

The successful practice of modern gynæcology implies and presupposes a broad practical acquaintance with all the ills human flesh is heir to in as great a degree, at least, as that demanded in the successful practice of any of the other so-called specialties. A previous training in general medicine and surgery is absolutely essential to enable the gynæcologist to establish clearly the sum total of the indications for treatment presented in each case, and to render him a safe guide and adviser of suffering womanhood.

To consider fully the relations of gynæcology to general medicine and surgery would be to write a text-book on the diseases of women. The object of this paper is to call attention, and that in an outline way merely, to the relations existing between the diseases of women, in the limited sense, and the conditions of

[1] Read before the Medical Society of the State of New York, February 1, 1899.

movable kidney and appendicitis, and incidentally to the relations existing between the two last-named affections.

The Relations of a Movable Kidney and Appendicitis.—A consideration of the relations existing between movable kidney and appendicitis will enable us to approach more intelligently and to grasp more fully the relations existing between the two conditions named and the diseases of the female pelvic organs. The writer has on two previous occasions called attention to this subject, and to state the matter as succinctly and briefly as possible will take the liberty of quoting the summary of the latter of the two publications, referring those who may wish to enter more fully into details and to judge of the validity of his conclusions to the paper itself. The summary reads:

"Chronic appendicitis, as proven by the writer's clinical and operative work, is present in from eighty to ninety per cent. of women with symptom-producing movable right kidney. This frequency constitutes chronic appendicitis one of the chief, if not the chief, symptom of movable kidney.

"Chronic appendicitis, by reason of its frequency, the protracted suffering and serious impairment of health which it entails, and the dangerous possibilities of implanted acute attacks of appendicitis, may be considered the most important complication of movable right kidney.

"The writer's statistics show: that twenty per cent. of all women have movable kidney or kidneys; that four per cent. of all women have symptom-producing movable kidney or kidneys; that four per cent. of all women have appendicitis; that, while three and one-half per cent. of all women have both symptom-producing movable kidney and appendicitis, only one-half per cent. of all women have appendicitis and well-anchored kidneys. The startling nature and importance of the conclusions to be drawn from these statistics does not invalidate the latter.

"Satisfactory investigation of the relations of movable kidney and appendicitis became possible only after the discovery and elaboration of the writer's method of palpation of the vermiform appendix. It remains impossible to those not practically familiar with the method.

"Chronic appendicitis may be the only symptom of movable right kidney.

"Some of the symptoms commonly ascribed to movable kidney are often in reality due to the concomitant appendicitis.

"The relations existing between movable right kidney and chronic appendicitis are those of cause and effect, for reasons detailed in the paper. A movable left kidney never produces appendicitis.

"Movable right kidney probably produces chronic appendicitis by indirect pressure upon the superior mesenteric vein, the return circulation of the appendix being hampered by compression of the vein between the head of the pancreas and the spinal column.

"Chronic appendicitis associated with movable kidney shows no tendency to resolution or spontaneous cure, with restoration of a normal appendix, while the right kidney remains movable. The only cure possible, under these conditions, is by slow progress to appendicitis obliterans.

"In twelve of the writer's cases of coexisting movable right kidney and appendicitis, the appendicitis apparently ended in resolution and remained permanently cured, after right or bilateral nephropexy, without any attention to the appendix.

"Recovery from appendicitis after right nephropexy may only be expected in cases in which the associated chronic appendicitis is of comparatively recent origin.

"In a minority of cases only of associated movable right kidney and chronic appendicitis will either nephropexy alone, or appendectomy alone, meet all the indications. The majority of patients require both operations to restore them to full health.

"Both operations, right nephropexy and appendectomy, may be simultaneously performed through one and the same lumbar incision extending along the outer margin of the erector spinæ muscle from the twelfth rib to the crest of the ilium."

The Relations of Movable Kidney to Diseases of the Female Pelvic Organs.—Nearly every writer upon the subject of movable kidney has dwelt upon the evident and unmistakable frequency of the association or coexistence of movable kidney with nearly every form of disease of the female pelvic viscera, retroversion and its accompanying endometritis being especially well represented. Exacerbation of the symptoms due to movable kidney at the menstrual epoch is also frequently noted, although the explanation of renal congestion with each menstruation advanced by a number of writers is doubted by many others, among them the writer, who believes that the nervous manifestations of movable kidney, in common with all other nervous phenomena, are more apt to be accentuated at the menstrual period. Equally far-fetched is the explanation of Landau, that malpositions of the uterus, notably retroversion and prolapsus, dislocate the kidney downward by traction upon the ureter.

When we call to mind the essential pathological condition underlying the development of movable kidney, its relations to posterior and downward displacements of the uterus do not appear difficult to understand. The one thing settled about the etiology of movable kidney is that it is due to a relaxation and stretching of the lamina fibrosa of the renal adipose capsule, the tissue upon the integrity of which depends the retention of the kidney in its proper place. The same diseased action resulting in elongation and stretching of the essential supports of the other abdominal and pelvic viscera leads to enteroptosis, partial or general. When in the progress of the disease the supports of the uterus are attacked, and the round, broad, and other ligaments of the uterus lose their tonicity and lengthen, the uterus becomes retroverted and prolapsed. Glénard has pointedly and with all the emphasis at his command called attention to the fact that mobility of the right kidney is the first step in the delevopment of enteroptosis; that there is no enteroptosis without movable kidney, although there may be, and frequently is, movable kidney without enteroptosis. Often and often has the writer witnessed and followed the successive development, in the same woman, of mobility of the right kidney, mobility of the left kidney, and retroversion of the uterus, the first named of these three conditions almost invariably developing first, while either of the latter two sometimes preceded and sometimes followed the other.

While the connection between movable kidney and malpositions of the uterus is, therefore, perfectly clear, the association of movable kidney with other diseases of the female pelvic organs is probably simply accidental, the frequency of the coincidence being readily explicable by the frequency both of movable kidney and of pelvic disease.

So much for the etiologic relations existing between movable kidney and the diseases of woman's special organs. From a practical point of view these relations are of important and far-reaching significance. They explain, as already stated, why the most perfect success in removing diseased states of the female pelvic organs, and restoring these to practically normal conditions, so often fails of therapeutic relief, fails to make our patients fully well. An unsuspected, unde-

tected, or disregarded movable kidney causing symptoms will very frequently explain the discrepancy between the opinion of the surgeon, after successful pelvic surgery, that nothing further ails his patient, and the assertions of the patient herself that she feels no better than before operation. It will explain, to cite only one instance, why a successful treatment of retroversion of the uterus, or the repair of a lacerated cervix or perineum, may relieve the patient of a small part only, or even of none, of her multitudinous complaints. Of four women each having a movable kidney and movable retroversion, the symptoms in one may be due exclusively to mobility of the kidney, in the second exclusively to retroversion, in the third to both movable kidney and retroversion, while the fourth woman may not suffer in any way from either condition. If you perform a retroversion operation in the first, or anchor a movable kidney in the second, you will have helped neither of them. If you do either of these operations alone upon the third, the result will be at best but partial relief, while if you perform either or both of them upon the fourth, you will have been guilty of an entirely unnecessary and uncalled-for procedure.

Further practical applications of the facts adduced and to be adduced, on which the making or losing of professional reputation largely hinges, lie in the direction of diagnosis, the proper establishment of indications for treatment, and prognosis. Given a patient with movable kidney or kidneys, various disorders of the pelvic viscera, and perhaps chronic appendicitis, it goes without saying that it is first of all of vital importance to be able to diagnosticate each and every one of these conditions. Next, as to the proper establishment of rational indications for treatment, it is essential that we learn how to analyze the patient's symptoms, so as to be able correctly to refer each of these symptoms to the special pathologic condition causing it. Then first will we be in a position to apply intelligently the proper remedy—not to anchor, for instance, a movable kidney when that condition is producing no symptoms, but the sufferings of the patient are due to chronic appendicitis, diseases of the pelvic viscera, etc., or *vice versa*. Often, indeed, will it be necessary to correct all the pathologic conditions named before full therapeutic success is obtained and the patient is made entirely well.

This analysis of the symptoms presented by a given patient, with their correct reference to the specific abnormality causing each of them, is not quite so easy and simple a matter as the discovery or diagnosis of the various existing pathologic conditions themselves. It requires training, close observation, correct induction, experience, and a judicial cast of mind joined to habitual painstaking, and full and complete routine examination of every patient presenting, to reach its highest development and greatest capabilities. Once acquired, however, this faculty of correct analysis of symptoms becomes the richest possession and greatest power for good of the gynæcologist, or, for that matter, of the general practitioner. With it, diagnosis in its fullest sense and prognosis approach the dignity of exact sciences. Its possession and correct application will enable the surgeon to determine at the start if the case is one requiring several operations to be performed at different sittings, will restrain him from promising a complete cure after performance of a part only of the surgical work required, and will prevent his losing the confidence of his patient after the first operation or series of operations, as the case may be. On the contrary, possessing a full and intelligent grasp of the patient's entire condition and all the therapeutic requirements called for in her case, he will inform her that such and such of the symptoms she presents are due to such and such of her pathologic conditions, and such and such other symptoms to such and such other abnormalities; that after the operations immediately contemplated she may expect to be rid of certain specified complaints, but that the rest of her symptoms will disappear only after all the remaining abnormalities producing symptoms in her case have been finally corrected. The confidence of the patient is thus retained when she finds her attendant's predictions come true after her first operation or operations, and she unhesitatingly follows his further lead toward perfect health.

To be specific, I may state that in my own practice I have never required more than two sittings to correct by operation all the pathologic abnormalities present at my first examination in the abdomen and pelvis of any one woman. An extreme case, though by no means a very infrequent one, is the following taken at random from among a number of similar ones on my records: A married woman, aged thirty-one years, had a large, heavy uterus, retroverted, tied down by adhesions; there were multiple lacerations of the cervix; an extensive cicatrix following a childbirth tear of the left vaginal vault and left parametrium; chronic appendicitis, and movable right and left kidneys—each of the pathologic conditions named being responsible for one or another or several of the numerous symptoms complained of, and each requiring correction before a complete therapeutic success could be hoped for. She was informed of her condition, and that a number of operations to be performed at two sittings would be required for her relief. On February 16, 1898, at the patient's home, I performed curettage of the uterus, amputation of the cervix, and vaginoplasty for the removal of the vaginal and parametric scar; then, through a five-centimetre incision through the right rectus abdominis muscle, I performed inversion of the appendix and liberation of the uterus by breaking up the adhesions binding it down posteriorly, concluding with inguinal shortening of the round ligaments. At the second sitting, exactly four weeks later, bilateral nephropexy was performed. Smooth convalescence from both series of operations, primary union of all wounds, and a patient perfectly cured and remaining cured of all her many previous complaints, resulted. Again, in another somewhat similar case, bilateral nephropexy for movable right and left kidneys, and inversion of the appendix for chronic appendicitis through the lumbar right nephropexy incision, were performed at the first, and the pelvic surgery required in the case, curettage of the uterus, amputation of the cervix, and shortening of round ligaments at the second sitting.

When such a large number of operations demanding two sittings are required in a given case, it frequently becomes a nice matter to determine which series of operations is the more important and urgent, and should be first undertaken. Experience and the demands of surgical technics will prove the best guides in determining the proper course. One rule, however, should probably hold almost inflexibly good: When the appendix is involved and its removal becomes necessary, appendectomy should be included in the first series of operations. The risks of delay in appendicitis should not be assumed without grave and cogent reasons.

A practical point relating to prognosis, which it is well to bear in mind, is that large abdominal tumors and the pregnant uterus in the later months form the best possible contrivances or splints to support in its proper place a movable kidney, and while doing so to keep in abeyance all the symptoms of the latter condition. Consequently, we must be prepared for the recurrence or even the new development of symptoms of movable kidney after the termination of pregnancy or the removal of large ovarian and uterine tumors, an

experience which the writer has encountered on numerous occasions.

The Relations of Appendicitis and Disease of the Female Pelvic Organs.—This part of my subject has come to be more generally and better understood and acted upon by gynæcological surgeons as a whole than the two subdivisions already discussed. I can limit myself, therefore, to an attempt at indicating merely a few of the practical aspects of the relations existing between appendicitis, acute and chronic, and the various disorders of the female pelvic organs. To consider them *in extenso* would far exceed the limits of an ordinary paper.

In the first place no examination of the pelvic viscera should be regarded as complete that does not take note of the appendix and determine whether that organ is in normal condition or inflamed. This can be readily established in practically every woman, the very stoutest and those having abdominal tumors only excepted, by properly executed palpation of the appendix. It is unnecessary to say another word upon the importance of the knowledge thus obtained.

Appendicitis and inflammatory diseases of the uterine adnexa and of the pelvic peritoneum are very frequently found associated. The inflammation may be primary in either the appendix, the adnexa, or the pelvic peritoneum, and one or both of the other two of the three tissues mentioned may become secondarily involved. Generally it is not difficult to determine from the history of the case, as well as from the findings at cœliotomy, the order of involvement of the various organs. Practically the condition of the appendix should always be investigated by inspection on the occasion of cœliotomy for diseased adnexa or pelvic inflammation. Should any doubt be entertained in regard to the perfect health of the appendix, the latter must invariably be removed. The writer, in his own practice, has carried this rule still further and inverts the normal appendix on the occasion of cœliotomy undertaken on any indication, provided always that such inversion does not call for enlargement of the incision required to do the other work in hand, and that the patient's condition is not so critical that her safety is jeopardized by the additional two or three minutes required for inversion. Inversion of the entire, unopened, normal appendix can be performed in two or three minutes; is in itself, if properly performed, entirely devoid of risk; does not add to the dangers of whatever other operation may have been undertaken, and absolutely insures the patient's future against a possible appendicitis. The premium paid for such insurance, two to three minutes' prolongation of anæsthesia, is insignificant when compared with the amount of future suffering from a possible chronic appendicitis, or the risk of a possible acute appendicitis, which it covers. As already stated, four per cent. of all women whom I have examined during the past six years had appendicitis. To be absolutely certain of not being one of the four per hundred is worth something to any woman. As a matter of fact I know of at least five of my patients who at periods more or less remote following a cœliotomy performed by myself, and at which cœliotomy the appendix was found normal, acquired appendicitis, acute or chronic. This experience has led me to live up to the following rule: The abdomen should never be opened anywhere within a finger's length of the appendix without investigation of the condition of the latter. If the appendix is found diseased, it should be removed, even if it is necessary to enlarge the incision for this purpose. If found normal it should be inverted entire and uncut, if this can be done without enlarging the incision or imperilling the patient's chances of recovery from the operation or operations in hand.

The diagnosis between appendicitis and diseases of the right uterine adnexa, particularly their various inflammations and new growths, forms an interesting topic, which, however, time will not permit me to go into at length. The general rule for guidance, which, however, frequently fails, is that adnexal diseases are more pelvic, appendicular inflammations more abdominal, in location. The history of the case forms an important element in diagnosis, but is likewise susceptible of misinterpretation. An inflamed and even gangrenous appendix may have taken up its abode in the depths of Douglas' sac, or other parts of the pelvis, as well as in unusual places in the abdomen. In one case of abscess situated in Douglas' sac the writer was able to diagnosticate the tumor as probably appendicular in origin, from the fact that careful palpation proved the appendix to be absent from its normal site. Operation verified the correctness of the diagnosis. In other doubtful cases the writer has been able repeatedly to exclude appendicitis by palpating a normal appendix occupying its normal situation above the suspected tumor mass.

The frequent involvement of the appendix in various pathologic conditions affecting the female pelvic organs should always be taken into account in arriving at a decision as to whether a given case of disease of the pelvic organs requiring operation is to be approached by the vaginal or by the suprapubic route. Palpation of the appendix should always be practised before operation in each such case. If the appendix is found normal, the vaginal route may be selected. If the appendix, on the contrary, is found inflamed or even not entirely above suspicion, suprapubic abdominal section is indicated, as enabling one to deal with the appendix as well as to perform the other work required. This point is so evident that to dwell upon it longer would be waste of time.

Appendicitis complicating pregnancy and labor is a subject that has lately come in for a fair share of deserved attention, which, I might add, it should have received long ago. I merely mention it, as it does not come, strictly speaking, within the limitations of my theme.

The relations of movable kidney, appendicitis, and the diseases of the female pelvic organs are of interest and importance alike to the general practitioner, the surgeon, and the gynæcologist. Among the women consulting the latter a large number present two, or frequently even all three, of the conditions named, though suffering only from the symptoms caused by one or more of them, and healthy in all other respects. This large class of women can be relieved of their multitudinous complaints and be made perfectly well and happy by the physician who possesses both the power correctly to analyze their symptoms and the surgical skill necessary to perform properly the operations indicated. Nothing short of malignant disease should baffle him in this class of cases. He must not, of course, perform nephropexy when the movable kidney or kidneys produce no symptoms, as is the case in about eighty per cent. of all women having movable kidneys, nor should he operate upon the pelvic organs without making certain that they are the cause of the woman's complaints. The appendix, if diseased, he will never go amiss in removing.

A certain number of these patients will need nephropexy, appendectomy, and surgical correction of abnormalities in the genital sphere to restore them to complete health. With a large experience based upon constant study of these cases for a number of years past and critical observation of results, I have no hesitation in saying that the indications in each case can always be fully and clearly established. Basing my actions upon this fact, I now decline to accept for treatment any patient, unless with the proviso and express understanding that she will have all the opera-

tions indicated in her case. I act thus both in the interests of the patient herself and for the protection of my professional reputation, which is not enhanced by the fact of a patient upon whom I have operated still going about in quest of complete relief and cure.

The writer has seen quite a number of cases in which all the symptoms the patient ever complained of, all of which had been referred to disease of the pelvic organs, persisted, with now and then a new one added, after complete removal of uterus, tubes, and ovaries. The patient's complaints after operation were sometimes referred by the operator to sudden establishment of the menopause, sometimes to the fact that both ovaries had been entirely removed, and again to the circumstance that a remnant of ovary had been allowed to remain. Several of these cases were restored to complete health by subsequent nephropexy, by removal of a diseased appendix, or by both operations when indicated. It is superfluous to add that the genital organs had been needlessly sacrificed.

A list of the author's previous publications upon the topics above treated of is appended. It will serve to illustrate the evolution, in his practice, of the principles enunciated and the gradual steps by which his present position was reached.

1. "Movable Kidney; with a Report of Cases Treated by Nephrorrhaphy." *American Journal of the Medical Sciences*, March and April, 1893.

2. "Diagnostic Palpation of the Vermiform Appendix." *American Journal of the Medical Sciences*, 1894, n. s., cvii., 487.

3. "A Clinical Lecture on Palpation of the Vermiform Appendix." *Post-Graduate*, 1894, ix., 154.

4. "Notes on Movable Kidney and Nephrorrhaphy. Part III. The Relations of Movable Kidney and Appendicitis." *American Journal of Obstetrics*, 1895, xxxi., 161.

5. "Inversion of the Vermiform Appendix." *American Journal of the Medical Sciences*, 1895, n. s., cix., 650.

6. "Wanderniere und Appendicitis; deren häufige Coexistenz und deren simultane Operation mittels Lumbalschnitt." *Centralblatt für Gynäkologie*, 1898, xxii., 1084.

7. "Chronic Appendicitis; the Chief Symptoms and Most Important Complications of Movable Right Kidney." *Post-Graduate*, February, 1899.

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ON THE TREATMENT OF CARDIAC NEUROSES.

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I most willingly comply with the wishes of several American colleagues of mine, who, with reference to my treatise in this journal of March 26, 1898, "Treatment of Chronic Diseases of the Heart in the Light of Roentgen Rays," encouraged me to publish a further article relative to the balneological and gymnastic treatment of cardiac neuroses, diseases which are widely spread in all civilized countries, and not the least in the United States of America. Our social condition in general, the continually increasing struggle for existence, impose upon the individual more strenuous exertion than ever—a struggle which, in the first place, is carried on at the expense of the nervous system; we behold this baneful influence in the annual increase of nervous diseases. Certainly it must be stated that nowadays we are in a better position for diagnosing the presence of heart diseases. However, the ascertaining of the limits of heart diseases of a different character and neuroses of the heart continues to cause serious difficulties, in spite of our better knowledge of the innervation of the heart, and frequently we observe one disease overlapping the other, or both of them prevailing at the same time. Therefore I shall treat only of the unmistakable forms of cardiac neuroses, which may be divided into three large groups, viz., (1) sensory neuroses, (2) motor neuroses, and (3) the neurasthenic condition of the heart (neurasthenia cordis).

I. Sensory Cardiac Neuroses.—The most characteristic symptom is an abnormal sensation in the chest, which is subject to remarkable fluctuations with regard to locality and character. In most cases the sensation is that of a piercing, shooting, or stinging pain. However, in many cases the pains are not so distinct, and the patients complain of a dull, oppressive, or contracting sensation near the heart, which they are at a loss to describe in a precise manner. Not less variable is the locality of those pains in the same individual at different times; in most cases they are felt in the middle or lower part of the sternum; frequently they are complained of near the apex of the heart or the upper part of the sternum. However, there are a good many cases in which the painful sensation is felt at the fossa jugularis or the right side of the chest, over the stomach or the regio hypogastrica, etc. From those principal points the pains radiate to other nerves, *i.e.*, to the plexus brachialis, especially on the left side, and produce thereby not only pains, but also numbness or formication, either in the whole arm or in parts of it. Besides these, there occur also radiations to the nervi thoracici anteriores et posteriores, nervi occipitales, etc., or to the sensory nerves of the lower extremities, thereby producing before the eye of the observer fictitious nervous diseases. The sensory neuroses of the heart are divided nowadays into three categories, viz., (*a*) pseudangina, or angina pectoris nervosa; (*b*) angina pectoris vasomotoria; (*c*) angina pectoris vera.

Angina pectoris nervosa attacks by preference juvenile persons and is seldom observed after the fortieth year, and those mostly afflicted by it were before subject to neuralgias or other nervous complaints. Frequently it is combined with chlorosis or anæmia, and in a good many cases it is a matter of inheritance. It may be also caused by excitements of different kind, or by mental and bodily overstrain. Syphilitic diseases as well as tabes have often the same bad effect, and gout is often even in its first beginning capable of producing such nervous cardiac pains. Pleurisy as well as pericarditis, principally if the pericardial layers are adherent, produces the same evil results. I have also observed pseudanginal pains of the heart caused by poisons, at the head of which I need only mention lead, but alkaloids produce similar effects. On different occasions I have laid stress upon the fatal influence of the abuse of tobacco, which is apt to lead not only to pseudangina, but also to angina pectoris vera.

Angina pectoris vasomotoria shows in general the same symptoms as pseudangina, but the complaint must be attributed to spasmodic contractions of the vessels. The dyspnœa which is frequently observed indicates clearly—as it does also in cases of angina pectoris vera, of which we shall speak presently—that besides the disturbances of a nervous character there exist also other abnormal changes of the heart.

Angina pectoris vera, also known by the term of stenocardia, is of the three forms the most frequent. Its symptoms are similar to those of angina pectoris nervosa, but with the difference that the pains and the oppression are accompanied more or less by a sensation of great anxiety, which often is increased to such a pitch that the patient, though but for a moment, imagines himself to be on the point of death. Generally the attacks come suddenly; still I have met with

patients in whose cases an aura could be observed, existing for some hours and even one or two days before the fit. The conduct of patients during the attack differs very much; most of them—they are generally persons of advanced age, or such as have passed their fortieth year of life—keep perfectly quiet, shunning every movement, and if they are attacked in the middle of some exercise, as when walking, they suddenly stop, look anxiously around, and try to get hold of some support. As soon as the attack decreases they resume their walk till it returns; under this impression of fear, their gait assumes a peculiar characteristic stamp. But there are also deviations from this habit; some patients seek for relief from their pains by bending their thorax or head backward, or by moving their arms sideways, etc. The respiration may vary. Mostly the patients avoid as far as possible every action of the muscular system for fear of increasing the pains; they fear to take a deep inspiration, and therefore are disposed to breathe superficially without there being a real dyspnœa. It may be easily observed that they are capable of drawing a deep breath without any difficulty if their medical adviser will direct them to do so. In the further progress of the disease there often occur serious anomalies, under the influence of which the respiration may become abnormal, so that real dyspnœa or acute œdema of the lungs will frequently result.

The state of the heart as well as that of the pulse long ago attracted the attention of physicians, especially with the view of explaining thereby the nature and the occurrence of the stenocardic attacks. Already years ago I stated that the allegation of a normal condition of the circulation during the fits ought to be treated with decided scepticism. Not only do we often observe the pulse to be unequal and arrhythmical, but I have also been able to demonstrate by means of the sphygmograph that there may exist a tachycardia, while the examining finger had felt either a normal frequency of the pulse or even a bradycardia. The contractions of the heart during the attack may become so feeble that they cannot at all, or at least quite insufficiently, be ascertained by the usual auscultation. The practitioner who often has occasion to observe patients during such fits can easily convince himself that the contractions of the heart become more and more fast and enfeebled—nay, now and then may assume a fœtal character, or we meet with a fluttering heart. The ictus cordis becomes weak on a sudden, and cannot be felt any more, etc. I have also described, several years ago, how, during the stenocardic spasm, a dilatation of the left auricle takes place, with subsequent dilatation of the left ventricle, which may at a later period be followed by a total enlargement of the heart.

Arterio-sclerosis, chiefly of the coronary vessels, insufficiency and stenosis of the aortic valve, myocarditis, etc., are the most frequent causes.

I must confess that as yet the opinions of medical men concerning the nature of angina pectoris vera do not quite agree, but in general we are nowadays led to suppose that this disease is apt to affect the heart when the latter has been enfeebled before.

II. Motor Cardiac Neuroses.— Everybody knows how much the action of the heart depends upon the influence of the nervous system. A sudden terror, a depressing or cheerful emotion, alters at once the beating of the heart, and thus the most important motor cardiac neurosis is palpitation, which occurs sometimes continuously, sometimes in paroxysms. In many cases the pulsations are in reality not accelerated but are only felt to be so by the patients, and recently we have come in possession of a number of observations, according to which there was even a reduction of the frequency, a bradycardia. It is understood that in all these cases there was not the question of an organic alteration of the muscle or the valves of the heart, but merely of an abnormal innervation. Percussion and auscultation will in these cases frequently give the desired information; if not, we may become enlightened by investigating the etiology. It is sometimes very difficult to decide which part of the nervous system calls forth the motor neurosis—whether it is to be attributed to central or peripheral nerves, whether there is an affection of the extracardial or of the intracardial nerves, the cardiac ganglia, or nerves of the heart. The difficulty of making a correct diagnosis is sometimes insurmountable.

All the causes described with regard to sensory cardiac neuroses may also lead to motor heart troubles. In children masturbation is a cause. In women they mostly occur at the climacteric, and it is well known how sexual diseases and stomach complaints, plethora, etc., are very frequently the causes.

In most cases the sensation of palpitation is accompanied by a marked increase of the heart's action; we see the chest rising with every systole, the frequency is increased, the carotids and other vessels are undulating, the face of the patient is reddened or of a bluish-red color, and the patients feel the pulsations and throbbing about the heart, sometimes even in the whole body. There exists often at the same time a real arrhythmia. But the beatings of the heart do not always keep pace with the pulse; we explain this by the fact that the muscle of the heart becomes dilated, and that thereby the ventricles cannot be perfectly emptied, and thus the ictus cordis is strong while the pulse is small. The sounds of the heart vary very much; generally they are dull, but they may often be found clear, sometimes even of a shrill character. In the later course of the disease, especially when the heart becomes enlarged, we see a fluttering or trembling, and the patients sometimes complain that they feel as if their heart was suspended by a string. Then the patients begin to get weak, are subject to fits of fainting, etc., until they feel ill even when they are not subject to these attacks, and are tormented by a continual apprehension of a relapse.

III. Neurasthenia Cordis.—It is well established, and the merit of having first stated the fact belongs to Fothergill, that we must strictly distinguish between a heart of muscular and one of nervous weakness, and the objection that cardiac neurasthenia is only one symptom of a general neurasthenia is by no means justified. For we see that the cardiac symptoms either precede the other disturbances or assume such prominence that the latter appear of but little moment, though their existence may be asserted; still they may serve as a valuable means of diagnosis. It is certain that in the first stages the similarity of the nervous and muscular diseases renders a distinction between the two more or less difficult, and that a decided diagnosis must be reserved for a later stage of the disease.

All the causes which lead to general neurasthenia may also produce a neurasthenic state of the heart, and in these cases also we observe that the diseases of the heart generally prevail between the twentieth and fortieth years, and that for sufficiently known reasons the male sex is more subject to them than the female sex.

The clinical symptoms are best divided into two large groups, viz., (1) the excitomotor and (2) the depressive stage; but it must be remembered that there often occur symptoms which are common to both forms of disease. In the beginning of the affection the patients usually complain of the precordial oppression and of difficult breathing. But these symptoms may in some cases be so indistinct that the patient cannot give a clear account of them, and merely com-

plains of headaches and giddiness. The frequency of the pulse is rarely increased; it usually remains quite normal, or in some rare cases its frequency may be even decreased. But sometimes the symptoms may take a more decided character; the patient has the sensation of palpitation, with or without hyperkinesis. The objective signs are varied; regular action of the heart alternates with arrhythmia, tachycardia with normal frequency or even bradycardia. But the patients are especially frightened by the intermittence of the heart's action, and as they generally perceive at once a stopping of the heart, they are always under the influence of an imaginary apprehension that such a stoppage might prove fatal. The natural consequence is that their attention is entirely and continually concentrated on the state of their heart, that they are observant of the least change in the beating or of every alteration of any kind, and thereby increase their nervous excitement as well as the action of the heart. But still more frequent than the palpitation which troubles the patients is an abnormal sensation near the heart, chiefly near its apex, which they describe as tension, heaviness, undulating, etc. In this period there is usually difficult breathing, though a real dyspnœa does not yet exist. In the excitomotor stage there appear often symptoms in the other circulatory system, especially increased pulsation of the arteries, for instance at the neck, head, aorta abdominalis, the vessels of the extremities, etc. In accordance with the heightened sensibility of the nervous system, we find, principally on the left side of the chest, a number of spots painful under pressure, and often this hypersensibility is limited to the area of the heart. At this period one of the most frequent complaints of the patients is sleeplessness or disturbed sleep; they suffer from paræsthesiæ of different kinds, feel cold or heat in the extremities, numbness of one or other limb, formication in the skin; the complexion varies from red to pale; besides there may be felt spasms of the bladder, tenesmus, inflation of the stomach, alternate boulimia and want of appetite—all symptoms which generally attend affections of the nervous system.

In the subsequent period of depression the palpitation becomes of a longer duration, the strength of the heart decreases, the pulse becomes smaller, ictus cordis is little or not at all perceptible; slight effort or psychical excitement seriously alters the action of the heart; the patients become more and more enfeebled, they complain of a general cold sensation in the body, are subject to cyanosis, and the pallor of the face, especially of the lips, is most remarkable; there is a lasting disturbance of the sleep, a sudden jerking up of one of the legs frequently awakens the patient, the fright increases more and more, nervous disturbances of different kind torment the sufferer, chiefly in the morning, and by and by we observe all the different symptoms of general neurasthenia, such as want of appetite, inability to take long exercise, general trembling of the muscles, swooning, vomiting, etc.—which state was first described by Beard in a very striking manner. In this stage the diagnosis between cardiac neurasthenia and other diseases offers no difficulty.

Prognosis.—It is not possible to indicate a general system of prognosis for cardiac neuroses, but each separate case must be studied by itself, as duration and intensity of the illness, age and strength of the patient, complications with other diseases, etc., must all be taken into account.

Treatment.—With the prophylaxis the medical man takes upon himself a most important and grateful task. By enlightening the public regarding all the injurious causes which are likely to lead to cardiac neuroses, by regulating the course of life of the patient with regard to diet, exercise, mental work, etc., we may do much to prevent the onset or a relapse of cardiac neuroses.

It would exceed the limits of this article if I were to detail here the large list of medicaments which have been recommended in these cases, and this list has been much increased of late; instead of that I prefer to treat of the balneological and gymnastic treatment, which, just as in the cases of general chronic cardiac diseases, has gained ground in a very short time. The widespread favor which the physical treatment has met with is founded on the experience that thereby we are enabled not only to obtain prompt relief from troublesome symptoms, but also a strengthening of the nervous system in general, and especially of the muscle of the heart and its nerves. The value of the latter system is enhanced by the fact that with its help we are better enabled to avoid injurious effects than by the systems formerly in use. With reference to treatment of hronic diseases of the heart by means of natural or artificial Nauheim mineral baths, I would refer the readers of this journal to my former papers published in 1891 and 1898. In cases of cardiac neuroses we may, provided there is not already deep-rooted alteration of the cardiac muscle or the vessels, begin a bath with a solution of one and one-half to two per cent. of brine and a weak admixture of carbonic-acid gas, baths of a composition such as those stored up in the reservoirs at Nauheim; the temperature ought not on an average to exceed 90°–91° F., only lean or anæmic persons had better begin with a somewhat higher temperature—say 93°–95° F. By way of precaution and with the view to insure more safely a favorable result, it is preferable to begin with baths of a short duration, five to eight minutes, and to rise by degrees to ten, fifteen, or twenty minutes; the use of a bath of longer duration can be recommended only in rare cases. It is also advisable to pause now and then in the application of baths, in the serious forms of the disease every second day, later or in milder cases between the third, fourth, or fifth day. Stronger concentrations of salt, especially of mother-lye—the latter containing a strong solution of chloride of calcium—are to be avoided, as experience teaches us that after their application patients feel either feeble and exhausted or in other cases overexcited. In these cases it is more reasonable to use baths with more carbonic-acid gas, as we apply them in Nauheim in the form of effervescent or effervescent running baths (the so-called Nauheim Sprudel and Sprudelstrombäder). The tonic effect of these baths is shown by a more buoyant state of mind, better sleep and appetite, increased ability for exercise, and the improvement in the circulation becomes evident through an abatement

FIG. 1.—Before Bathing.

FIG. 2.—After the use of a Nauheim effervescent mineral bath of 88° F., duration ten minutes.

or disappearance of the painful sensations in or around the heart; the duration of the attacks is shortened, and they take place at longer intervals, the heart begins to beat more quietly and regularly, and simultaneously the pulse becomes fuller, slower, and more or perfectly rhythmical. But, strange to say, I often observed that even a bradycardia, an apparent or a natural one, disappeared under the aforementioned treatment. As a proof thereof I herewith reproduce two diagrams of the pulse, of which Fig. 1 was drawn before and Fig. 2 after a bath taken by a patient who was afflicted by angina pectoris vera. In comparing these diagrams, we perceive at once how a number of beats reappear which before could not be observed. But it is important to state that the amelioration of the innervation, the relief of the painful sensations, the regulation of the action of the heart are accompanied by a strengthening of the cardiac muscle; the sounds of the heart become more distinct, and their timbre becomes by degrees normal; a dilatation, if it exists, is reduced, and finally disappears. Such cases have been fully described by myself and my late brother, as well as by foreign colleagues.[1]

Contraindications for the balneological treatment—as well as for the gymnastics to be described hereafter—must be attended to in these cases as well as in other organic diseases of the heart, in which every increase of the pressure of the blood has to be avoided. In this category we must especially place all cases of angina pectoris vera in which an advanced arterio-sclerosis of the coronary or other vessels has been diagnosed, for then every rise of the blood pressure may lead to apoplexy or embolism.

In the hydrotherapy, whether we apply half-baths, frictions, or douches, it is imperative to avoid extreme temperatures, like those which were formerly but too often made use of, a neglect of which precaution would produce either a weakening of the general state or an irritation of the whole nervous system, and especially of the cardiac nerves. Sea-bathing would agree only with persons of a very robust constitution, and even the effect of the sea air, like that of mountain air at an elevation above one thousand metres (thirty-two hundred and fifty feet), is sufficient to call forth a state of overexcitement with all its noxious consequences; while in summer time a stay in the mountains of modern elevation, especially where there are shady and comfortable walks, in the winter season a sojourn in the south, are likely to have a beneficial effect. Cure by drinking is scarcely ever employed in cases of cardiac neuroses, and is made use of only in cases of complications, *e.g.*, iron waters in cases of chlorosis and anæmia, purgatives against koprostasis.

The application of electricity has lost ground from year to year, and has been supplanted by massage, either by a gentle effleurage or pétrissage of the whole body, or by local tapotement; and under this treatment we often see a relief of the nervous complaints in general, as also of the cardiac pains. To cause the patient to lie down for a long period of time is not only of no avail, but generally disagrees; while, on the contrary, daily walks in fresh air during favorable weather are in most cases to be recommended. But it is understood that every overstraining by walking too long or too fast, or too much climbing, or anything in the nature of athletics, would prove injurious.

A nutritious but digestible diet, composed of frequent meals — say, every two or three hours — will strengthen the nerves as well as the heart. Too strong stimulants have a decided injurious effect in cases of cardiac nervous diseases; this includes pungent spices as well as exciting beverages, such as strong tea and coffee, and especially alcoholic drinks, which ought to be entirely prohibited or reduced to a minimum.

By means of the system of gymnastics (therapeutic exercises) which has been described long ago by my late brother and myself, I have continued to obtain highly satisfactory results in all forms of cardiac neuroses; they are best executed as gymnastics with resistance by an assistant, scientifically trained for that purpose. If the cardiac neuroses are not complicated with intense muscular or valvular lesions of the heart, we are justified in beginning with a resistance of moderate strength, and may within a short time have recourse to more vigorous therapeutic exercises. At a later period, when the patient has become familiar with this treatment, he may dispense with the assistant and perform the exercises with self-resistance. The effect is quite similar to that described above with regard to the bathing.[1] In illustration and confirmation of this, I present here two diagrams of the pulse, Figs. 3 and 4, which also represent a case of angina pectoris vera. As a matter of course, the exercises must be executed with much caution, and require, just as in the case of the balneological treatment, a continuous medical supervision; but, if correctly executed, the gymnastic system has one great advantage—namely, that it can be put into practice everywhere and at any time.

Fig. 3.—Before Exercises.

Fig. 4.—After Thirty Minutes' Exercises with Resistance.

THE OTHER SIDE OF THE ANTITOXIN QUESTION.[2]

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The scientific development of artificial immunization dates from the work done by Pasteur with the anthrax microbe, when he showed that attenuated virus confers immunity against infection with the virulent germ.

This was toxin treatment, a fact I wish to emphasize; all further advance has been along this line. I am not unaware of the antitoxin theory and the recent therapeutic applications of antitoxin, still I claim that not one disease, including diphtheria, has yet found a specific cure in serum treatment. The following is a presentation of data in proof of this statement. It will require consideration of all diseases submitted to immunistic treatment, and opinions will be cited of men from all quarters of the world, though only the testimony of those qualified to form an opinion from experience will be admitted.

A specific should cure every case when treatment is begun a reasonable time after the commencement of the disease; it must bring the death rate down to the lowest point and below the lowest point ever recorded in any part of the world, and it must keep the death

[1] *Vide* my article in this journal, February 14, 1891.

[1] *Vide* also my paper of 1891.

[2] Read before the Brooklyn Pathological Society, February 9, 1899.

rate below the lowest reported rate. By this standard the following diseases have been considered.

Immunization against variola by inoculation of the virus of that disease was an admitted success, only three persons out of one thousand dying in the London inoculation hospital. It was toxin treatment, and was practised in England until 1841. The possibility and value of artificial immunization against this disease have been known at least three thousand years. In 1796, Jenner placed the production of immunity to smallpox by inoculation with the virus of vaccinia on a scientific basis. On the fourteenth day of May of that year he inoculated James Phipps with cowpox from the hands of Sarah Nelmes, and on July 1st it was impossible to inoculate Phipps with smallpox. Vaccination also must be considered toxin treatment. Vaccination brought to light a new fact—that the virus of one disease may be antagonistic to that of another. On this principle depends the success of the treatment of sarcoma with erysipelas and prodigiosis toxins, by means of which Dr. Coley cures fifty per cent. of spindle-cell sarcoma cases. Babtchinsky treated diphtheria with the pure culture of the erysipelas microbe, with successful results in several grave cases of the disease. Closely connected with this subject is the treatment of leprosy with antivenin; Dr. Dyers says this has been successful.[1] Also Catani tried to neutralize the tubercle bacilli by causing phthisical patients to inhale atomized fluids containing bacterium termo.

Pasteur grew the anthrax microbe outside of the body for eight days at 42.5° C., and was then enabled to inoculate susceptible animals with the culture against infection with the original disease. He achieved the same success with chicken cholera and hog fever. He found that the culture freed from microbes also possessed protective power. The immunization to anthrax, chicken cholera, and hog fever is established through toxin treatment.

In Pasteur's hydrophobia cure, which again is due to toxin treatment, the system of the patient is gradually accustomed to an attenuated form of the poison. This treatment was early foreshadowed, for in 1776 Van Swieten refers to the use of "burnt liver of a mad dog, to be eaten by the person bitten." In Pasteur's treatment the first injection consists of a preparation of virulent medulla, which has been kept in a glass vessel with caustic potash for twenty-two days. Each succeeding day a preparation is used which has been kept one day less, until one is injected which has been kept only five days, when immunity is found to be established. It is immunization being carried on during the incubation of the disease, analogous to the plan of vaccinating a patient during the early stage of an attack of variola. The mortality of hydrophobia is now about one per cent.

Koch's first tuberculin has been succeeded by an equally useless preparation. In the Berlin Gesellschaft der Chariteärzte Drs. Huber and Burghart concluded that the tuberculin R. was generally neither harmful nor beneficial, and at the fourth congress for the study of tuberculosis it was unanimously condemned.

Drs. Trudeau and Baldwin came to the conclusion that none of the tubercle antitoxins is of much value.

Dr. Bolton found that animals die sooner after the injection of tubercle antitoxin serum than from inoculation with the culture of tubercle bacilli. Dr. H. P. Loomis formed the opinion that "none of the antitubercular serums has a marked effect on the disease."

Dr. Carasquilla's antitoxin leprosy serum was voted a failure by the leprosy congress held in Berlin in 1898.

It is hard to find anything favorable to quote for antistreptococcic serum. Reynolds believes, "if used freely it seems to be a dangerous remedy." Dr. W. H. Thomson thinks there is still room for belief that this treatment is not entirely free from danger. Dr. Mundé would not insist that two of his puerperal cases that recovered were saved by the serum. Dr. Parks says results by New York physicians and surgeons have not been specially favorable, and Dr. Noble stated to the New York Academy of Medicine that serum treatment for puerperal fever had not been very satisfactory in Philadelphia. Noble mentions a series of twelve cases, of which six died. Marx, of New York, lost four successive cases with the serum. Dr. Charles Jewett, of Brooklyn, found that "no good statistics could be shown." Dr. Watson Cheyne has "great doubts of its value as a curative agent." Cobbet[1] thinks it cannot be recommended in human disease. Dr. J. W. Williams writes that reports from Pinard's clinic show less prophylactic value than claimed by Marmorek. Dr. Bolton, before the New Jersey Medical Society, June 29, 1898, made the statement that the experience of the past year had not been encouraging. Dr. R. C. Norris[2] says, "So far its usefulness has not been demonstrated, and it is not free from danger."

The pneumonia serum has not fared better than the last-mentioned antitoxin. Fränkel used it in forty cases in man, with doubtful effect. Dr. G. L. Peabody said, "in his hands antitoxin treatment of pneumonia has not produced very brilliant results." And according to Vaughan there is "no promise at the present time of making pneumotoxin of therapeutic effect." Osler[3] concludes that "against pneumonia toxæmia we have as yet no reliable measure at our disposal." Dr. A. H. Smith "cannot avoid the conclusion that up to the present time the achievements of sero-therapy in its application to pneumonia can scarcely be said to amount to more than an encouragement to further effort." As a modification of the usual serum treatment mention may be made of the work of Haber and Blumenthal, who treated fourteen cases of pneumonia with serum from human convalescents, with the loss of two patients. Klemperer brothers have done somewhat similar work on rabbits, using pleural exudate from a pneumonia patient.

Gamaleia and Lowenthal rendered animals immune to cholera with attenuated cultures. The cholera serum, it is said, contains feeble antitoxic and moderate bactericidal properties.

The serum treatment of typhoid fever has not given marked results.

Of Sanarelli's yellow-fever serum Dr. Wasden[4] says the patients treated in New Orleans during the past summer would have done as well without it; and Dr. Havelburg reports unsatisfactory results in Rio de Janeiro. The serum treatment of yellow fever will continue hazy until Sanarelli, Sternberg, and other claimants decide which one, if any, has discovered the microbe of this disease. Meanwhile Dr. Finlay, of Havana, has done something definite by treating yellow fever with blister serum from a recovered case.

Measles, scarlet fever, and erysipelas have also been treated with filtrate of the blood of convalescents from those diseases, but with no convincing results.

Calmette and Fraser claim the discovery of snake-venom antitoxins. The fakirs of India and others are said to use a form of toxin treatment, safeguarding themselves by eating the snake or inoculating themselves with its poison.

Positive claims have been made for the efficacy of tetanus antitoxin, but it is difficult for me to find any

[1] Medical and Surgical Journal, No. 4, 1897.

[1] Lancet, April 9, 1898.
[2] Advance sheets from "Progressive Medicine," 1899.
[3] American Journal of the Medical Sciences, January, 1897.
[4] Marine Hospital Service Report, 1898.

justifiable grounds for them. Cheyne, before the British Medical Association meeting, held in Montreal, September 1, 1897, declared, "The evidence in the case of animals is absolutely convincing, but in human patients suffering from the disease the effect is not certain." While Patterson[1] reports two cases of recovery he will not say it was due to the effects of the antitoxin. Nocard[2] writes, "It is of no use when tetanus is declared; but good as a preventive; doesn't always prevent the onset of the disease, but is likely to cause the attack to be mild and short." It is admitted that the "curative power of the serum in developed cases is not quite so well established." Erdheim[3] recorded eleven cures and eleven deaths with Behring's antitoxin. Lambert mentions thirty-one cases developing eight days after infection, with 61.3 per cent. mortality. Webber[4] gives 50 per cent. mortality in twenty-four cases. Weischer[5] collected ninety-eight cases of tetanus and trismus treated with serum, with 41.8 per cent. mortality. Certainly a very poor showing for a specific remedy. To rest the reputation of tetanus antitoxin on its prophylactic powers presupposes a frame of mind which to me is a mystery; for with what probability can the development of tetanus be predicted? Dr. Ascoli[6] lost but one out of five cases treated by Bacelli's method with injections of carbolic acid, and a collection of thirty-one reported cases treated this way shows the loss of only one case.

It was thought the bubonic-plague serum would give good results, but the report of the Russian committee, composed of Drs. Wysokovich, Zobolotny, and Redrov, sent to India to study the disease, states that neither the Haffkine nor the Yersin serum conferred any lasting immunity, and that the curative effect could hardly be regarded as entirely satisfactory when forty per cent. of those treated with Yersin's serum died.[7] Of five hundred inoculated with the Roux serum for immunizing purposes five contracted the disease and three died. Of thirteen hundred exposed persons injected with Haffkine's serum fifty-five contracted the disease and died.

A statistical study of the results of diphtheria antitoxin serum treatment will be reserved for a separate paper, as its consideration here would unduly prolong this communication. It may be stated that diphtheria patients have been subjected to direct toxin treatment by Masotto, who in 1868 inoculated fifteen children with diphtheritic material and lost only one of the cases treated in this manner.

This completes a pretty thorough *résumé* of serum treatment, and we have not encountered one example of its undoubted successful application in any disease. The only serum for which to-day decided claim is made is the antitoxin used for diphtheritic infection. If antitoxin fails so miserably in all other diseases, why should it succeed in diphtheria? There are many men all over the world who believe that it does not succeed. The surgeon-general of the army went altogether out of his way when he wrote the following words in criticism of physicians opposed to antitoxin: "If the patient should die of diphtheria because of failure to administer the proper remedy . . . it would appear that the courts should have something to say as to his fitness to practise medicine." Coupling this remark with another statement in the same communication, to the effect that "every man was entitled to his own opinion upon any settled problem," the inference is compulsory that Sternberg will be satisfied only when he is allowed to do all the settling himself.[1] In graceful contrast to these intolerant and uncalled-for remarks is the statement made by Virchow in an address delivered in the Charing Cross Hospital Medical School of London, October 3, 1898: "The new doctrine of antitoxins has not yet emerged from the conflict of opinions, and we are not yet in a position to pass a final judgment on the results of serum therapeutics."

If the antitoxin theory is correct and treatment founded on it can be proved to give the best results, the sooner it is demonstrated the better. If the diphtheria antitoxin is the specific claimed, then we are living in truly revolutionary days—seeing an advance in treatment such as was hardly dreamed of in the past. If it is not, and it can be shown that it is a mistaken idea that it works beneficially, then also it will be best to know it; if false, it will be best for medical progress to know it as soon as possible. This paper constitutes my contribution toward bringing the question to some conclusion. As Dr. Graves observed, "Interrogation and investigation will never injure truth nor aid error." Study of the subject leads me to the conviction that antitoxin sero-therapy is based on theorism run wild.

Gamaleia put the question: "Why should it not be possible to cure any infectious disease by injecting a lymph obtained from the blood or tissues of an animal previously made refractory to the disease in question?" Behring and Kitasato claimed that the blood serum of animals made immune against diphtheria will destroy the poison formed by the microbe of that disease.[2] Then came the use of antitoxin serum in man.

Let us examine the foundation on which this treatment rests, ignoring the various explanations of the production of immunity, about which, though very much has been written, very little is known. We will simply notice Behring's idea, which is that after toxin injection it is compensated by antitoxin, and there remains a surplus of the latter. This surplus can be employed to help other individuals to overcome the same intoxication. He says: "The entire blood-serum therapy rests on this fact." But it will be observed that he refrains from saying what antitoxin really is, and up to this time neither he nor any one else has seen it. We are asked to believe that it exists in the serum of the blood drawn from an immunized animal. My belief is that antitoxin should not be considered a thing, but a condition—but that is another paper.

Let us see how thoroughly the causative influence of the Klebs-Loeffler bacillus has been demonstrated, according to the scientific formula which requires the bacillus to be present in every case, that it is obtained in pure culture, and with it the disease is reproduced.

That a pure culture can be obtained is not denied. But it has not been found possible to find the bacillus in every case of diphtheria. Loeffler admits this. Dr. Delephine[4] acknowledged four to seven per cent. of error in bacteriologial diagnosis. He cites fourteen cases from which no Klebs-Loeffler bacilli could be obtained, which still ran the typical course of clinical diphtheria. On the other hand, it is well known that the bacilli are often found in normal throats. Indeed, Hennig does not even admit the etiological rôle of the Klebs-Loeffler bacillus. This microbe is usually accompanied by other micro-organisms, mostly staphylococci and streptococci: Fränkel and many others say there is rarely a pure Klebs-Loeffler infection. Jacobi, in 1895, thought there might be a streptococcal diphtheria, and Bowker claimed the strepto-

[1] Dublin Journal of Medical Science, February, 1898.
[2] La Médecine moderne, No. 71, 1897.
[3] Wiener klinische Wochenschrift, May 12, 1898.
[4] Lancet, 1897.
[5] Münchener med. Wochenschrift, No. 46, 1897.
[6] Rome Accademia Medica, March, 1898.
[7] Russki Arkhiv, October 31, 1897.

[1] MEDICAL RECORD, June 11, 1898.
[2] Philadelphia Medical Journal, October 8, 1898.
[3] Deutsche med. Wochenschrift, December 4, 1890.
[4] Lancet, February 12, 1898.

coccic infection with diphtheria was just as virulent as the infection with the Klebs-Loeffler bacillus. Roux and Yersin,[1] and Brieger and Fränkel,[2] showed that diphtheria bacilli differed in virulence in different cases. And Abbot[3] says, "Not infrequently diphtheria bacilli possess no pathogenic power." Vissman makes the assertion that if in a case slight ulceration exists and diphtheria bacilli are found, the conclusion usually follows that the case was one of true diphtheria — whereas in twenty-four hours, the time usually taken, it was not possible to make a bacteriological diagnosis of virulent diphtheria in the human subject. It was on such a diagnosis that many cases were reported as having been cured of diphtheria by the use of antitoxin. Observers have seen clinical diphtheria, even causing paralysis and death, in which no Klebs-Loeffler bacilli were found.

Now as to the possibility of reproducing the disease in animals. It can be shown that many organisms from the mouth, cultivated in bouillon, will kill animals if injected into them. Thus, in 1879, Raynaud found that the saliva of a man suffering from hydrophobia, if injected into rabbits, caused their death. But Pasteur showed that the fatal result was not from hydrophobia, and that the microbes found in the blood and tissues of the rabbits were found also in the saliva of healthy persons. Diphtheria bacilli injected into rabbits do not increase. The claim that animal diphtheria is the same as occurs in man is denied. According to Virchow, the disease produced artificially in animals has nothing to do anatomically with Bretonneau's diphtheria. Vissman insists that the lesions found in man and animals are not the same. "In animals false membrane is formed if the mucous membrane is denuded, but it does not extend beyond the denuded portion. If the animals live long enough paralysis occurs, but this would occur from inoculation with almost any other organism. If bacilli are injected into the subcutaneous tissues, the animals soon die. There may be infiltration surrounding the site of injection, and then a slight hydrops of the pericardium, pleura, and peritoneum—something not characteristic of diphtheria in the human subject. Also there will be cloudy swelling of the kidneys, liver, and other organs—true of almost any infection."

So, of the three causative proofs, the only one universally accepted is the possibility of the production of the pure culture.

Admitting that after what otherwise would be a fatal dose of toxin an animal can be rescued from death with mathematical certainty by the injection of the proper dose of antitoxin, still the assertion that this laboratory experiment demonstrates the ability of antitoxin to cure diphtheria in the human subject is a claim which I am not willing to accept. Dr. McFarland, for instance,[4] in a description of the mode of testing antitoxin on animals by mixing a known quantity of toxin with a varying amount of antitoxin to determine which dose of the serum is just sufficient to prevent the development of signs of disease, boldly asserts that "each one of these guinea-pigs is in exactly the same position as a child hopelessly poisoned with the disease and treated by antitoxin." This is a statement which I do not admit as fact, for there is not sufficient analogy between a child sick with the disease diphtheria, and a guinea-pig into which simply some Klebs-Loeffler toxin has been injected. It only proves, if anything, that an animal can be saved by antitoxin from the effect of the toxin of the same germ which has been used to produce the antitoxin. Even if these experiments were performed with children instead of animals, nothing more would be proved than in the case of the guinea-pigs. Toxin alone and the disease diphtheria are not exactly the same thing —notwithstanding the assurance of laboratory workers. The child sick with diphtheria is not in the same condition as the guinea-pig in the laboratory experiment. The pig, which must be in good health to begin with, has some toxin and antitoxin injected into it together or about the same time. The child is not in good health, or it would not be susceptible to the disease, and in its treatment it is not possible to inject the antitoxin the very minute the toxin is formed; and when it is afflicted with diphtheria it suffers from not only the toxin produced by the bacteria, but in the case of the child the bacteria themselves are present as a primary and constant factor—which is not at all considered when animals are subjected only to the influence of the toxin and not the bacteria. Besides, it is not at all unusual for the Klebs-Loeffler infection to be complicated with micro-organisms which produce symptoms equally as severe as those caused by the diphtheria bacillus, and in this respect again the two cases are dissimilar.

The manufacture of antitoxin serum, closely examined, reveals some surprising things. In man natural immunity is established by a process in which the bacteria take some part, while the so-called antitoxin horse serum used for immunization of man is elaborated in the animal by some phenomena in which the microbes take no part; for the toxin injected into horses is first freed from bacteria. This to my mind is already a different thing. When to this fact is added the likewise very important consideration that the horses are tested with tuberculin, injected with tetanus antitoxin, and further inoculated with the mallein of glanders, the confusion becomes worse confounded, for surely these substances must produce some constitutional changes in the animals which are transmitted to the serum. But this is not all! Not until to some preparations of antitoxin an antiseptic has been added, is the serum considered finished and ready for use.

When we know that many cases of diphtheria are complicated with other throat infections against which the Klebs-Loeffler antitoxin serum has no effect, and the unestablished grounds on which the whole theory rests, it should no longer seem strange that to-day many men will not use antitoxin, but rather surprise should be evinced that there still remain some who persist in using it, on the insufficient evidence brought forward in its favor.

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[1] Pasteur Institute Annals, 1890.
[2] Berliner klinische Wochenschrift, 1890.
[3] Johns Hopkins Hospital Bulletin, vii., No. 17.
[4] Medical Record, January 1, 1898.

HEADACHE AND ITS RELATION TO DISEASES OF THE EYE, EAR, THROAT, AND NOSE.

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There is, perhaps, no commoner symptom presenting itself to the general practitioner than headache; there are few symptoms whose control affords more relief to a suffering patient; but there are many, very many cases of persistent headache in which the practitioner has exhausted not only his supposedly rational therapeutics but his empiricism as well, in fruitless attempts to remove this demon of distress. I have seen case after case of persistently recurring headache vainly treated by general practitioners, often rationally perhaps for the relief of an existing systemic condition possibly causative, but perhaps equally as often with measures for the relief of some absurdly suppositious ultimate causation. This unhappy state of

affairs exists, assuming the physician to be conscientious, either because he has not sufficient confidence in himself and his powers of diagnosis to exclude any possibly existing systemic cause, or because he lacks the professional astuteness necessary to recognize or suspect the existence of a cause outside of the domain of general medicine to which the symptom may be referable.

Headache may be due to—(1) pressure from whatever cause, embracing (*a* and *b*) conditions within or without the cranium, including traumatism, which may act by causing local hyperæmia or congestion, or by a general disturbance of the physical equilibrium of the brain; (2) general circulatory changes involving either increased vascular tension and dependent upon one or more of many diseased conditions of the system, or any sudden change of tension; (3) local hyperæmia or congestion caused by direct or reflex nervous irritation; (4) reflex nervous sensation apparently not associated with vascular or other pathological changes in the cranium; (5) morbid processes occurring in the bony walls of the cranium; (6) local trophic changes, or changes in nerve tissue; (7) intense emotional disturbances; and (8) neurasthenia.

It will be seen at a casual glance that this is a very general classification of the immediately exciting causes of headache, whose origins might be found in a very large majority of the long category of human ills. This is precisely what I wish to emphasize without going into minutiæ. In any event a distinct and definite individual description and characterization of the almost limitless causes of headache would reach far beyond the projected purpose of this paper. In many instances the cause is unassignable, but it is reasonable to suppose that the cause exists, whether or not it can be recognized by the general practitioner. I do not for a moment dispute the fact that many cases must, for want of light, be regarded as "idiopathic," or ascribed in a general way to a "neurasthenia" that is too often simply taken for granted to exist; I have even included the latter under the head of general causes, for undoubtedly it may sometimes be held accountable. But I do assert, and with a positiveness born of frequent proof, that a very large number, even a very large majority of these cases, are not idiopathic so-called nor neurasthenic, but are simply the result of very common causes, easily located if properly looked for.

The general causes above enumerated cannot in every case be divided into entirely separate and distinct factors. Some of them merge into others with a seeming subtlety, which is often illustrative of the distressing results which they produce. Others are essentially individual and are easily recognizable.

The symptom of headache presents itself in varying forms, many of which by location and character aid materially when considered with other accompanying symptoms in the diagnosis of the cause. But this is within the domain of the practice of general medicine, and not to be discussed here. These forms of headache occur in the daily experience of every general practitioner; they are readily recognizable, and controllable in so far as the cause can be mitigated or removed. The headaches to be considered here are a portion of that class which are present and persist with cause unassigned, and usually, by the general practitioner, unassignable; resisting every effort directed toward their cure or amelioration; existing perhaps continuously, perhaps recurrently, and often proving themselves sources of inexpressible discomfort and distress.

To the untiring zeal of ophthalmologists belongs the credit of having generally impressed upon the profession at large the possibility and frequent occurrence of headache in connection with abnormalities of the eye. The profession at large is yet to be impressed with the fact that headache due to abnormal conditions of the throat, nose, and ear are of even more frequent occurrence. Hack says that in every case of cephalalgia a thorough inspection of the respiratory tract should be made for the detection of any abnormal condition. Bosworth says: "The relief of this distressing symptom (headache) is one of the most creditable of our successes in throat practice," and "this distressing disease is relieved, in a large proportion of cases, by treatment directed to the air passages." Other like expressions by prominent laryngologists could be quoted.

There is probably no one region of the human economy whose commonplace abnormalities are more prolific in the production of headache than the upper air passages; yet how many physicians, not specialists, recognize this fact? Few indeed; and it is therefore the plain duty of the rhino-laryngologist and otologist to impress upon the profession at large, with iteration and reiteration, the positive and incontrovertible fact that diseased action of the ear, nose, or throat, and particularly of the last two, is a frequent and peculiarly active cause in the production of the various forms of cephalalgia. Not once or twice, but often has every specialist been confronted by men of wide experience in medicine, men of learning and resource in general medical and surgical fields, who, while perhaps not scoffing, smile significantly at the "enthusiasm" of the rhinologist and laryngologist who ventures to explain an otherwise inexplicable headache by pointing out a morbid process in the nose or naso-pharynx. While diseased conditions of the ear are not so fruitful a source of headache as are diseased conditions of the upper air passages, yet every otologist will bear witness to the fact that such an accompanying symptom in ear disease is by no means rare. And by this I do not mean pain limited to, or localized in, the ear itself, or the mastoid process of the temporal bone, but a genuine "headache," "neuralgic" or otherwise, characterized by pain diffused over the side of, or even the entire head, and not referable by the sufferer to the ear in every case, by any means.

The general practitioner will admit on general principles, and because of its unquestioned acceptation in the medical world, the frequency of headache due to ocular disturbances; yet he is loath to consider (indeed the possibility, much less the probability, seldom suggests itself to him) that conditions in the ear, the nose, the throat are at least as frequent causes. Why this lack of appreciation? There are two reasons: First, there is in the medical profession at large a general acceptance of a vague impression that this state of facts exists; and this is strengthened by the observation of, second, that patients are much more likely to complain of slight visual disturbance than of any slight alteration in the function of the ear or air passages. Indeed these last may be scarcely, or not at all, noticeable to the patient, and yet be capable of producing very distressing effects not directly referable, by the patient, to the cause.

There is no reason why the impression above referred to should prevail to the exclusion of other facts. The practitioner should think for himself. There is no reason why the abnormal ear and upper air passages should be less potent factors in the production of headache than the abnormal eye. Are they not as nearly related in situation and vital connection to the encephalon and the whole head as is the eye? Are not the nerve connections, both sensory and motor, and of special sense, between the ear and upper air passages and the brain as intimate as those between eye and brain? May not the same be said of the vascular supply? Are not the muscular attachments

of the ear and upper air passages in as close touch with the muscular development of the head as are those of the eye? Are not the essential bones of these organs as closely related to the cranium as are the essential bones of the orbit? Whether, therefore, the headache is produced by transmission of morbid processes by means of continuity or contiguity of tissue, by transmission of stimuli along nerve branches and trunks, or by vascular changes and perversion of normal vasomotor function, it must be readily conceded that deviations from the normal in the ear and upper air passages are quite as capable, theoretically, of producing the changes under discussion as are diseased conditions of the eye. This is assuming that the relation of the eye to the possible causation of headache is generally conceded by the profession at large. I fancy that it is, and very justly so. Even if it were not, it would be necessary to suggest only the intimate nervous and vascular relation existing between the eye and the contents of the cranium, as well as between the latter itself and its muscular attachments. This is sufficient reason why the relations of disease of the eye to headache should exist. That it does exist can be clinically demonstrated at any time, or can be plainly proven by an examination of the records of any ophthalmologist. The same, in fact, can be shown to be true in the case of diseases of the ear, nose, and throat, the only difference being that portions of the upper respiratory tract can perhaps be shown to have an even more intimate vascular connection with the brain than is accorded to the eye.

I have no intention, for it is unnecessary, to enter upon the rehearsal of a long list of cases in evidence of this exposition. I can claim nothing new in substance but only a new argument for presentation, by which I hope to bring this important subject more prominently before the eyes of the general practitioner. I shall, however, take the liberty of outlining a few typical cases, taken from my private records and from the records of my clinic in the ear, nose, and throat department of Shirras' Dispensary, in this city.

Case I.—Miss C. F——, aged twenty-four years, has suffered for some years with frequent violent headaches, and for the past six weeks has had only one day free from the terrible pain. The attacks come on every morning about 3 A.M. and last until 5 P.M. The pain is sometimes over the eyes, but oftener over the vertex and in the occipital region. I removed a Tornwaldt's bursa, containing a thick, clear, fluid substance, from the vault of the pharynx, and for two weeks the patient was absolutely free from pain. At the end of that time an adenoid growth developed on the site of the former bursa and the symptoms returned, with, however, only partial severity. The patient declined further operative interference at that time. This is a significant and instructive case.

Case II.—Miss V. S——, aged twenty-eight years, suffered for several months with persistent headache over the frontal region and vertex. A mild chronic hypertrophic rhinitis and naso-pharyngitis were treated, with the result of disappearance of the headache.

Case III.—Miss L. B——, aged eighteen years, has severe headaches on an average two or three times a week. Treatment of atrophic rhinitis and chronic naso-pharyngitis caused complete disappearance of headaches.

Case IV.—Mrs. H. S——, aged twenty-eight years, for several months has been subject to repeated attacks of sore throat, accompanied by headaches. A naso-pharyngitis with acute pharyngitis and laryngitis was relieved, followed by entire relief from symptoms complained of.

Case V.—E. R——, aged thirty years, has been suffering for about three weeks with pain all over the left side of head and face. Examination showed a mild acute catarrhal otitis media, upon relief of which all symptoms complained of disappeared.

Case VI.—Mrs. J——, aged sixty-five years, complained of deafness for the past two years, stuffy feeling in both ears, and frequent headaches, though not of a severe type. The removal of hard plugs of impacted cerumen from both ears gave complete relief.

Etc., almost *ad infinitum*.

Almost all of these cases were treated for a long time by general practitioners, without result.

It would be superfluous to quote cases in which headache has been relieved by treatment of abnormal eye conditions. Such are generally well known, even among the laity. Any deviation from the normal in the refraction of the eye, or any diseased process in the eye, is capable of causing headache. I have even seen the cause in a mild chronic conjunctivitis, which is probably explained by the fact that this disease often makes the lids feel droopy and heavy, and the constant muscular and nervous effort to keep them open results at times in the production of headache.

In the air passages the part most active in the causation of headache is the naso-pharynx; and the commonest condition there that is to be held responsible is chronic naso-pharyngitis, though, of course, any diseased action of the part may be causative. The nose is the next in importance from this standpoint, and the chief factor here in producing the symptom under discussion is probably a chronic hypertrophic rhinitis, though it is clear that any other morbid process could, and often does, produce the same result.

In the ear impacted cerumen, pressing upon the walls of the canal, is probably the most frequent cause of headache, whose origin is in this region; but any other abnormal condition, whether of external, middle, or presumably internal ear, may have a like effect.

As has been said before, the fact that a patient will complain of slight eye trouble sooner than of slight ear, throat, or nose trouble, accounts for the general practitioner's more willing recognition of the part played by the eye in the causation of headache. Almost any, if not every, deviation from the normal in the upper respiratory passages is capable theoretically and clinically of producing this distressing symptom; not by any means in every case does this occur, of course, but it is certainly of very frequent occurrence.

As quoted above, Hack says that in every case of cephalalgia the upper air passages should be searched for diseased action. This may be going too far, since the cause may, of course, be found elsewhere; but is it not far more reasonable, in any case of headache with cause obscure (and there are many of them), to examine at once the upper air passages for a possible, or rather say probable, causation, than to dose the patient for a mythical dysmenorrhœa, or a hypochondriacal liver complaint, or stomach or kidney trouble, or so on, that exists only in the imagination of the patient herself or himself? And it must be admitted that disease of the eye, throat, nose, or ear can rationally be supposed to have a far greater influence over such a head symptom than has the slightly perverted function of some far distant organ.

Bosworth, Tornwaldt, Hack, Beverley Robinson, Ingals, Sajous, Mackenzie, Gruber, and many other eminent specialists have recognized and called attention to the fact that disorders of the throat, nose, and ear are by no means infrequently responsible for the presence of persistent headache, apparently neuralgic or otherwise, and facial neuralgia. The later writers, as a rule, emphasize this even more than do the authors of earlier date. Many cases have been reported and could be quoted to support the position. The medical profession cannot afford to ignore, or pass lightly over, the conclusions drawn by such skilled observers.

Unfortunately these reports and recommendations have not been published where the eye of the general practitioner is likely to penetrate, which is and can be the only reason why they have been and are so generally overlooked.

Upon looking over my records for the past year I find a large percentage of them (comparatively, of course) to consist of the class of cases under consideration. I shall not discuss them individually; suffice it to repeat for the purpose of added emphasis, that it will be found, in theory and in practice, that diseased action of practically any type, in the ear, nose, or throat as well as in the eye, is fully capable of being, and is indeed likely to be, the chief and often the only factor in the causation of persistent or persistently recurring headache. The treatment, of course, is mainly and simply the treatment of the local conditions found, and I may add that the results are often astonishingly brilliant. The subject is one which is easy of investigation, and to which there can be no good reason for the profession at large remaining oblivious.

85 Broad Street.

Progress of Medical Science.

Diabetes Insipidus and Pregnancy.—Dr. Ch. Vinay (*Deutsche Medizinal-Zeitung*, January 19, 1899) reports two interesting observations of diabetes insipidus during pregnancy. In the first case the diuresis rose to a maximum of twenty-five quarts per day, in the second to twelve quarts. Both patients showed a very marked improvement after delivery, and gave birth to living and healthy children, but died soon after the puerperium from diseases whose connection with diabetes insipidus is not settled—that is to say, from embolic pneumonia, perhaps pulmonary tuberculosis. Both patients were taken ill immediately after severe fright; the second, for the first time during pregnancy. Vinay believes that there is a certain connection between diabetes insipidus and pregnancy, but does not consider that this has been definitely enough settled to justify the induction of artificial abortion.

Immunity and Superinfection in Chronic Gonorrhœa.—Dr. J. Jadassohn, of Berne (*Deutsche Medizinal-Zeitung*, January 23, 1899), as a result of observation and experiment, draws the following conclusions: (1) We know nothing of a diminution of the infection of a gonorrhœal process as long as gonococci can be demonstrated in the patient. (2) We know nothing of a congenital immunity of those organs which generally are easily attacked by gonorrhœa. (3) We must accept the fact that those organs which are not particularly disposed (vagina, bladder, conjunctiva, joint) have a varying susceptibility to gonorrhœal virus partly at various ages, partly in different individuals. (4) We know nothing of immunity of the organism on account of the existence of gonorrhœa; even a continued chronic gonorrhœa in one organ does not prevent an acute inflammatory attack in another, *e.g.*, acute epididymitis in chronic urethral gonorrhœa. (5) An immunity of any organ in which the disease has lasted for a long time is not settled.

Substitutes for Cocaine: Scale of Efficiency.—Dr. Schmitt (*Deutsche Medizinal-Zeitung*, January 26, 1899), as a result of numerous experiments, has devised the following scale: (*a*) Rapidity of anæsthesia: tropacocaine, holocaine, cocaine, eucain A and B, orthoform. (*b*) Duration of anæsthesia: orthoform, cocaine, eucain B, eucaine A, holocaine, tropacocaine. (*c*) Intensity: holocaine, tropacocaine, eucain B, eucain A, orthoform. (*d*) Analgesia of inflamed eyes: holocaine, tropacocaine, eucain B, eucain A, orthoform. (*e*) Mydriasis: cocaine, tropacocaine, eucain A, eucain B, holocaine. (*f*) Ischæmia: cocaine, tropacocaine, eucain A, eucain B, holocaine. (*g*) Dilatation of blood-vessels: eucain A, eucain B, tropacocaine, holocaine. (*h*) Irritation: orthoform, eucain A, holocaine in strong solution, cocaine, eucain B, holocaine (weak), tropacocaine. (*i*) Antiseptic effect: orthoform, holocaine, eucain B, tropacocaine, eucain A, cocaine. (*j*) Toxic properties: holocaine, cocaine, eucain A, tropacocaine, eucain B, orthoform.

The Mode of Action of the Principal Physical and Medical Agents Used in the Treatment of Diabetes Mellitus.—Dr. R. Lepine (*Wiener medizinische Blätter*, January 26, 1899) is credited with the following statements: On the assumption that the cause of diabetes is a deficiency in oxidation and only in certain cases an increase in sugar production, Lepine divides the substances into those (1) which increase glycolysis; (2) which diminish the production of glycogen; (3) which possess a sort of mixed or unknown effect. (1) Inhalations of oxygen and compressed air have but little effect on diabetes; permanganate of potash was not followed by any particular benefit. The alkaline waters, when given in large quantities, are useful, probably only on account of the bicarbonate which they contain. Good results are reported from the use of beer yeast, especially the soluble ferment. Muscular exercise to moderation is strongly recommended; the results of electrotherapy and organotherapy (thyroidin) are less satisfactory. (2) Antipyrin is especially recommended in nervous cases of diabetes; quinine and salol are also worthy of praise; the first two substances as well as the sovereign remedy, opium, produce their effects through a diminution of the glycogen production or the sugar production from the glycogen, or both. The sambul preparations occasionally produce good results. (3) Bicarbonate of soda owes its good effects very likely to a diminution of the sugar production. Piperazin and arsenic (in large doses) produce a diminution of glycogen. Recently uranium nitrate (0.03–1.02 daily) has been advocated, especially in nervous diabetes. The good results of other remedies (phosphorus, strychnine, iron, pilocarpine, iodine, iodoform, ergotin, calcium) are merely incidental. Brilliant results have been reported after the use of raw or cooked sheep pancreas and also after enemata of pancreatic juice.

The Action of Diphtheria Toxin on the Nervous System.—Drs. Luisada and Pacchioni (*Giornale della R. Accademia di Medicina di Torino*, vol. 61) report the results of a number of experiments made upon dogs with the diphtheria toxin. These results are about as follows: (1) The diphtheria toxins applied directly to the nervous system provoke a profound lesion at the point of application, characterized by an inflammatory and degenerative action. (2) These lesions are propagated more or less extensively from the point of application. (3) In the non-immunized dogs, which had been injected with a dose sufficiently toxic, the phenomena of local reaction were noted. (4) In immunized dogs the toxins constantly produced alterations in the central nervous system, intense, localized, but of less extent than those produced in dogs non-immunized. (5) The toxins applied directly to the medulla are propagated rapidly in all directions, preferring the posterior columns, the gray matter, and the central canal as routes. In consequence of the bulbar invasion death occurred in the animals more rapidly when the toxins were introduced into the medulla than when applied to any other portion of the cerebro-spinal axis. When the toxins were introduced into the cerebral cor-

tex, characteristic lesions of these regions were manifested. Death occurred later, through propagation of the poison to the medulla. (6) Toxins introduced into the sheath of the sciatic nerve provoked an inflammatory process more or less intense, but more circumscribed than in the central nervous system. From the nerves the poison ascended to the medulla, chiefly through the posterior columns, and thus provoked an ascending myelitis. (7) The lesions produced upon the neuroglia by the direct action of the toxins are similar to those reported by Vassale, Danagglio, and others in the various intoxications and infective processes. In the oblongata the prevalent alterations are found in the crossed pyramidal tracts and posterior columns. (8) The alterations produced by the toxins affect the nerve fibres more than any other part of the nervous system. These lesions affect principally the myelin, and consist of a physical modification of it, whereby the connection between the various nerves is lost. A chemical modification of the myelin is also partially present. (9) The action of the toxins has much importance in the genesis of various paralyses as seen in the human family, attacking first the sheaths of the nerves, then the nerves, and later the nerve centres of the medulla.

Uterine Cough.—(1) In those predisposed, such as neuropaths and sufferers from genital diseases (especially during menstruation and pregnancy), cough may at times be induced by isolated contact with the fornix vaginæ. (2) In those so predisposed, pathological processes which involve the broad ligaments, and especially Douglas' pouch, may cause reflex cough, just as they cause reflex acne and hyperemesis. In the latter conditions abnormal fermentation and auto-inoculation are probably also present. (3) In those predisposed to cough as above stated, irritation of the lower third of the vagina and vulva can occasion only local reflexes—nothing remote, such as a cough, can occur. (4) Uterine cough is produced by irritation, on the one hand, of the utero-vaginal fibres of the hypogastric plexus which supply the fornix vaginæ and cervix uteri, and, on the other hand, of the spermatic plexus, the hemorrhoidal nerves, and the ganglia embedded in the broad ligament which supply the fundus uteri and ovaries. (5) Irritants which affect the nervus pudendus are at first localized in their reflex effects. (6) Reflex phenomena may be (*a*) essential physiological reflexes in remote motor and vasomotor territories, which through the neuropathic basis are easily set in motion; (*b*) radiation in the case of neuropaths, where resistance is weakened; (*c*) irregular radiation in high degrees of neuropathy. (7) Cases of tuberculosis habitués or predominance of stomach symptoms play a separate part in the genesis of nervous cough. (8) Local treatment, especially by pessaries, acts promptly when pathological conditions are complicated, as in the case of retroflexion and prolapse, etc. —SCHAEFFER.

Treatment of Spermatorrhea and Prostatic Affections by Faradization.—Dr. Moritz Popper (*Wiener medizinische Blätter*, January 26, 1899) draws the following conclusions: (1) By means of the faradic current I have been enabled to set into activity the function of the prostate; this method of procedure is preferable to the mechanical one of massage. (2) In acute painless cases of prostatitis it is possible by this means to empty gonorrhœal pus from the gland and ducts. (3) In chronic prostatitis, which for the most part represents the only ground for recurrent chronic blennorrhœa, my experience shows a diminution in size of the gland; furthermore, it appears that the faradic current affects, to their detriment, the virulence of the gonococci. The prostatitis is cured; the recurrence of the blennorrhœa ceases. (4) In hypertrophy of the prostate (one case of five years' duration with residual urine and relative atony of the bladder) I have been enabled to accomplish a complete diminution of the gland; parallel with this a cure of all the symptoms took place. (5) The cause of pathological sleep pollution, and indeed the most important one, is the weakness of the compressor muscle of the ejaculatory duct. (6) Prostatorrhœa and spermatorrhœa are mostly due to the atony of the compressor muscles of the ejaculatory duct and the duct of the prostate gland. If, then, this atony arises as the result of generalized atony or of local blennorrhœal inflammation, it affects in the first place the compressor muscular structure, and this causes the functional disturbances. (7) This weakness of the compressor muscles, which is the fundamental cause of sleep pollution, as well as the atony which gives rise to the spermatorrhœa and prostatorrhœa, are cured by energetic faradic treatment of the prostate.

Phlebitis and Thrombosis.—Dr. Julius Mannaberg (*Klinisch-therapeutische Wochenschrift*, January 22, 1899) makes the following remarks: "These conditions occur far more frequently than is generally supposed, and are recognized far less frequently than is desirable. The etiology of thrombosis has been very thoroughly worked up and discussed. Before the days of Virchow, phlebitis was looked upon as the primary condition; the veins were affected from some one or other inflammatory cause, an exudation became deposited in the lumen of the vessel, and to this the thrombosis appeared as a secondary affair. As a result of a dyscrasia of the blood thrombosis may occur without a preceding phlebitis. Virchow explains the occurrence of thrombosis upon mechanical grounds, that is, through alteration of the lumen of the blood-vessel, lack of continuity, diminution of the cardiac power, or changes in the walls of the veins. Phlebitis is secondary to the thrombus. The experiments of recent date have shown that breaks in the substance of the intima and bacteria play an important part, in addition to which blood coagula arise. According to the views of other observers, thrombosis may occur as the result of bacteria or their toxins in the blood without any change in the intima. These opposing views are not yet definitely settled, and this is due to the difficulty of the examination and the interpretations of the result at the post-mortem table. In eighteen hundred cases of post-mortem at the Vienna pathological-anatomical institute during 1898, there were ninety-six instances (six per cent.) of thrombosis of the veins, of which a large proportion had succumbed to consecutive pulmonary emboli. Of these cases, thirty-nine had infectious diseases, thirty heart and blood-vessel changes, nineteen neoplasms, six marasmus, one chlorosis and nephritis. There is no infectious disease in which venous thrombosis may not occur; it frequently complicates typhoid fever, influenza, tuberculosis, diphtheria, malaria, etc. The occurrence of thrombosis in the later stages of typhoid is due to cardiac weakness and marasmus; the appearance of thrombosis three or four days after the beginning of diphtheria is traceable to a fatty degeneration of the heart and an exfoliation of endothelium. The occurrence of thrombosis in the crural vein after angina is due to metastasis. The most frequent site of thrombosis is the lower extremities; then the upper. In diseases of the heart and arteries the thrombi arise in the femoral vein, the heart, or in the cerebral sinuses. Stenosis of the mitral valve leads to thrombosis, and the thrombi are more numerous in the heart the more marked the stenosis chances to be. In carcinoma the thrombi are found mostly in the lower extremities; Trousseau has already spoken of the occurrence of phlegmasia alba dolens as a symp-

tom of carcinoma in the late stage. The cause of thrombosis in these cases is, according to Virchow, the cardiac weakness; but, according to the French school, some poison given off from the carcinoma. In marasmus thrombi occur in the femoral vein, the auricles, and the ventricles. Among the blood diseases thrombosis is observed in chlorosis, leukæmia, scorbutus, and morbus maculosus Werlhofii; of these affections, chlorosis is the most important, and in this condition thrombosis is not so very rare, but is frequently overlooked. Three cases of thrombosis in leukæmia were observed. In one young girl pains in the calf arose, which were treated with massage; after one of these séances collapse and dyspnœa suddenly took place, the limb became swollen and tender, the pulse very small, the temperature subnormal. This was a case of crural thrombosis with embolism of the pulmonary artery. Later on thrombosis of the jugular and axillary veins, and perhaps of the heart, occurred. The occurrence of thrombosis in chlorosis is attributed by some to hydræmia, by others to cardiac debility, and by Von Noorden to bacteria; the absence of fever in most instances speaks against the latter view. In morbus maculosis Werlhofii thrombosis of the nose often occurs after tamponing. Apart from these, septic thrombi following operation or childbirth were observed.

Diabetic Coma.—Some of the suggestions made by Dr. Robin (*Bull. gén. de Thérap.*, vol. cxxxvi., p. 353) to ward off coma are: to stop strict *régime;* milk diet; sodium sulphate to increase elimination; five drachms of sodium bicarbonate daily; infusion of digitalis and ergotin if the pulse is small, rapid, or irregular; caffeine citrate and theobromine if slow, soft, and compressible; strychnine before and pepsin and maltine after the milk; two injections daily of a twenty-five-per-cent. solution of sodium glycero-phosphate; friction; oxygen.

Rotheln.— (1) The clinical course of rötheln is not incompatible with the view that it is an anomalous form of measles occurring toward the end of an epidemic of that disorder. (2) The rash can, as a rule, be distinguished from that of scarlatina. When it is indistinguishable, the disease is probably scarlatina, and should be regarded as such. (3) The rule that immunity is afforded by one attack of an exanthem against another admits of so many exceptions that it cannot be used as an argument in favor of the specificity of rötheln.—Leonard G. Guthrie.

Some Peculiarities in the Behavior of Certain Malignant and Innocent Growths. — After detailing illustrative cases, Bennett (*Lancet*, January 7, 1899, p. 3) gives expression to the following views: (1) Certain tumors, although undoubtedly malignant in structure, pursue an innocent course and disappear spontaneously. (2) Certain tumors, malignant in structure, become quiescent, assuming a condition of negative malignancy. (3) Some tumors, originally innocent in type, pursue a course of extreme malignancy. (4) Microscopic examination is powerless, in a certain percentage of cases, to determine whether a growth will prove malignant or innocent in its course. (5) The clinical behavior of new growths is often a better test of malignancy than microscopic examination. (6) Mental concentration on the part of the patient upon the site of the disease is a distinct factor in stimulating the growth of innocent tumors and in the production of malignant disease in certain susceptible subjects. (7) In nervous subjects of the type described, recurrence of malignant disease after operation is more certain and its growth more rapid than in persons of a placid or apathetic disposition. (8) Evidence is wanting to show that operation for carcinomatous tumors of the breast that have assumed the condition of negative malignancy is, as a rule, necessary or advantageous. (9) Although the practice of candidly announcing to patients suffering from malignant disease the nature of their complaint is, speaking generally, moral and salutary, it may be modified with advantage in patients of the nervous type already indicated.

The Syphilitic Etiology of Locomotor Ataxia.—The whole question presents itself somewhat thus: Given a normal nervous system in a healthy individual without hereditary taint. In such an individual a progressive degenerative process may be started up: (1) By direct injury (traumatism), including such factors as cold, damp, etc.; (2) by overwork of the nervous elements (exhaustion); and (3) by certain blood states (toxæmia), including syphilitic and other forms of infection, such as alcoholism, ergotism, etc. Of the toxæmic and, in fact, of all the three sets of causes enumerated, the syphilitic is without doubt the most common; because probably under these circumstances the highest degree of blood-poisoning, acting for a long period of time, is brought in relation with the sensory, the most delicate and highly organized part of the nervous apparatus. In other words, the muscular sense being the last acquisition in the evolution of the sensory functions of the race, and therefore the first that would be liable to succumb to any unusual strain, the power of resistance is probably less in the sensory neurons than in the other neurons, to the prolonged action of the syphilitic virus. On the other hand, there is probably a higher degree of virulence in the syphilitic virus toward the nervous elements than there is in most of the other varieties of toxæmia. That some syphilitics do not acquire tabes is explained on the ground that either the virus in their case is not sufficiently active; or, if it is sufficiently active, the inherited vitality of the nervous elements is so vigorous as to be able to resist the action of the syphilitic poison.—Dr. Harrison Mettler, *Alienist and Neurologist.*

The Treatment of Chilblains with the Electric Bath.—Having observed that children with infantile paralysis, who are subject to chilblains in the winter time, often become quite free from this complication during the electric-bath treatment of their paralysis, Jones (*Lancet*, January 14, 1899, p. 88) was led to try the effect of the bath in other cases of chilblain, and with excellent results. An induction coil is used, and the wires are attached to two metallic plates, which are placed at the two ends of an ordinary earthenware foot-bath filled with warm water. The patient is instructed to use this bath at bedtime for ten or fifteen minutes whenever the slightest threatening of chilblains is noticed. The current is used as strong as it can be borne without discomfort, the effect being to make the feet warm with a glow that lasts until the patient goes to sleep. Any swelling or congestion of the toes quickly disappears, and all danger of serious trouble from a broken chilblain is warded off. Besides its use for the prevention of actual chilblains, the treatment may be employed in cases in which the patients complain of cold feet. The electric stimulation seems to improve the circulation in the extremities to an extent far superior to anything that can be obtained from an ordinary warm foot-bath. A short course of electric foot-baths for eight or ten consecutive nights not only dispels chilblains that have already formed, but seems also to produce an improved state of the circulation, which renders the patient more or less chilblain-proof for some time after the baths have been stopped.

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THE SPREAD AND ORIGIN OF THE PLAGUE.

SINCE the plague attained the alarming proportions which it has presented for the past two years in India, the fear has been frequently and freely expressed that, unless extraordinary precautions should be taken, the disease might spread to other countries. These pessimistic views were apparently not shared by the English authorities, who seem to have been of the opinion that the existing regulations were sufficiently stringent to preclude the possibility of the infection being carried beyond the borders of India. Unfortunately, however, the prophets of evil have proved to be in the right; the germs of the disease have been transmitted to European countries, and, in addition to the outbreak in Vienna, one or two isolated cases have occurred even in British ports. These facts have occasioned some severe criticisms on what are claimed to be the lax methods employed by the British to prevent the dissemination of the disease. In June last Dr. Zavitziano, United States sanitary commissioner at Constantinople, reported to this government that in spite of the steps taken by the international sanitary commission there were many questions which rendered the measures delusive. Dr. Zavitziano went on to say that in his previous reports he had pointed out how much Turkey is exposed to the invasion of epidemics through the Persian Gulf. This opinion was contrary to that of the other members of the international sanitary commission, who held that no epidemic ever entered Turkey from that way. The American commissioner nevertheless had surmised correctly, as in the middle of June three cases of bubonic plague were landed at three Turkish ports from different vessels coming from Bombay. The foreign sanitary representatives, seeing that despite the orders given by the sanitary authority the spread of the epidemic is always imminent, decided to present to the ambassadors or ministers, whom they represent at the international sanitary commission, a memorial, according to which diplomatic action would be taken in order to compel the Ottoman government to respect and put into execution the decisions of the international sanitary commission without modifying them, and to adhere to the sanitary conferences of Paris and Venice. Whether it has been found possible to compel the Turks to be bound by these regulations is doubtful, but Dr. Proust, a distinguished French sanitary authority, has recently read a paper, quoted in the London *Standard*, before the Paris Academy of Medicine, in which he charges the English with the same neglect as was laid at the door of the Turks. He said that if the regulations prescribed by the Venice conference were properly executed, Europe might be regarded as safe from an invasion of the terrible scourges. He regretted, however, to be obliged to say that some of the measures which were recommended two years ago had not yet been put into execution, while others were applied in an incomplete manner. Examining the question as to what should be done for the protection of Europe, Dr. Proust described the present position of the plague in Asia, Africa, and Europe. He said that Bombay was still the chief centre of the disease, and that indeed a slight increase of mortality from it had recently occurred there. The sanitary situation in the south of India had become more unsatisfactory. In spite of this, however, the departure of pilgrims for Mecca had not been completely prohibited as it was in 1897, owing to the pressure brought to bear on the British authorities by the Venice conference. Dr. Proust urged that nothing but a complete interdiction could be efficacious. The epidemics of plague which broke out formerly in Europe had, according to Robert Koch and other doctors who had studied the invasion, come from places situated in Persia and Mesopotamia. The epidemics of plague which occurred in China had their origin in a hot-bed of the disease, existing to the west of the province of Yunnan, on the frontier of Thibet. A third hot-bed of the disease exists to the south of Mecca, in the mountainous country of Assir. According to Koch a fourth hot-bed of the disease exists in the interior of Africa, in Kisiba, situated at the extreme northwest of the German East African colony, and in the Buddu province of Uganda. After referring to the success with which the French had coped with the plague in Madagascar, Dr. Proust proceeded to examine the question of plague on board ship. He declared it had been proved within the last two years that five English vessels had had the disease on board, and he pointed to the case of the *Caledonia* carrying the Indian mail, as a striking example of the disregard of the sanitary regulations against the plague. He went so far as to say that "when the regulations impede English traffic a little, those regulations might almost as well not exist." So far as the measures taken in some parts of India are concerned, there would appear to be some truth in Dr. Proust's remarks. The special correspondent to *The Lancet*, commenting on the outbreak in the Central Provfnces, writes: "The so-called necessary precautionary measures toward staying the spread of the disease are reported to have been instituted. These consist apparently of segregation camps and hospitals, with disinfection on an extensive scale. The already condemned quarantine is once more applied. Notwithstanding that the weather conditions are just now admittedly favorable, nothing is heard of clearing out the people *en masse*, the only remedy which has hitherto proved of any material value. If this were done, the annoyance of

all other measures might be avoided." The fact should be borne in mind that the English in their efforts to stem the spread of the plague in India have many difficulties to contend with, not the least of which is the fanaticism of the natives. With regard to the transmission of the plague germs by means of ships, it is to be hoped that Dr. Proust has been misinformed on that point. This much may, however, be said, that looking at the immense flow of traffic coming by British vessels from the Indian ports, the task of a strict sanitary supervision of their human freight and cargo is manifestly a hard one, but if it can be proved that due care has not in all cases been exercised, it certainly is incumbent on the European nations, for the safety of their people, to insist that the regulations passed by the sanitary conferences should be faithfully observed.

THE CREMATION QUESTION.

A LARGE part of the London letter in the New York *Herald* of Sunday, February 18th, was devoted to a consideration of the advisability of enforcing cremation in the interests of public health. It appears that the county council of that overgrown and ever-spreading city, London, is deeply concerned at the danger by which its inhabitants are threatened, due to the present system of burying the dead. That the alarm felt and expressed is not altogether groundless, must be allowed. Granted that contagion can be spread by such means—and under certain conditions the possibility of this occurrence has been on several occasions undeniably proved—then London, with its numerous cemeteries and graveyards, must necessarily be more or less exposed to the risk of infection. True it is that most of its large burying-grounds are situated at a distance from the city, but, owing to its marvellous expansion, there are many which, once in the country, are now surrounded by houses. However, putting aside sanitary reasons, in themselves a strong enough cause for an alteration, there is another point to be considered. It has been estimated that every year about twenty-four acres of land are required for the disposal of the dead of London, and the argument is brought forward that if cremation should be adopted this waste of land would be avoided. But as it is with London, so it is with all large centres of population, though to a lesser extent. Dr. Louis Windmüller, writing on the subject in the *North American Review* of August last, says: "In the early part of this century graves were in evidence in New York to such an extent, that a splenetic Englishman who came to visit our shores speedily returned when he found every street lined with headstones." At one time New York was full of graveyards, and this was the case until between 1846 and 1852, when to all intents and purposes burial within the city limits was prohibited. This is certainly a change for the better; still, with the present tendency of people to flock to the towns, the question of disposing of the dead so as to preclude any fear of spreading contagion and on general sanitary grounds is a serious one. Perhaps the strongest objection to cremation will be found in religious sentiment, but, after all, it is but a sentiment. Looked at through medical spectacles, it would almost appear as if cremation had almost everything to be urged in its favor, and little or nothing against it. With regard to the difficulty of detecting poison in ashes, this can scarcely be regarded as a sufficiently serious objection to counterbalance the manifold advantages of the method. The fear of being buried alive, too, which is ever present with some people, would, if cremation should be brought into use, be wholly done away with.

THE REMOVAL OF THE OVARIES FOR CARCINOMA OF THE BREAST.

THAT there is some functional relation between the uterus and the ovaries on the one hand, and the mammary glands on the other hand, there seems good reason to believe, and the possibility does not appear too remote, that circumscribed and non-metastatic new growths of the breast may be favorably influenced by ablation of uterus or ovaries, or both; but such an operation would appear to possess slight advantage over extirpation of the intramammary growth, or even of the entire affected mammary gland. That operations upon the internal genitalia should have any inhibitive effect upon malignant disease of the breast seems most unlikely. An opposite opinion is held, however, by Boyd (*British Medical Journal*, February 4, 1899, p. 257), who reports the further histories of five cases in which bilateral oöphorectomy was performed for the relief of carcinoma of the breast. In one case improvement persisted for two years; in the second the improvement was rapid for six months, but death ensued after two and one-half years; in a third and a fourth the operation was performed after the menopause, and was without obvious effect upon the malignant disease, one of the patients dying shortly, and the other looking well and being strong seventeen months afterward; in the fifth case the affected breast, as well as the ovaries, was removed, and the patient appeared healthy a year after the operation. Two additional cases are reported. In the first of these the affected breast was removed, and eighteen months later both ovaries. The patient was two months pregnant at the time of the second operation, and was subsequently delivered of a healthy child at term. Though not well, the woman was still alive thirteen months after the oöphorectomy. In the second case both the ovaries and the breast were removed. There was improvement for a time, but death took place after seven months. In some of the cases thyroid extract was employed also, but without appreciable effect.

The results in the cases reported, while not definitely assuring, still raise the possibility and the hope that the operation upon the ovaries may have had at least some ameliorating, if not curative, influence upon the course of the malignant disease. Oöphorectomy alone, however, is scarcely to be trusted in the treatment of carcinoma of the breast, and is to be thought of only in conjunction with other measures, or if

these have failed or are inapplicable. Properly performed the operation, it is true, is comparatively so free from danger that, in conjunction with removal of the breast and all accessible infected tissues, its practice may be sanctioned under the conditions discussed, in the hope of preventing recurrence and for whatever other good it may be capable of effecting. Most of the cases reported present clinical evidences of malignant disease, but scientific precision will demand that the diagnosis be confirmed by pathological methods.

THE DISTRIBUTION AND THE ORIGIN OF TUBERCULOSIS IN CHILDREN.

It is a common belief that tuberculosis in children attacks most commonly the intestinal tract, and the reason assigned for this predilection is the large use of tuberculous milk as an article of food. There has, however, been brought forward of late evidence that the popular impression is incorrect, and that in children, as in adults, tuberculosis of the respiratory tract is the most prevalent localization. One of the most prominent advocates of this view is Dr. W. P. Northrup, of New York, who, as the result of a protracted investigation into the lesions present after death in children that had been under observation at the Willard Parker Hospital, found the bronchial glands the primary seat of the disease in a preponderating number of cases, and reached the conclusion that infection through the respiratory tract is more common than that through the intestinal tract. In this opinion he is sustained by Carr (*Lancet*, December 17, 1898), and confirmatory evidence is offered by Guthrie (*Lancet*, February 4, 1899, p. 286) in the way of an analysis of the post-mortem records in 77 cases of tuberculosis in children, collected during a period of eight years. Among these cases tuberculosis of the thoracic viscera was found 105 times (pulmonary, 72; pleural, 32; pericardial, 1); of the abdominal viscera, 102 times (peritoneal, 33; intestinal, 30; splenic, 24; hepatic, 7; renal, 7; pancreatic, 1); of the brain and its meninges, 41 times; of the bones and joints, 6 times; of the thoracic glands, 46 times; and of the abdominal glands, 31 times.

It will thus be seen that the intestines, the abdominal glands, and the peritoneum were involved 94 times; while the lungs, the pleura, and the thoracic glands were the seat of the disease 150 times. In 42 of the cases—54.5 per cent.—thoracic tuberculosis was the most prominent and apparently primary; while in 19 cases—24.6 per cent.—abdominal tuberculosis was the most prominent and apparently primary. Primary glandular involvement was found in 32 cases—41.5 per cent.; 17 thoracic, and 15 abdominal. Of the whole series of cases, death took place in 4 as a result of tabes mesenterica, in 30 death from pulmonary tuberculosis, and in 41 from tuberculous meningitis. In 24 of the last—58.5 per cent.—the meningitis probably originated from the thorax, while in 9 the origin seemed abdominal.

The preponderance of thoracic over abdominal tuberculosis disclosed by this investigation is not believed to be due necessarily and solely to the direct entry of tubercle bacilli into the air passages; and it is pointed out that the lungs may be involved in consequence of the entrance of bacilli into the thoracic glands through the lymphatics of the pharynx, tonsils, and œsophagus above, and the lymphatics of the intestines and the abdominal glands below, and of the entrance of bacilli through the thoracic duct into the pulmonary circulation by way of the right heart.

News of the Week.

Diphtheria broke out the other day in the children's ward at Bellevue, and ten children suffering from the disease were removed to the reception hospital. The ward from which they were taken was quarantined.

Varioloid at Princeton.—A case of smallpox occurred the last of February at Princeton, and many of the students of the university have gone to their homes, being influenced partly by fear and partly by opportunity of an extra holiday.

Smallpox in Arkansas.—Governor Jones sent a special message to the legislature on March 3d asking for a large appropriation to fight the smallpox epidemic. He said the disease is now epidemic in Fulton, Sebastian, Lonoke, Perry, Pulaski, Izard, Yell, Baxter, Jefferson, and Marion counties.

A Babies' Solarium, to give the city's waifs a chance at the sunshine, has been added to Bellevue Hospital. It is a glass-enclosed pavilion, in which about thirty cots can be placed. In the summer the glass roof can be opened to let the air in.

Dr. B. Rush Field has been elected mayor of Easton, Pa.

Vital Statistics of Philadelphia.—For the week ended February 25th there were reported to the Philadelphia board of health 618 deaths, 91 more than during the preceding week and 150 more than during the corresponding week of the previous year. The largest number of deaths were due to the following causes: Pneumonia, 99; pulmonary tuberculosis, 62; nephritis, 45; heart disease, 43; typhoid fever, 38; apoplexy, 33; senility, 29; convulsions, 28; marasmus, 24; inflammation of the brain, 23. There were also reported to the board 421 cases of typhoid fever, 52 of diphtheria, 33 of scarlet fever.

Vaccination of All Porto Rico.—A correspondent of *The Sun*, writing from San Juan de Porto Rico, recounts the efforts that are being made to stamp out smallpox in that island. It is estimated that there are about one thousand cases of the disease now existent, and in order to prevent the further spread it has been determined to vaccinate every one of the one million inhabitants of the island. The difficulties in the way of the undertaking are naturally very great, and one of them was the procuring of the necessary amount of vaccine. If purchased in New York, the expense would be upward of $100,000 so it has been decided

to manufacture it on the spot. For this purpose some of the largest ranchmen on the island have placed their herds at the disposal of the United States authorities, and the work of inoculating the animals and securing the virus has been entrusted to the supervision of Dr. Azel Ames, of Massachusetts. For the production of the necessary virus he will need two thousand head of cattle, each of which furnishes virus for five hundred points. When the work has progressed a little further, the corps of surgeons can vaccinate thirty new cattle and distribute each day fifteen thousand vaccine points supplied by the animals already treated. Detailed cavalrymen will take the finished product of each twenty-four hours, riding day and night, to five district stations, respectively at Mayaguez, Arecibo, San Juan, Guayama, and Ponce. The present plan is to get the names of each man, woman, and child in each district, and check them off when vaccinated. If the people do not come willingly, they can easily be found by the police. At present the vaccine corps is located at the first temporary farm, where three hundred head of cattle are under treatment. After these animals have been treated, the corps will remove to another farm, and thus continue its work until the two thousand cattle have furnished the required vaccine. Dr. Timothy Leary has charge of the pathological tests to determine whether the animals are healthy and in a fit condition for treatment. For the vaccination of the cattle and the collection of the virus, two squads have been organized under Drs. L. L. Gilman and J. S. White, with Drs. Gustave Moret and W. R. Kirk for associates. Dr. Richard Wilson will have charge of the distribution. From the Government stations the vaccine points will be sent free to the various district towns, whose only expense will be the employment of physicians in the actual vaccination. For the instruction of the Porto Ricans, Dr. Ames has directed the publication in the Spanish newspapers of an explanatory circular, setting forth especially the pecuniary loss which will follow a further spread of the disease, by interrupting trade with the ports of this country and by frightening away tourists and prospectors.

The Late Dr McGillicuddy.—The following minute has been sent us for publication: The members of the Metropolitan Medical Society of the City of New York, having heard with profound regret of the sudden death of their esteemed associate, Dr. Timothy J. McGillicuddy, one of the founders of the society, desire to put on record their high appreciation of his sterling qualities as a physician and his unusually lovable traits as a man, and to tender to his bereaved family this expression of their deep sympathy.—G. G. Fischlowitz, M.D., *Corresponding Secretary.*

Inaction and Insanity.—The lawyer of a man who was recently convicted of robbery in one of the courts of this city made the request that his client be sent to the Elmira Reformatory instead of to Sing Sing. A prisoner sent to the latter place, he said, "is liable to become insane and wind up in the Matteawan Insane Asylum. There are now fourteen hundred prisoners in Sing Sing prison unemployed, and every day some are sent to the Matteawan Asylum, having become insane because they had nothing to employ their minds." The judge assented to the statement of the lawyer, and said he would make an inquiry as to the number of unemployed in Sing Sing.

A New Antipneumonic Serum.—Professor Wassermann, of Berlin, is said to have discovered an antipneumotoxin of undoubted prophylactic and therapeutic value. According to the cabled reports of the discovery, the protective body is found in the bone marrow of men and animals suffering from pneumonia.

The Washington Statue to Hahnemann.—The House of Representatives on one of the last days before adjournment refused to suspend the rules for the purpose of passing a joint resolution for the erection of a statue of Hahnemann, the founder of homœopathy.

Mishap of an Ambulance Surgeon.—The front axle of an ambulance broke the other day, throwing the driver on to the horse's head and the surgeon on to a woman who had just been committed by a magistrate for examination as to her sanity. She thought the doctor was making an attack on her, and seizing a fistful of his hair with one hand began to beat him with the other. He was taken by surprise, and was in a somewhat battered condition when he was rescued by two policemen.

Arsenical Wall Papers.—Several cases of alleged poisoning by arsenical wall papers having occurred in Ithaca, Dr. E. M. Chamot of the chemical department of Cornell University undertook a series of analyses of wall papers of various colors and patterns, as a result of which he is said to have asserted that nearly all wall papers sold at the present time contain arsenic, some of them in large quantities. The conclusion to be drawn from this is obviously that it is inexpedient to eat wall paper unless one happens to be suffering from malaria or is in need of a strong tonic.

Typhoid Fever in Philadelphia is still on the increase, there being reported for the week ended March 4th four hundred and forty-three cases and forty-nine deaths, a larger mortality, it is believed, than has hitherto been recorded in that city. The disease is most prevalent in those districts supplied with water by practically direct pumpage from the reservoirs, and the necessity of sedimentation and filtration is thus made emphatically obvious. The number of deaths from typhoid fever for the ten weeks of the current year is three hundred and forty-two.

The Sanitary Condition of Sweatshops in New York.—Dr. Michael B. Feeney, chief sanitary inspector of the board of health, who has been conducting a series of investigations among the tenement houses and sweatshops of the east side, yesterday submitted a report as to the conditions of eighteen hundred and thirty-five houses visited east of Broadway and south of Houston Street. He said that the sanitary conditions in many of the houses were execrable. In many of the apartments from three to seven people were

manufacturing clothing of various kinds, and this same clothing was frequently used for the sleeping children of the inmates as beds. In one apartment house, where clothing was being manufactured, one woman was found to be suffering from an acute attack of influenza, accompanied by very high fever. In another apartment a child of about three months was found suffering from croupous pneumonia, lying in a pile of unfinished clothing.

Prophylaxis of Syphilis.—An international conference in regard to the prophylaxis of syphilis and venereal diseases will be held in Brussels some time in the first half of September, 1899.

Professor Snellen, of Utrecht, has announced his intention to retire at the close of the present semester from the chair of ophthalmology at the University of Utrecht.

Dr. Adami, of McGill University, Montreal, is still declining chairs. The latest offer, as we learn from a London contemporary, was that of the professorship of pathology at the University of Cambridge.

Professor Brouardel, whose term of office as dean of the faculty of medicine of the University of Paris recently expired, has been re-elected for a further term of three years. The election is made by the professors of the faculty and the *agrégés* in active service as public teachers. Professor Brouardel received forty-nine out of a total of fifty-two votes.

Twin Births.—A record case of twin births is reported in *The Medical Times and Hospital Gazette.* The wife of a coal miner named Thomas Eden, in a village near Sunderland, England, has just given birth to twins for the fourth time in succession. Altogether Mrs. Eden, who is in comfortable circumstances, has had one pair of sons and three pairs of daughters, all in the last seven years. Only four, all daughters, survive. The latest pair are vigorous and healthy.

The Eyes of Japanese Students.—An examination, recently made, of the eyes of the students of the Tokio Imperial University, by Dr. Naoyoshi Sugita of the medical section in the university, gave the following results:

Course.	Number Examined.	Perfect.	Short Sight.	Far Sight.
Literature.....	198	68	128	2
Technical.....	320	175	143	2
Medicine... ...	130	54	75	1
Law.....	457	23	230	4
Science.....	94	39	55	..

The Western Ophthalmological and Otolaryngological Association.—The annual meeting of this association was held in New Orleans February 10th and 11th. Owing to the unavoidable absence of the president, Dr. J. Elliott Colburn, of Chicago, the first vice-president, Dr. W. Scheppegrell, of New Orleans, presided. Two joint sessions and three sessions of the ophthalmological and otolaryngological sections respectively were held, and many important papers were read and discussed. The following officers were elected for the ensuing year: *President,* Dr. W. Scheppegrell, of New Orleans; *First Vice-President,* Dr. M. A. Goldstein, of St. Louis; *Second Vice-President,* Dr. H. V. Wurdemann, of Milwaukee; *Secretary,* Dr. F. C. Ewing, of St. Louis; *Treasurer,* Dr. W. L. Dayton, of Lincoln, Neb. St. Louis was selected for the next annual meeting.

Yale Medical-School Orator.—Prof. Charles Sedgwick Minot, of the Harvard Medical School, will deliver the commencement oration of the Yale Medical School next June.

The Hendryx Laboratory.—Through the generosity of Dr. W. A. Hendryx, a retired physician of Los Angeles, the Medical College of the University of Southern California has been equipped with a complete modern laboratory.

A Hospital for Colored Patients has recently been established in St. Louis, in which both physicians and nurses are of that race. The hospital has at present accommodations for fifteen patients only, but it is hoped that the number of beds may soon be materially increased.

The Academy of Medicine of Paris.—The new building of the Paris Academy of Medicine has been begun on the site of the old Mont-de-Piété. The plans were drawn by M. Rochet, and it is stated that the completed structure will be one of the most beautiful buildings in Paris. It is not expected that it will be ready for occupancy under two years.

New York State Medical Examinations.—From the report of Dr. Lewi, secretary of the State board of medical examiners, we learn that during the academic year of 1898 there were five licensing examinations—in September, January, April, May, and June. These were held simultaneously at Buffalo, Syracuse, Albany, and New York. During the year 869 candidates appeared before the State medical boards, and the total rejections were 217, or 24.97 per cent. Under exemptions in the medical laws, the regents licensed during the year 143 physicians. On the recommendation of the board 10 diplomas issued before the law took effect were legally indorsed, entitling the holders to register in any county of the State. Since the creation of the boards, 3,972 candidates have been examined, of whom 921, or 23.18 per cent., were rejected. By the action of the regents, after consultation with all parties interested, there will be four examinations annually, beginning with the year 1900.

The Practice of Medicine and Pharmacy in Japan.—The following is the wording of a section of the present law regulating medical practice in Japan: "Any person who has graduated from the medical section of a foreign university or from a medical school, or who possesses a license to practise medicine in a foreign country, may apply for a license to practise in Japan by virtue of the said certificate of graduation or license to practise, and the minister of state for home affairs, after examining the said documents, may grant a license without requiring the applicant to pass an

examination." In order to bring the regulation concerning the practice of pharmacy into accord with this law, the following has recently been passed by the parliament: "Any person who, having attained the full age of twenty years, has graduated from the druggists' section of a foreign university or from a druggists' school, or who possesses a druggists' license entitling him to practise in a foreign country, may apply for a license to practise in Japan by virtue of the said certificate of graduation or license to practise; and the minister of state for home offairs, after examining the said documents, may grant a license without requiring the applicant to pass any examination."

Philadelphia Bureau of Health.—By an act of the Pennsylvania legislature the powers and duties heretofore vested in the Philadelphia board of health are in future to be performed by a bureau of health, to be organized and controlled by the mayor.

The Utah State Medical Society.—The next annual meeting of this society will be held at Salt Lake City, October 5 and 6, 1899. The present officers are: *President*, C. M. Wilson, Park City; *First Vice-President*, Ira Lyons, Salt Lake City; *Second Vice-President*, J. W. Aird, Heber; *Treasurer*, E. S. Wright, Salt Lake City; *Secretary*, R. W. Fisher, Salt Lake City.

Vaccination Bill in Japan.—The Japanese parliament has passed a bill authorizing the free distribution of vaccine virus, and rendering vaccination compulsory. It is provided that a child must be vaccinated within ten months of its birth, and that, if the vaccination does not take, it must be repeated within a period of six months, and yet again within a similar period if it be again unsuccessful. Further, all children must be re-vaccinated at the age of six and once more at the age of twelve. Thereafter vaccination becomes occasional, and may be declared compulsory at any time of threatened or actual epidemic, the power to order it being vested in local governors.

College of Physicians of Philadelphia.—At a stated meeting held March 1st, Dr. George A. Muehleck read a paper entitled "Results of the Examination of the Blood of Ninety Soldiers Ill with Typhoid Fever," in which he pointed out the frequency of anæmia, which was most marked in the fourth week of the disease, the reduction in the number of red cells being greater than that in the hæmoglobin. Hypoleukocytosis was the rule, and in a number of instances typhoid and malarial infections were present together. Dr. Charles Lester Leonard read a paper entitled "The Roentgen-Ray Diagnosis of Renal Calculus," in which he pointed out the difficulties in diagnosis by ordinary means, and the almost absolute certainty, both positively and negatively, with the aid of the *x*-rays. The college adopted a resolution expressing its opposition to the passage of a bill introduced into the Pennsylvania legislature for the purpose of repealing an existing law making compulsory vaccination of all children that wish to attend the public schools, and a committee was appointed to represent the college at a public hearing before the committee on education to be held at Harrisburg on March 14th, at 8 P.M. Additional contributions to the library endowment fund were announced.

Easton (Pa.) Hospital.—An addition costing $12,000 and increasing the number of beds fifty-four, including a children's ward with twelve beds, was opened on February 22d.

Pathological Society of Philadelphia.—At a stated meeting held February 23d, Dr. W. Wayne Babcock, Jr., exhibited a specimen of polypoid sarcoma of the cervix uteri of the spindle-cell variety, and another specimen of large bilateral hydrosalpinx. Dr. William G. Spiller exhibited sections from a specimen of tumor of the filum terminale. The condition is an extremely rare one, but fifteen others having been reported. In most of these the growth was extradural, and in only four, including the one reported, was it intradural. Dr. Spiller also reported a case of paraplegia resulting from fatty degeneration of the nerves of the lower extremities, and he exhibited sections of the sciatic nerves. Dr. M. P. Ravenel reported a case of fœtal tuberculosis in a calf. The condition is rare and the diagnosis was confirmed by inoculation experiments. Dr. Alfred Stengel exhibited a fibroid myocarditic heart, with calcareous occlusion of one coronary artery, thinning of the interventricular wall, and a beginning aneurismal dilatation at the apex of the organ. Dr. W. E. Robertson exhibited a specimen of carcinomatous degeneration of a cystic ovary, with extension to the peritoneum and the transverse colon and metastasis to the liver. Dr. W. E. Hughes exhibited a specimen of carcinoma of the stomach, and one of probable carcinoma of the bladder from an aged man who had had vesical fistulæ.

Philadelphia County Medical Society.—At a stated meeting held February 22d, Dr. J. Madison Taylor read "A Note on the Practical Uses of Hypnotism," in which he pointed out the therapeutic uses, the limitations, and the dangers of this agency, and citing illustrative cases. In the discussion, which was participated in by Drs. C. K. Mills, E. X. Dercum, C. W. Burr, Romaine Newbold, Orville Horwitz, H. A. Hare, G. H. Makuen, Judson Daland, A. F. Witmer, and A. A. Eshner, it seemed to be agreed that suggestion, hypnotic or otherwise, was capable of good in selected cases, but that it had to be employed with discretion, intelligence, and caution. Dr. H. A. Hare read a paper on "The Diagnosis of Acute Tuberculous Infection from Pneumonia and Typhoid Fever," in which he related a case of typhoid fever presenting pneumonia due to the bacillus of Eberth at the onset of the disease. In the discussion, participated in by Drs. H. S. Anders, J. P. Crozer Griffith, W. E. Hughes, and A. A. Eshner, the difficulties in diagnosis were conceded, and the frequency of the pulse, the course of the temperature, the presence or absence of crackling and of palpable and audible friction, and the presence in the sputum of pneumococci, tubercle bacilli, or typhoid bacilli were dwelt upon as points of importance in the differential diagnosis in addition to the agglutinating reaction yielded by the blood.

Dr. D. W. Jefferies has been elected mayor of the city of Chester, Pa.

The Plague in India.—Sixty cases of plague with forty-five deaths have been reported from the gold-fields of Southern Kolar, in India, and a panic has seized upon the coolie miners. Many of them have run away, and it is found impossible to induce new men to take the places of those who have left.

Shorter Hours for Drug Clerks.—Senator Ford's bill, fixing the hours of employment of drug clerks in New York City, has passed the senate by a vote of thirty-two to two. The bill provides that no pharmacist, drug clerk, or other employee engaged in the preparation or compounding of prescriptions or medicinal preparations in any pharmacy or drug store shall be required or permitted by the proprietor to work more than ten hours on any week day other than Saturday, and not more than twelve hours on Saturdays, and not more than six hours on Sundays and legal holidays. Nothing in the act shall prohibit the working of one hour overtime on any day except Sunday for the purpose of making a shorter workday; provided, however, that the aggregate number of hours per week does not exceed sixty-six. No proprietor of a pharmacy or drug store shall permit any of his clerks to sleep in such pharmacy or drug store, or in any store-room or laboratory connected therewith, though they may sleep in any other room adjoining such pharmacy or drug store, provided the room is properly ventilated and complies in all other respects with sanitary regulations to be adopted by the board of health of New York City. The act is to take effect thirty days after its passage.

A Contemporary's Economy.—Several of our American contemporaries, just to hand, publish some comments upon the new departure in medical journalism which has been adopted by a medical journal recently founded in Philadelphia, of refusing to issue exchange copies. No doubt, as a piece of "bluff," the announcement of this change was, to use a vulgar phrase, "smart," and, in any other country than the United States, might prove in the end to be a successful move. But, judging from the remarks of our contemporaries, just the opposite effect is likely to ensue, as the medical journal in question will probably before long find to its cost.—*The Medical Press.*

Typhoid Fever at Paterson.—An outbreak of typhoid fever is reported from Paterson, N. J., over forty cases having occurred during last week. An investigation located the cause apparently in the water supply, which, it was assumed, had been temporarily infected by receiving the discharge from a typhoid-fever patient at some place along the river. A water supply that can so readily be infected is hardly one of which a city in these days can be proud.

Hospital Closed for Lack of Funds.—The Staten Island Hospital, on Belair Road, Clifton, closed its doors, owing to a temporary lack of money with which to conduct the institution. The hospital was established some time ago by several persons who had formerly been connected with the Smith Infirmary. It had accommodations for ten or fifteen patients only.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 4, 1899. February 24th.—Passed Assistant Surgeon W. F. Arnold, when discharged from further treatment at hospital, Norfolk, Va., ordered home and granted sick leave for three months. February 28th.—Passed Assistant Surgeon E. M. Shipp detached from the *Lancaster* and ordered to the naval hospital, Norfolk, Va. Passed Assistant Surgeon J. A. Guthrie detached from the naval hospital, Norfolk, Va., and ordered to the *Franklin* immediately. Assistant Surgeon G. L. Angeny detached from the naval hospital, Chelsea, Mass., and ordered to the *Lancaster.* Assistant Surgeon J. H. Payne, Jr., detached from the *Franklin* and ordered to the naval hospital, Chelsea, Mass. March 2d.—Surgeon John W. Ross, U.S.N., retired, is assigned to military hospital No. 1, Havana, Cuba, and will report to the commanding officer of that hospital for duty.

To Restrict Vaccination.—A bill has been introduced in the Pennsylvania legislature looking to the repeal of the present law that makes vaccination compulsory among pupils in the public schools.

Generous Bequest.—By the will of Hannah Price Brookfield, who died in Philadephia on February 8th, the sum of $10,000 is bequeathed to Jefferson Medical College Hospital in memory of Dr. J. M. Brookfield and his wife Sarah Price Brookfield.

Maryland State Insane Asylum.—Dr. J. Clement Clarke, first assistant at the Maryland State Insane Asylum, has been chosen superintendent of the Springfield Insane Asylum of the same State, to succeed the late Dr. George H. Rohé. Dr. Clarke is a graduate of the University of Maryland.

Medical Schools Consolidated.—There has been some talk of the consolidation of several of the largest medical schools of Baltimore. This step has been brought about by active competition and by a feeling that consolidation would elevate the teaching of medicine in Maryland.

The General Memorial Hospital of New York.—Senator Ahearn's bill changing the name of the New York Cancer Hospital (Eighth Avenue and One Hundred and Sixth Street, New York) to that of the General Memorial Hospital has been signed by the governor.

Death of Dr. Deane.—Dr. Horace C. Deane died at Hoosick, Rensselaer County, N. Y., on February 28th, aged thirty-five years. Dr. Deane graduated from the Medical College of the University of New York in 1884, and served the following year as resident physician and surgeon at the Hartford Hospital. He had been engaged in the practice of medicine during the last seven years at Hoosick, N. Y. His high professional and personal qualities have endeared him to the community which he so faithfully served at the expense finally of his own health.

Reviews and Notices.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and specially prepared articles on Treatment and Drugs. By Professors and Lecturers in the leading Medical Colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by JUDSON DALAND, M.D., Philadelphia; J. MITCHELL BRUCE, M.D., F.R.C.P., London, England; and DAVID W. FINLAY, M.D., F.R.C.P., Aberdeen, Scotland. Volume III., Eighth Series, 1898. Philadelphia: J. B. Lippincott Company.

VOLUME III., Eighth Series, of this excellent quarterly contains articles of much interest and value. Dr. L. H. Adler, of Philadelphia, heads a list of forty-three contributors, with a lecture on the treatment of external hemorrhoids. The second name is that of C. W. Allen, of New York, who has furnished one of the five illustrated lectures, demonstrating some dermatological conditions and "points not down in the books," and giving his plans of treatment in a variety of skin affections. John A. Robison's lecture on the treatment of acute bronchitis is very timely, and includes several prescriptions of value. John B. Hamilton's lecture includes psoas abscess, carcinoma of breast, injury to the spine, and laminectomy. Trendelenburg, of Leipsic, speaks of hydrocephalus, Dupuytren's exostoses of the big toe, etc. McPhedran, of Toronto, has a lecture on peripheral neuritis, illustrated by a rather noteworthy instance following "rough-on-rats" poisoning. Strychnine, baths, and massage are recommended. The various special branches are, as usual, well represented in articles by well-known writers. The attractive features are well kept up.

UEBER MALARIA UND ANDERE BLUTPARASITEN NEBST ANHANG: EINE WIRKSAME METHODE DER CHROMATIN- UND BLUTFÄRBUNG (On Malaria and other Blood Parasites, with a Reliable Method of Chromatin and Blood Staining). Von DR. HANS ZIEMANN. Marinestabsarzt. Mit 165 farbigen Abbildungen und Photogrammen auf 5 Tafeln und 10 Fieberkurven. Jena: Gustav Fischer. 1898.

THIS royal octavo brochure of one hundred and ninety-two pages gives a most satisfactory account of what is known of malarial parasites and their mode of development. The work is not theoretical, but is based upon actual experience in the fevers of tropical as well as of temperate climes, so that the author is in a position to speak with assurance. Much industry has been put into preparation for the work as it comes to us, and while much of a confirmatory nature regarding the investigations of others enters into it, there are many things which are new and original. The descriptions of the appearances in sterile forms and in the periods of transition are most interesting and instructive. The question of hæmatozoa has been largely entered into, as well as that of the exact significance of flagella. The latter he found less often present in quartan than in tertian fevers. Extreme interest attaches to the author's investigations of the blood of migratory birds. The work is rather too technical for the general reader, but the expert and the student and laboratory worker daily engaged in blood examinations will find it almost a necessity. Some staining methods have been elaborated, and especially that of Romanowsky has been simplified. The colored plates are beautifully executed, and one dealing with intracorpuscular elements in birds is not only instructive but the chapter which it illustrates opens a new territory of investigation. The author is to be highly complimented upon his diligence in the extensive field of which this volume is the result.

A MANUAL OF THE PRACTICE OF MEDICINE. By FREDERICK TAYLOR, M.D., F.R.C.P., Physician to and Lecturer on Medicine at Guy's Hospital, etc., etc. Fifth Edition. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1898.

NO author or publisher can afford in these days of rapid progress and changing views to put forth a new edition without submitting the work to careful revision. This has been done in the book before us. Some parts have been rewritten; a section has been devoted to diseases of the mediastinum, a region often neglected in works on practice. The author acknowledges his indebtedness to recent works, including "Allbutt's System"; the "Twentieth Century Practice of Medicine"; Manson's "Tropical Diseases"; and Coles' treatise on "The Blood." The type is an improvement on the earlier edition and makes an attractive page. Despite the fact of one thousand pages, the weight is just right for holding in the hands while reading. The index is commendably full.

ESSENTIALS OF MATERIA MEDICA, THERAPEUTICS, AND PRESCRIPTION WRITING, ARRANGED IN THE FORM OF QUESTIONS AND ANSWERS. Prepared especially for students of medicine. By HENRY MORRIS, M.D., Physician to St. Josiah's Hospital, Philadelphia, etc. Fifth Edition, revised and enlarged. Philadelphia: W. B. Saunders. 1898.

THIS is one of those condensed compends belonging to a series put out by the publishers. This is number seven. There are several others besides, but probably there is none more practical in the nature of the question and the lucidity of answer considering the space taken up. While designed only for students, the practitioner of thirty years might become interested to see how many of the questions he could answer without looking in the book.

TRAITÉ DE L'ALLAITEMENT ET DE L'ALIMENTATION DES ENFANTS DU PREMIER AGE. Par le DR. A. B. MAIFAN, Professor agrégé à l'Université de Paris, Médecin des Hôpitaux. Paris: G. Steinheil, Editeur, 2 Rue Casimir-Delavigne. 1899.

THE first words of the introduction can but excite interest in the great question of infant feeding: "Of every thousand children born, about two hundred die in the first year, eighty in the second, forty in the third, and twenty-five in the the fourth." It is with a view of decreasing this large percentage of infantile mortality that the author has written a most careful *exposé* of the whole question of nourishment from the first application of the infant to the mother's breast, through all the difficulties of artificial feeding in health and in disease. There are four hundred and forty pages and twenty-two figures in the text. Interesting chapters are those on microbes in milk; the digestion of milk in nurslings; the technique of artificial feeding and nourishment in various diseases, including syphilis. The author shows himself well capable of giving instructive advice. The work is bound in light-blue flexible linen covers. The print is good.

A MANUAL OF VENEREAL DISEASES. By JAMES R. HAYDEN, M.D., Chief of Clinic and Instructor in Genito-Urinary and Venereal Diseases, College of Physicians and Surgeons, New York, etc. New Edition, revised and enlarged. In one 12mo volume of 304 pages, with 54 engravings. Philadelphia and New York: Lea Brothers & Co., publishers.

IT does not seem so long ago that the MEDICAL RECORD contained a notice of this work in its first edition, Among new matter is noted the care of urethral instruments and the introduction of some new pictures of instruments. It would seem that even the student must be growing fairly familiar with the appearance of urethral instruments from the makers' catalogues, if not from seeing them in clinical use. Of course it costs more to introduce pictures illustrative of disease and operative measures, but they are far more instructive. We spoke well of this book before, and find no reason for taking back anything then said.

THE MEDICAL NEWS POCKET FORMULARY FOR 1899. Containing sixteen hundred prescriptions representing the latest and most approved methods of administering remedial agents. By E. QUIN THORNTON, M.D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica in the Jefferson Medical College, Philadelphia. In one wallet-shaped volume, strongly bound in leather, with pocket and pencil. Lea Bros. & Co., Philadelphia and New York.

THIS is a collection of formulæ arranged under the various headings alphabetically in concise form and compact space. Although evidently drawn from many different sources, there is no credit mark to indicate which prescriptions were originally suggested by other authors, and which have been formulated by the author himself. Many of the newer preparations have received recognition. While the reader is left to select one of a number given under each heading, the indications to be met by each are briefly noted.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 3, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

The Treatment of Syphilis in Its Early Stages.—DR. L. BOLTON BANGS read a paper on this subject. He said that the two great essentials to success in the early treatment of syphilis were, the administration of mercury to the point of tolerance, and careful attention to hygiene and the general health. He was in favor of excision of the initial lesion, as it was an infective mass which should be removed. The local use of mercurials would hasten the healing of the initial lesion. As mercury caused fatty degeneration of the products, and iodide of potassium favored absorption only, it was evident that the iodides found their appropriate sphere of usefulness late in the disease, and especially in combating the nervous manifestations. If it was admitted that histologically all the secondary manifestations of syphilis were composed of almost exactly the same elements as was the initial lesion itself, how could it be argued that there was nothing to treat until the development of these syphilitic lesions? In his opinion, the effects of syphilis were due not only to the mechanical interference with the functions of the parts in which the exudate took place, but also to a systemic poisoning resulting from the circulation of the toxins of a micro-organism. The intensity of the disease depended not only upon the activity of the virus, but upon the vulnerability of the individual. Mercury acted beneficially by increasing the powers of resistance of the individual.

Mode of Medication.—If the remedy was well borne it was preferable to give it by the mouth, and in such quantities as would not interfere with digestion, but which would produce the physiological effect. In most instances the system became tolerant of the drug in a short time, and hence it was well to suspend the remedy or reduce the dose from time to time. It was his custom to intermit the internal administration of the medicine, even if well borne, substituting for it inunctions. Occasionally, hypodermatic injections into the buttocks were proper, but it should be remembered that a few deaths had been reported from this method of administration. One of the most important guides to the length of time the treatment would have to be persisted in was to be found in the enlargement of the glands. So long as they remained increased in size, it was an evidence that the treatment must be continued. The duration of the treatment must depend somewhat upon the individual and the activity of the disease, but experience showed that it was best to continue it for from three to six years to secure to the patient the best possible protection in later life.

The Treatment of Secondary Syphilis.—DR. ROBERT W. TAYLOR read a paper with this title. He said that the old Ricord plan of treatment in vogue prior to 1870—*i.e.*, free mercurialization, together with the use of iodide—seemed to him to be far better than the emasculated, narrow-gauge method since so generally adopted in France and in this country. Whatever mercurial was swallowed, it must be acted upon in the intestinal canal and converted, in whole or in part, into peptonates or albuminates before absorption could take place. Chemical examinations had proved that when gastro-intestinal derangement was not produced by mercury, a goodly portion of it was absorbed, and, of course, under such circumstances the effect on the syphilis was beneficial. But investigations had shown further that, as time went on, less and less was absorbed, until finally medication with mercurials given by the mouth was almost without effect. This fact could be demonstrated by any one who would keep a syphilitic under observation and such treatment for a period of a year. Many a syphilitic had continued to take his mercurials long after they had ceased to be absorbed, and to the great detriment of his digestion and general health.

The Interrupted Treatment Radically Wrong.—In 1870 the originator of the interrupted method of treating syphilis by the proto-iodide of mercury had stated that the term of treatment should be about two years and a half, yet a few years ago the same physician had expressed the opinion that syphilis was a diathetic disease, like gout or rheumatism, and was one which demanded lifelong treatment. Dr. Taylor said that for many years he had been of the opinion that this interrupted treatment with small doses of mercury was radically wrong. The process of syphilitic infection was one of constant growth and division from the very beginning. It was very certain, therefore, that excision of the chancre would not abort the disease. It was also reasonable to assume that this rapidly growing tissue gave off, probably through its micro-organisms, a diffusible poison.

Early Mercurialization Inadvisable.—His experience had taught him that the best results always followed when the treatment was commenced just as soon as the syphilitic manifestations made their appearance. He was not a believer in early mercurialization of syphilitics, because until there had been a certain amount of this cell distribution there was very little on which the mercurial could work. Mercury given before the generalization of the syphilitic products did not confer any immunity on the tissues, but, on the contrary, interfered with the subsequent action of this most important remedy. Again early treatment simply retarded the development of the early manifestations and interfered with the natural order of development of the lesions. Moreover, it should not be forgotten that it was exceedingly important that the patient should be thoroughly convinced that he really had syphilis. If the patient only saw the chancre, and the evolution of the secondary manifestations was postponed by early mercurialization, the patient was apt to give up the treatment at an early date on the supposition that he had not really had this disease. Many men had been rendered unhappy for the rest of their lives by reason of a false diagnosis of syphilis, based on conclusions drawn solely from the examination of what had really been a benign lesion. As a general rule, the treatment should be begun just as soon as the general rash appeared, together with the other symptoms of the disease. If the disease was then attacked efficiently, its backbone could be broken in ninety-five per cent. of the cases. The mercurial treatment covering the first six months of the disease was far more salutary and effective than a course extending over a year or more, but instituted later on. It was certainly important that the physician should have a fair knowledge of the constitution of his syphilitic patients. In America syphilis ran about the same course in women as in men, but women were much less liable to exhibit evidence of syphilis of the nervous system.

The Administration of Mercury.—It was always well to begin the medication in a manner which would not annoy or discourage the patient, and hence one should not be in too great haste to commence the inunction treatment. In this stage, mercury was usually well borne when given by the mouth, and therefore pills of the proto-iodide of mercury, half a grain each, might be given three times a day. Having given proper attention to the intestinal canal and the state of the mouth, the dose of the drug could be safely in-

creased until its effect was obvious. It was always a good rule, as the rash was declining, to discontinue the pill and give several courses of mercurial inunctions in order that the whole surface of the body might be acted upon. The papular and pustular lesions in the hairy parts were generally best treated locally by mercurial applications. By such a course of treatment it was not generally difficult to persuade an intelligent patient to discontinue the pills altogether and make use of the systematic inunction treatment. To be effective, the mercurial inunctions should be thoroughly administered over the whole body, in regions, using about sixty grains of the ointment. Usually after fifteen or twenty inunctions, at intervals of a day or two, the treatment could be discontinued for three or four weeks. Up to this point very great care should be taken so to regulate the patient's habits of life, including changes of scene and proper recreations, as to maintain the general nutrition and health at the highest possible point. It was well to encourage the use of Turkish baths without the cold plunge, or, if at the seaside, the use of salt-water baths.

The Use of Iodide.—Study and experience had taught him that the physician should not too long defer the use of iodide of potassium, which was best given in doses of from ten to thirty grains, or even more, three or four times a day. It was often necessary to suspend the inunction treatment for various reasons, and at such times it was not his practice to go back to the pills, but to make use of a strong "mixed treatment." After about five months of the treatment already outlined, the patient would generally present no evidence of syphilis. The patient should then be given a respite from medication for three or four weeks, and then the treatment should be resumed for about three months longer. In many cases the necessity for treatment was not always apparent, but during the second year, or perhaps even later, it was well to give the patient occasional courses of inunctions. In this second year of the disease the treatment should be given for two or three months at a time, and then intermitted for six or eight weeks. Hypodermic injections of the bichloride of mercury should be used in emergencies, and it was well to bear in mind that mercurial vapor baths had a certain sphere of usefulness in the later stages of syphilis.

Prognosis.—He was of the opinion that if this line of treatment was energetically followed for two years and a half, the patient would be cured, as shown by the absence of syphilitic manifestations, the ability to procreate healthy children, and the enjoyment of continued good health.

Differential Diagnosis of Syphilitic Eruptions, and Signs in the Skin of Former Syphilis.—Dr. George H. Fox discussed this phase of the subject by means of a series of admirable lantern slides. He pointed out, as special diagnostic features of syphilitic lesions of the skin, the great tendency to symmetry; the hard, "fleshy" character of the infiltration; the curvilinear shape of the isolated lesions or the general scalloped outline of the patches as a whole; the raised border of such patches; the almost universal absence of itching, and the occurrence about the knee or in the upper third of the leg of more or less circular lesions or cicatrices.

The Stigmata of Syphilis in Children.—Dr. R. H. M. Dawbarn read a paper with this title. He said that he had been at considerable pains in collecting the various diagnostic signs which had been vouched for by high authority as occurring in inherited syphilis. Next to "the old-man appearance" was a sallow look of the skin. A sign rarely alluded to, but given by several good authorities, was the presence of an umbilical cord so extremely thick as to appear swollen. This cord was also unusually long, and was very slow to separate from the umbilicus. Another sign was syphilitic pemphigus, which generally occurred as large bullæ or blebs. Almost all children affected with syphilitic pemphigus died. The vesicular form was not quite so fatal, but nevertheless indicated a severe type of the affection. The common eruption in its early form was an erythema, appearing ordinarily on the lower part of the abdomen about three weeks after birth. This eruption was called by some writers "syphilitic penny pieces." In only about twenty-five per cent. of the cases of inherited syphilis was any eruption observed. Condylomata were also seen early at the muco-cutaneous junctions of the orifices of the body. Snuffles was an exceedingly common sign. Mucous patches, ulceration or gummata in the larynx were responsible for the characteristic crying and speaking of syphilitic infants. In the absence of mucous patches a general stomatitis was an important diagnostic sign. Sometimes there was a peculiar desquamation of the tongue. As a distinguishing sign between congenital and the acquired variety it should be mentioned that general enlargement of the lymph nodes was absent in congenital syphilis. Hemorrhages from either sound or ulcerated mucous membranes pointed usually to syphilis. Among the visceral involvements was what Virchow called "white pneumonia." It was suspicious to have a baby born with pneumonia, or who was attacked with it very soon after birth. In the newly-born syphilitics the spleen was almost always involved, and syphilitic hepatitis was not infrequently observed. Certain eye troubles were highly diagnostic. Among these perhaps the most characteristic was the "ground-glass cornea"—a peculiar form of keratitis. Hutchinson's famous triad consisted of notched teeth, ground-glass cornea, and otitis media. A rapidly occurring alopecia was suspicious of syphilis, and occurred in both the inherited and acquired forms. Among the rarer signs should be mentioned a painless orchitis. Sudden and quietly appearing paralysis should lead the physician to think of syphilis. The earliest and most common sign was osteochondritis of the shafts and epiphyses of the long bones. According to Taylor, this was often the only sign. It was usually found at birth, or in the first month. The swellings were usually sharply limited, as a rule, and tender on pressure. Later in appearance came syphilitic periostitis, and especially that form which consisted of bosses about the fontanelle. The finger nails were sometimes the seat of peculiar forms of onychia, particularly the "claw form." The temporary teeth in syphilitic children were cut very early, were of bad color, and were liable to early decay. It was curious how widespread was the belief that it was bad luck for infants to have teeth at birth, yet here was to be found a very good reason for this popular notion. Hutchinson's teeth, it should be remembered, were only observed in the permanent set of teeth. The notching of the lower edge, the peg-shape, and the screwdriver-shape were familiar to all medical men. Hutchinson had himself pointed out that they were found only in those who had had syphilitic sore mouth at an early age. In late cases there were irregularities and hypertrophies and asymmetries of bony development. The deformities of the nose were especially noticeable. The changes in the tibia were also very characteristic.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, February 23, 1899.

Brooks H. Wells, M.D., Chairman.

Ruptured Ectopic Gestation; Cholelithiasis; Pyelonephritis; Impacted Calculus in Ureter; Operations.—Dr. Paul F. Mundé presented three specimens from one patient—a case of ruptured ectopic

gestation upon which he had operated nearly two weeks previously. The patient was a woman, forty years of age, who had had eight children, and who had presented absolutely no sign of ectopic gestation. She had menstruated just four weeks before first coming under his observation. All that the examination had revealed had been a soft, doughy mass of irregular outline in Douglas' pouch. The only symptom had been pelvic pain. He had been in doubt at the first examination as to the exact condition, and the examination had been made under difficulties, arising chiefly from the amount of adipose tissue in the abdominal walls and the rigidity of the muscles. When next seen by him, three weeks later, and examined under anæsthesia, the pelvis was filled with a large mass. This had led him to think that the mass was a large coagulum, and that it had increased in size by hemorrhage from a ruptured ectopic pregnancy. The same afternoon he had operated, and the diagnosis of ectopic pregnancy had been confirmed. The gestation had been originally intraligamentous, but had become intraperitoneal on account of the early rupture of the broad ligament. The patient had done well for the first eight days, and then the temperature had suddenly risen to 102° F. Examination per vaginam had revealed nothing except on the left side of the anterior vaginal vault a small mass about the thickness of a lead pencil and about one inch in length. The sensation imparted to the examining finger had been that of an impacted stone in the ureter, but fifty ounces of urine had been voided in the preceding twenty-four hours, and it had not contained any pus. The bladder was washed out for a few days, but the temperature had kept nearly at 102° F. for one week. Then it had suddenly risen to 104° F., and this had been associated with severe pain in the right iliac region. Palpation and percussion had indicated a fulness in that region. After consultation, an exploratory incision had been made in that region, but no accumulation of pus had been found. Palpation of the kidney did not seem to indicate that this organ was at fault, but the gall bladder was found to be exceedingly large and tense. The first incision had consequently been closed, and another made over the gall bladder, and the latter had been stitched to the wound, with the result that over two hundred small gall stones had been discharged. A drainage tube was still in the gall bladder. To his surprise the temperature had remained elevated after the operation, and accordingly Dr. A. G. Gerster had been called in consultation six days later, and had come to the conclusion that there was suppuration of the kidney. The day before this consultation the patient had, for the first time, complained of pain in the region of the left kidney. After the woman had been anæsthetized both surgeons had been unable to find any definite evidence as to which kidney was diseased. The patient's condition being bad, it had not been thought proper to do a formidable operation on the kidney when there was so much doubt as to the exact location of the disease. Accordingly, they had contented themselves with cutting down upon the impacted stone in the left ureter through the vaginal vault and removing the stone. This stone had a groove on one side which had evidently allowed the passage of the urine and had prevented the kidney from becoming distended with urine. The pain had probably resulted from a change in the position of the stone in the ureter and the consequent occlusion of this tube. The removal of the calculus had been followed by a gush of purulent urine. A catheter had been introduced into the ureter for drainage and irrigation, and was still there. There was some reason for believing that the right kidney might also be diseased.

Dr. J. Riddle Goffe suggested that as the gush of urine on the removal of the stone indicated good drainage, it was not improbable that the catheter in the ureter would actually prove to be an obstruction. In the absence of the fœtal remains in this case it seemed to him doubtful whether it was justifiable to diagnosticate an ectopic gestation. In a recent case he had removed from the junction of the middle and external thirds of a Fallopian tube a mass about the size of a hen's egg which, even after its removal, he had supposed to be an ectopic gestation, but the pathologist had reported it to be nothing but a blood clot.

Dr. Joseph Brettauer said that he had witnessed both the first and second operations in this case. At the time of the removal of the first specimen he had examined it, and had supposed it to be a tubal abortion. This very fact would explain the absence of any symptoms of pregnancy. Conception had taken place in the tube, and had probably been destroyed by the rupture of a blood-vessel. This would not necessarily result immediately in a shrinkage of the sac, and evidently the bleeding had been very slow for a considerable time. He also thought it would be wise to remove the ureteral catheter, as it was a foreign body, but he would not do this without sewing the margins of the opening in the ureter into the vaginal wall. If this was not done, the opening would contract and close very quickly.

Ectopic Gestation without Missing a Period.—Dr. Mundé replied that he also desired to remove the ureteral catheter, but was afraid of the contraction just spoken of. On several occasions a slight obstruction to the drainage had immediately resulted in a rise of temperature. He did not feel like stitching the ureter to the vaginal wall because it seemed to him that enough operating had been done on this patient for the present. If she recovered from these operations, he would probably ultimately attempt to transplant the ureter into the bladder. The appearance of the specimen at the time of its removal had certainly been that of a tubal abortion, but this did not accord with the relations of the gestation sac to the broad ligament, at the operation. A specially interesting point in the case was the fact that it was possible for a woman to have an ectopic gestation without having missed a single menstrual period. Of course, there would be some bleeding in the interval.

The Vaginal Operation through the Anterior Fornix.—Dr. J. Riddle Goffe said that he was becoming more and more enthusiastic over the vaginal route in operating for all the pathological conditions found in women. He preferred this route even for conservative work on the ovaries and tubes, as well as for cases of ectopic gestation and for quite large dermoid cysts. The specimen presented by him was from a case in which he had made the diagnosis of a cyst of the ovary adherent to the posterior wall of the uterus. His remarks concerning the vaginal operation had referred to the operation through the anterior, and not through the posterior fornix. The case proved to be one of cyst of the broad ligament which had ruptured. The blood had dissected off the broad ligament and even the peritoneum from the posterior wall of the uterus like a cushion. Having evacuated the contents of this tumor through the anterior fornix, ligatures had been applied and the tumor excised. The specimen was about six inches long.

Dr. Mundé said that he had never done this operation on a case of intrapelvic tumor unless it was situated very low, because he had never felt that he could operate as well through a vaginal as through an abdominal incision.

Dr. Brettauer objected to making it a rule to attack these tumors through the anterior vaginal wall. Although he had made himself thoroughly familiar with the operation, he felt regarding it as did Dr. Mundé. He preferred to be guided, in locating the

incision, entirely by the situation and motility of the tumor. He did not consider it very unusual for the peritoneum to be dissected off from the posterior surface of the uterus in cases of large intraligamentous cysts. He had seen several uteri sacrificed because of the attempt to remove such tumors from below.

Dr. Brooks H. Wells said that in a question like this the personal equation was all-important. He had observed Dr. Goffe operate in a number of these cases, and had admired the skill and apparent facility of his operating.

Dr. Goffe said that he had found that he could reach the point at which he desired to apply the ligature much more easily through the anterior incision. It seemed to him very difficult to place the ligature close to the horn of the uterus through the posterior incision, whereas it was comparatively easy to do this through the anterior incision. It was easier to do conservative surgery on the tubes and ovaries through the anterior fornix than through the usual abdominal incision.

A Case Treated with Unusually Large Saline Infusion.—Dr. J. Riddle Goffe reported this case. The patient, a woman of twenty-eight years, had been seen by him on December 23, 1898. She was three months pregnant, and had been suffering from serious vomiting throughout her pregnancy. She had been nourished entirely by rectal injections during the three weeks preceding his first visit. She was nervous, anxious, and almost pulseless. Only three ounces of urine had been passed daily for several days, but the urine had been normal except for a very small quantity of albumin. Dr. Goffe had agreed with the attending physician that the uterus should be emptied of its contents. This had been done, and the uterus packed with gauze. When the patient had recovered from the anæsthetic the vomiting had not ceased and the kidneys had not functionated properly. The next day her condition had been desperate. A current of decinormal saline solution at the temperature of 110° F. had been allowed to run into the median vein, with the most satisfactory result. The infusion had been continued until two quarts had been injected. Then she had begun to perspire freely. As there were no unpleasant symptoms the infusion had been continued until a total quantity of five quarts of saline solution had been infused. It had then been stopped. About three hours afterward the patient had passed thirteen ounces of urine, the first for forty-eight hours. It had contained fifty per cent. by volume of albumin. The next day she had passed eighty-three ounces of urine, and since then her recovery had been uninterrupted. Forty minutes had been occupied in introducing this very large quantity of saline solution.

The Proper Temperature for Saline Infusion.—Dr. S. Marx said that he thought a temperature of 110° F. for a saline infusion given with a fountain syringe was too low; he had repeatedly found when this arrangement had been employed, and the fluid in the bag had had a temperature of 120° F., that on escaping from a fine needle the solution had been cool. He had estimated that there was a loss of 20° in the passage of the fluid from the bag through a small needle. For this reason he had performed saline infusion with a solution having a temperature of 140° F. in the bag. He would be afraid to use such a large quantity of saline solution except coincidently with a powerful heart stimulant. The pumping directly into the heart of such a substitute for blood, and in such quantities, seemed to him liable to induce paralysis of the heart. He would prefer to give at the same time strychnine in doses of one-fifteenth to one-twentieth of a grain every half-hour. In one instance he had seen a patient become rapidly worse and markedly cyanosed because he had used nitroglycerin and bled her into her own veins.

The Danger of Too Rapid Infusion.—Dr. Philander A. Harris said that only twenty-four hours previously he had had a fatal result after an infusion of but two quarts. It had seemed to him that the bad result in his case might have been due to too rapid introduction of the fluid. He had used a glass medicine-dropper, and the fluid had run in faster than he had intended. He was of the opinion that the danger was rather from the rapidity of introduction than from the quantity infused. Care should be taken also that the reservoir should not be raised very high. While it could not be denied that his patient had been almost moribund before the infusion was begun, he still felt that the defective technique was quite probably responsible for the fatal result. He could not understand how it was possible for the solution to lose 20° of heat in passing from the reservoir to the point of injection.

Dr. Goffe, in closing, said that the douche bag had been kept wrapped up in hot bichloride towels during the infusion.

Induction of Abortion Because of Uncontrollable Epistaxis.—Dr. S. Marx reported the following case in which repeated attacks of profuse epistaxis constituted the indication for the induction of abortion. The patient, a young and healthy woman, had been married about two years, and had had no previous attacks of nosebleed. One week after the supposed occurrence of conception the nose had begun to bleed profusely. These attacks had recurred every three or four days, the quantity being greater at each succeeding attack. When seen by him she had been intensely anæmic and in collapse. She was about three months pregnant, and the nose had already been firmly plugged. After stimulation by saline enemata she had improved slightly, and, under Schleich anæsthesia, an accouchement forcé had been done, and twins delivered with difficulty. He had then packed the uterus with gauze. She had collapsed again two or three days later, but had been revived. Her convalescence had been slow because of the anæmia. He could not account for the hemorrhages except on the theory that they were the result of the hydræmic plethora which so often accompanied the pregnant state.

Priestcraft and the Determination of Sex.—Dr. Brooks H. Wells exhibited a number of interesting charms which Dr. C. I. Proben had recently brought with him from Porto Rico. According as a pregnant woman desired to have a boy or a girl she paid the priest to bless a little image of a boy or girl as the case may be, and she then wore this on her person. It was stated that the people have the greatest possible faith in the efficacy of these charms.

Puerperal Infection.—Dr. Julius Rosenberg read this paper. He said that the bacterium most commonly met with and responsible for the severe cases of puerperal infection was the streptococcus pyogenes. Streptococci from infected wounds were the most virulent. Numerous investigations had shown that even fatal results might follow the infection with staphylococci. A few years ago he had had occasion to observe such a case of staphylococcus infection. On the eleventh day the patient had been permitted to leave her bed, the uterus being well contracted and there being no tenderness. Within a few hours she had had a severe chill with a rise of temperature to 104° F. After this the case had run the usual course of a virulent puerperal septicæmia which had been characterized by septic endocarditis and pericarditis, meningitis, and septic involvement of the various joints. Death had occurred on the forty-third day. In this case he was satisfied that infection from without could be excluded, and consequently he looked upon it as an example of autoinfection. As might be expected from the nearness of the bowel, infection with the colon

bacillus was quite frequent. It was only recently that the dangers of gonorrhœal infection had been realized. Some authorities claimed that the presence of this complication constituted a contraindication to the performance of Cæsarean section, and at the Dresden clinic, in four cases of this kind, the Porro operation had been selected because of the existence of gonorrhœal infection. Formerly he had ascribed every case of puerperal sepsis to lack of proper precautions, but his opinion on this point had changed, and he was now disposed to be more lenient regarding the occurrence of such infection until the exact conditions had been ascertained. In the opinion of a number of obstetricians gonorrhœal infection was sometimes responsible for puerperal sepsis. A number of cases of puerperal sepsis had been reported in which the only organism discovered had been the bacillus fœtidus. Bumm and Koenig had proved that streptococci, staphylococci, and other pyogenic germs were not infrequently present in the healthy vagina. Nearly all types of bacteria capable of producing puerperal infection had been demonstrated to inhabit the vagina normally, and the reason that puerperal infection was not more common was to be found in the fact that when the person was healthy, the vaginal secretions were normal, and the parts not unduly disturbed by frequent manipulation, the few organisms ordinarily present would be prevented from invading the system. It was well to remember that antiseptic douches, by carrying off the vaginal mucus, actually favored infection. The abdominal method of examination was capable of giving more exact information than vaginal palpation, and as a precaution against septic infection it was most valuable. He was of the opinion that the mistakes in midwifery were more often those of commission than of omission.

Treatment of the Different Varieties.—The form of puerperal infection most frequently met with appeared as puerperal ulcers on the vagina and cervix, that were the result of lack of cleanliness. The best treatment in such cases was to cleanse the parts with sterilized water and dust them with aristol. He had formerly made use of strong carbolic acid or peroxide of hydrogen, but had learned that this only retarded the healing process. Puerperal endometritis was not uncommon, and recovery often took place if too much was not done. The patient should be anæsthetized, the passages irrigated with sterilized water, and all shreds removed, preferably with the finger, but the dull curette might be used if the finger could not be easily employed. After another irrigation with sterilized salt solution the uterus should be packed with aristol gauze, and then an ice-bag placed on the abdomen over the uterus. This process should not be repeated, as nothing could be gained from it, and much harm was likely to ensue. In general puerperal septic peritonitis the depressing effect of the toxins on the heart was early noticeable, and such cases were usually hopeless. Statistics showed that nothing could be expected from opening the abdominal cavity and flushing out with saline solution except when the peritonitis was the result of rupture of pus sacs. Very conflicting testimony had been offered regarding the efficacy of the antistreptococcus serum, and the future alone could settle this important question. The rarest form of puerperal infection, according to his experience, was that designated as pyæmia. The thrombi which normally formed in the veins became infected in this variety, and hence the great danger of this disease. The symptoms developed late, and the infective process extended slowly through the different organs of the body. He was inclined to think that the serum treatment might do much good in this class of cases. The uselessness of operative treatment here must be evident, and local treatment was likewise unavailing.

The discussion was postponed.

SECTION ON MEDICINE.

Stated Meeting, February 21, 1899.

LOUIS FAUGÈRES BISHOP, M.D., CHAIRMAN.

Hydrophobia and Its Preventive Treatment: An Analysis of Some Cases.—DR. FOLLEN CABOT read a paper with this title, and also demonstrated rabies in the rabbit and guinea-pig.

Misplaced Sympathy.—He stated that on February 4th a dog had bitten several persons on Staten Island. The animal had been kept under observation until its death on February 7th. The body of the dog had then been sent to a laboratory in New York City, and an autopsy had been held, but no inoculations were made. As it was generally conceded that the presence or absence of rabies could be positively determined only by inoculation experiments, the health department had made application to the president of the Society for the Prevention of Cruelty to Animals, in whose custody the material was, for some of it; but when he had learned the purpose to which it was to be put, he had declined, on the ground that such tests constituted cruelty to animals. He had also volunteered the statement that he did not believe this dog, or the other dogs on Staten Island, had had rabies, and that he was of the opinion that the disease was so rare that if it were not for such inoculation experiments, aided by a sensational press, one would almost never hear the cry of "mad dog." He seemed to care nothing for the utter demoralization of the persons who had been bitten, so long as he could save two or three rabbits or guinea-pigs. It should be noted that the autopsy had not been made on this dog until three days after its death, and that the finding of sixty or seventy small worms in the heart, in the absence of other positive evidence, had been assumed to be sufficient proof that this animal had not had rabies. Dr. Cabot said that in the past year thirty-four persons had applied to the health department for the Pasteur treatment, but that for various reasons it had been considered necessary to subject only fifteen persons to the treatment.

Even Late Cauterization may be Effective.—From numerous experiments on rabbits he believed that rabies affected the nervous system through the lacerated nerves, and that effectual cauterization of the part with pure nitric acid within twenty-four hours would prevent the development of the disease in almost every case. In these experiments the first symptoms of rabies had developed in the rabbits usually in fifteen and one-half days, and in the guinea-pigs in nine days. All except the first two of these fifteen persons who had received the Pasteur treatment were well to-day. The two exceptions had received numerous and severe bites from a dog on Staten Island on February 7th. The wounds had bled freely, and only mild carbolic acid had been used on them. In one of these patients the treatment had not been begun until March 5, 1897. Forty-seven days after having been bitten she had become very ill, the wounds on the arm had become dusky, the pulse rapid, and the temperature had risen to 101.1° F. On the next day she had been very nervous, and had begun to show difficulty in swallowing. She had grown steadily weaker during the day, the spasms becoming more frequent and severe. She had died from exhaustion on March 27th. Her mind had remained clear, and at no time had she made any attempt to bite. There had been no autopsy. This was the only case of true hydrophobia in the human being that he had seen.

The Pasteur Treatment.—In 1896, 1,308 persons had been treated at the Pasteur Institute, Paris, with a mortality from rabies of 0.3 per cent. This preventive treatment had been proved to be practically harm-

less. The injections should be made with aseptic precautions into the subcutaneous tissue. The usual course of treatment covered fifteen days, during which time twenty injections were administered. Children bore nearly as large doses as adults. If a dog supposed to be suffering from hydrophobia should die, an autopsy should be held, and the spinal cord should be inoculated into animals. The shooting of the suspected animal was a practice which could not be too severely condemned. Six out of the eight sent from Staten Island to the health-department laboratory had yielded positive results with inoculations. According to Dr. Huidekoper, the paralytic form of rabies was not very common among animals. In this part of the country dogs were the animals most usually affected, but in the West the skunk was a very common source of this disease.

The Safety of the Pasteur Treatment. — Dr. R. J. Wilson said that in 1896 the commissioner of health had decided to investigate the preventive inoculations of hydrophobia, and to that end Dr. Williams had gone to the Pasteur Institute in Paris. There she had studied the details of the treatment for over a year, and had ascertained beyond all question that the method was capable of conferring immunity. To determine the risk of the treatment, Dr. W. H. Park had made a careful study of the records of the same institution for the previous ten years. Although several hundred animals had been inoculated with the preventive inoculations at the New York health-department laboratory, not one of these animals had developed rabies as a result of these inoculations. This fact, together with the results of the study of the records of the Paris institute, seemed to settle conclusively the safety of the treatment. He was of the opinion that if adequate dog laws were in force in this country, there would be very little occasion for the immunization treatment.

Dr. Maurice Asher, of Newark, said that his pet fox terrier had become restless and sleepless, had refused water and food, and had developed a short bark ending in a peculiar high-pitched howl. Although the dog had refused water, it had gone outdoors and eaten the snow. At first it had been supposed that these symptoms were the result of constipation, and treatment for the relief of this condition had been instituted. The animal had not seemed to be cross, but it had snapped when disturbed or when attempts had been made to give it medicine. In this way five persons in the household had been bitten. During this time the dog had remained bright and intelligent. After about three days it had begun tearing everything about it, and it had then been killed and its body sent to the laboratory of the health department. Four out of the five persons bitten had taken the Pasteur treatment, and although apparently in good health during this time, these individuals had all been unusually irritable. The inoculations had been rather painful, but this had seemed to depend chiefly upon the quantity injected. The inoculations on the abdominal wall had been more painful than those on the buttock.

Dr. S. K. Johnson, being ill, sent a report of three cases of rabies which he had witnessed in dogs, and in which the diagnosis had been verified by the health department. At the time of admission to his hospital, these dogs had had temperatures of 106°, 107°, and 105° F. respectively.

Dr. James Douglas, of Morristown, said that on December 27, 1897, while making a professional call, he had been bitten on the arm by a dog which a veterinary surgeon thought at the time was suffering from distemper. He had immediately cauterized the wound thoroughly, and had developed no symptoms thereafter, although subsequently the veterinary surgeon had changed his diagnosis to rabies. Dr. Douglas said that he had seen one case of hydrophobia, occurring in a man who had been bitten by his dog early in November, 1897. He had cleansed the wound with peroxide of hydrogen, and had cauterized it three days after the bite. On January 6, 1898, the man had become very nervous and anxious, and had complained of difficult and catching breathing. His pulse was 120, full and strong; and his temperature, 101.2° F. On attempting to drink, he had become greatly excited and shivered as if water had been thrown over him. There was much brown, tenacious mucus constantly in the throat. He complained of prostration and great thirst, and had had many terrible paroxysms. Delirium had then set in, and he had died a day or two later of heart failure. Subsequently some neighbors stated that they had recently killed a mad dog, but not before it had bitten the dog which had caused the death of this man. Dr. Thomas D. Prout, pathologist of the State Hospital, Morris Plains, had made the autopsy on the patient, twenty hours after death. The only apparent gross lesion of the nervous system had been a general congestion. At the New York health department the diagnosis of rabies had been verified.

Rabies in the Dog.—Dr. Frothingham, of Boston, said that it was hardly necessary for him to say that he was a firm believer in the existence of the disease, and in the efficacy of the Pasteur preventive treatment. His first experience with this affection had been about ten years ago, in connection with studies made with Dr. Ernst. During the past two years he had studied thirty-two suspicious cases. Of this number, twenty-one had proved to be rabies. He had had no experience with the disease as it occurred in human beings, but had seen it in dogs. In the latter there were two well-marked forms of rabies, (1) the furious form, and (2) the dumb or paralytic form. The first variety always terminated in the paralytic form.

Simulates Many Other Diseases. — It should be borne in mind that there were no post-mortem lesions which were at all typical of rabies, and that the only means of making a positive diagnosis was by the inoculation of other animals with a portion of the spinal cord of the suspected animal. The symptoms of many other diseases in dogs closely simulated rabies. This was especially true of cases of enteritis in dogs, and in that peculiar disorder characterized by the presence of fine, thread-like worms in the heart. Foreign bodies in the teeth, mouth, pharynx, and intestine were liable to give rise to symptoms like those of rabies. A small parasite frequently found in the ears of dogs often caused symptoms so like those of rabies that even experienced veterinarians could not make the differential diagnosis except by inoculation tests. The cellular infiltrations found about the perivascular portions of the brain had been attributed by some observers to rabies, but he believed, with many others, that these cellular infiltrations could be produced by various toxic substances.

Prophylaxis.—To prevent the disease, it was absolutely necessary to have exceedingly stringent and intelligently enforced dog-license laws. In addition to this, all suspected animals should be quarantined for at least three months—better for a longer period. He thought statistics showed that wherever a muzzling law had been introduced, rabies had almost entirely disappeared. Local laws of this kind were possible in this country.

Dr. W. H. Park emphasized the fact that cauterization, while very useful, even after an interval of twenty-four hours, did not altogether prevent the development of rabies, and that, therefore, both cauterization and the Pasteur preventive treatment should be employed.

Some Individuals Immune.—Dr. John H. Huddleston called attention to the fact that many human

beings were apparently immune to the disease, the proportion of persons developing hydrophobia after being bitten being about one in six; but it should also be remembered that every person developing the disease died.

Dr. Cabot remarked, in closing, that the most representative men of the profession were thoroughly agreed regarding the existence of hydrophobia in human beings.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 27, 1899.

S. O. Vander Poel, M.D., President.

Anæsthesia—Nitrous Oxide, Ether, and Chloroform.—Dr. S. Ormond Goldan presented a paper with this title, but owing to lack of time he read only that portion dealing with nitrous oxide. He said that if anæsthetics were properly administered to suitable persons there would rarely be any mishaps. The essentials for a proper narcosis were: (1) An anæsthetist who did not look too lightly on the responsibilities of his task; (2) one who possessed a thorough knowledge of the action of the anæsthetic agent on the human economy, and who was quick to recognize the danger symptoms; and (3) a thoroughly equipped armamentarium capable of coping with any emergency that might arise. Whenever possible, a complete history of the patient should be obtained, and should be recorded, along with that of the administration of the anæsthetic, on a suitably printed blank. Such a record would prove of great value if the same person required to be anæsthetized a second time. Upon a thorough examination of the heart, lungs, and arteries would depend, in large measure, the choice of the anæsthetic. The mere presence of a trace of albumin in the urine, without renal casts or other symptoms, was not a sufficient reason for selecting chloroform in preference to ether. In his opinion, a calomel purge, followed by a saline, was preferable to other remedies of this class prior to the administration of an anæsthetic, and should be given from two to four days before the operation. Preliminary stimulation, when called for, could be satisfactorily secured by the administration of strychnine or of tincture of nux vomica for days beforehand, or by the use of saline enemata. It was also well to encourage the patient to drink freely of water for some days. Only concentrated broths should be permitted on the day of the operation, and no food whatever within five hours of the time for giving the anæsthetic.

Morphine Objectionable before Anæsthetization.—He was decidedly opposed to the use of morphine just before anæsthetization. Morphine, he said, did not in any way reduce the quantity of the anæsthetic employed, as many seemed to think, but, on the contrary, prolonged the time required for the induction of anæsthesia; moreover, accidents to the respiration had occasionally occurred which could be properly attributed to this use of morphine. A very great objection to morphine was its action on the pupil, which prevented the anæsthetist from gaining the necessary information regarding the state of the narcosis. When morphine had been given prior to the anæsthetic, it would be found that the subsequent nausea would often be aggravated, but when morphine was given after stopping the anæsthetic, the narcosis of morphine would be superimposed upon the anæsthesia, or rather would be substituted for it, and would act well.

Reduction of Body Temperature.—The temperature of the operating-room should be from 80° to 85° F., and the patient should be kept covered with woollen blankets, as the temperature of the body fell during the administration of the anæsthetic, largely owing to the reduction of tissue metabolism. In one case in which there had been a continuously high temperature, and the body temperature had been 103° F. before anæsthetization, it had fallen during the period of anæsthesia eight degrees. If the Trendelenburg posture was required, the patient should be returned from time to time to the horizontal position. Chloroform should never be given in any but the recumbent position, as it was a circulatory depressant, and had a tendency to cause vasomotor paralysis. A neglect of this precaution had been responsible for more than one fatal result in the dentist's chair. It was interesting to note that the three anæsthetics first used in surgery were still the ones most in favor.

Nitrous Oxide.—Dr. Goldan said that those who wished to become proficient anæsthetists should begin with nitrous oxide, for, while a safe anæsthetic, it was absolutely necessary for the administrator to give his whole time and attention to the anæsthetic. Nitrous oxide was a useful anæsthetic in any operation where complete and prolonged muscular relaxation was not necessary. On account of the free venous oozing it was not satisfactory where delicate dissections were required. In very large and obese patients, in conditions causing a stress on the right side of the heart, or in persons in whom increased vascular tension was unsafe, nitrous oxide gas was contraindicated. It was not always necessary fully to anæsthetize the patient with nitrous oxide before changing to ether. The purest gas was obtained from the steel or iron cylinders in which it had been liquefied. Experiments had shown that it was perfectly stable, and that it was fit for use even after having been kept for eighteen years. Cylinders containing from twenty-five to one hundred gallons were quite portable.

Administration.—The introduction of air along with the nitrous oxide should be most carefully guarded against, as it prolonged the induction of anæsthesia. It was well at first to let the patient breathe the air through the apparatus for a few seconds, not only to inspire greater confidence, but to make sure, by the click of the valves, that they were working properly. After the first few inspirations the patient usually experienced pleasant or dreamy sensations, then a tingling throughout the body; then the respirations were increased, the pulse became full, rapid, and often irregular, and muscular spasms of the face, abdomen, and thorax would occur, associated with stertorous breathing and deep cyanosis of the mucous membranes. If properly given, the anæsthesia with nitrous oxide would be complete in one or two minutes, and the anæsthesia would then continue for from thirty to ninety seconds. Consciousness would return almost immediately on removing the inhaler, although all of the effects of the gas would not immediately pass off. The period of anæsthesia could be indefinitely prolonged by admitting the air until the cyanosis had passed off, and then resuming the administration of the gas, as before, and repeating this process again and again. The symptoms of danger were principally those connected with respiration and they might call for the performance of artificial respiration or even of venesection. After-effects were rare; occasionally there were vertigo, nausea, and headache. Vomiting was extremely rare. Glycosuria was a rare sequela; he had seen it in three cases, but in these it had been quite transient.

Nitrous Oxide and Oxygen.—Many attempts had been made to eliminate the asphyxia phenomena of nitrous-oxide anæsthesia. It had been found by Hewitt that twelve per cent. of oxygen and an additional pressure of two atmospheres gave an ideal result, but the method was not adapted to ordinary

practice. In most cases a mixture of ten or twelve per cent. of oxygen with the nitrous oxide would give very good results. Dr. W. W. Van Arsdale, of New York, had experimented with different mixtures, and had arrived at practically the same conclusions as had Hewitt. At one time, Dr. Goldan said, his own practice had been to use two cylinders, one of nitrous oxide and one of oxygen. In some of his cases the anæsthesia had been continued as long as forty minutes without any cyanosis. He had finally abandoned his rather crude outfit for the improved apparatus of Hewitt, which gave excellent results, but required great skill in its use. The great secret of success in the administration of this mixture was to give just sufficient oxygen to prevent the asphyxia phenomena, and little enough not to interfere with the anæsthesia. This principle was simple enough, but its practical application was difficult. It was more important thoroughly to exclude ordinary air when using this mixture than when employing nitrous-oxide gas alone. The induction of anæsthesia with this mixture occupied from three to five minutes.

Effect of Ether on the Renal Circulation.—Dr. William H. Thomson bore testimony to the very great advantage of adding ten per cent. of oxygen to the nitrous-oxide gas, and referred especially to a difficult operation, lasting an hour and a half, in which it had acted most admirably. It had occurred to him that it might be wise to begin its administration by the use of nitroglycerin in cases in which the increased vascular tension was to be feared. In some experiments made by him in the physiological laboratory a year ago, he had found that the effect on the circulation in the kidneys was different with each anæsthetic. With sulphuric ether it had been possible to produce complete suppression of the urine. Subsequently he had learned that Dr. Metzler, of this city, had observed the same phenomena in dogs. Ether produced: (1) albuminuria, (2) bloody urine, and (3) suppression of urine. His present opinion was that the dangerous effect of ether anæsthesia was perhaps more often observed in the few days succeeding the narcosis than during the actual period of anæsthesia. He would decline to administer ether to a person having renal disease, especially if there was a tendency to stasis in the lower lobes of the lungs. The danger lay in the subsequent œdema of the lungs, and the subsequent effusion into the bronchial tubes. This effusion into the bronchial tubes, he believed, had been too often ascribed to the local effect of the ether.

Dr. Goldan said that he had examined very many cases, both after chloroform and ether anæsthesia, and had found albuminuria unusual even immediately after the anæsthesia. It was possible that, in the experiments on dogs referred to, the blood had been supersaturated with the ether. He was always very careful to give the smallest quantity of the anæsthetic that would produce and maintain the anæsthesia, and this was to be accomplished by the proper use of a suitable closed inhaler.

Carbolic Acid in Surgery.—Dr. Seneca D. Powell read a paper with this title. He stated that the paper represented the results of his observations at his clinic in the Post-Graduate School in the past fifteen years.

Alcohol an Antidote to Carbolic Acid.—About five years ago he had ascertained that in ninety-five-per-cent. alcohol he had an antidote to carbolic acid. He demonstrated before the society that a ninety-five-per-cent. solution of the best crystallized carbolic acid could be rubbed freely on the hands and allowed to remain for a few seconds without any unpleasant effect from it if the hands were then rinsed with alcohol. He said that he knew of three cases of carbolic-acid poisoning in which alcohol had been used successfully internally. He had never met with but one case of carbolic-acid poisoning arising from the external use of the acid. This case was in a child, and the poisoning had resulted from enveloping an entire limb in compresses kept wet with a two-per-cent. solution of carbolic acid. Many of the results to be described had been obtained by using carbolic-acid solution of the strength of half a drachm to the ounce. This was the strongest perfect solution that could be made.

Mammary, Tuberculous, and Other Abscesses.—Granting that suppuration resulted from microbic action, our treatment to be effective must be capable of destroying these microbes. In mammary, palmar, ischio-rectal, and tuberculous abscesses no difficulty need be experienced in controlling the suppuration if carbolic acid were properly used. His method was to open the abscess through an incision only large enough to empty it completely. The cavity must be thoroughly cleaned out by irrigation, swabbing, or curetting. After this had been done, the cavity should be filled first with strong carbolic acid, and the acid evacuated; then filled with alcohol, and the alcohol evacuated, and finally the cavity should be washed out with water. By this method he had frequently succeeded in converting a foul abscess cavity into a clean granulating wound in from twenty-four to forty-eight hours. In the treatment of ischio-rectal abscesses an opening should be made outside of the external sphincter, and the cavity thoroughly irrigated and cleansed. After this, the fistulous tract should be followed up with a specially made syringe, through which the pocket could be completely filled with carbolic acid. The lower opening should be kept pervious by the insertion of a drain. This treatment was applicable to recent abscesses. If there was an old fistulous tract, the carbolic acid should be introduced daily until the pyogenic membrane had been destroyed. Tuberculous abscesses should be swabbed out every day until healthy granulations were obtained. It was a mistake to suppose that ulcers and wounds would not granulate under such treatment. Bone abscesses were also amenable to this treatment. Dr. D. B. St. John Roosa had used this treatment for two years past in mastoid abscesses, and had spoken very highly of it.

Cellulitis of the Hand.—In cases of cellulitis and palmar abscesses, the surgeon was always anxious, because the incisions usually made, although checking the septic process, almost invariably resulted in deformity. In his opinion, the usual free incisions were not necessary. His practice was to insert a hypodermic syringe needle deeply, and, as it was slowly withdrawn, to inject a solution of cocaine. He then made a small buttonhole opening, and injected carbolic acid and alcohol successively, after which a simple carbolized dressing was applied. A number of years ago the late Dr. James L. Little had published an article in which he had advocated the treatment of contused fingers in a similar manner.

Lymphangitis.—When there was extensive lymphangitis associated with these conditions, his practice was first to cleanse the primary wound, and then swab the surface of the skin along the swollen and tender lymphatics with pure carbolic acid until the skin became whitened, and then to wash off the acid with alcohol. One such application usually sufficed to control this process.

Empyema.—In the treatment of empyema he preferred to resect a portion of rib and evacuate the pus and masses of fibrin, and then irrigate the pleural cavity with carbolic-acid solution of the strength of one drachm to the ounce. Of this solution he used about one pint, and while irrigating the cavity swabbed it out. He had recently evacuated two quarts of pus from a case of empyema, and had filled the cavity with a solution of carbolic acid of the strength of half a drachm to the ounce. A piece of gauze had

then been inserted in the opening, and the dressing had not been changed for a week or more. By this time there was practically no further discharge.

Cystitis.—He would not hesitate to wash out the bladder with a solution of carbolic acid, half a drachm to the ounce, following this by an irrigation with alcohol. This having been done once, a two-per-cent. solution of carbolic acid should be used thereafter.

Erysipelas.—A case of severe and extensive erysipelas, developing after a hernia operation, was cited in which swabbing of the surface first with pure carbolic acid, and then with alcohol, had brought about a surprisingly rapid convalescence. This patient had had a temperature varying between 104° and 106° F., and had been considered practically moribund at the time the treatment with carbolic acid had been begun. Facial erysipelas could be cured by one application of the pure carbolic acid. The acid should be allowed to remain on only long enough to whiten the surface, after which the alcohol should be substituted.

Carbolic Acid in Tuberculous Joints.—Dr. A. M. Phelps said that he had verified, in his own practice, almost every claim made by the reader of the paper, except perhaps the treatment of erysipelas. Alcohol was certainly the most effective antidote for carbolic acid. In washing out tuberculous joints with this acid it had been found that there resulted a great deal of exudation, and, as a result, there was likely to be a limitation of motion. It was for this reason that at one time he had abandoned the carbolic acid for bichloride of mercury. Finally, he had again begun its use after having seen the work of Dr. Powell. The plan followed had been to inject the joint first with pure carbolic acid, then with alcohol, and finally with water, after which the wound was closed. Those cases invariably went on to convalescence except where there was bone disease beyond the reach of the acid. He would advocate the use in these cases of a free opening, one or two inches in length. When used in this way he believed carbolic acid exerted a beneficial influence on the cells in addition to its action as a germicide. This additional influence probably consisted in drawing to the part a large number of phagocytes which rendered valuable assistance in destroying the germs which sought to invade the issues. Carbolic acid, unlike nitric acid, did not have a tendency to kill the tissues unless allowed to remain too long. The whitening of the parts was an indication that the carbolic acid had been applied sufficiently long. Shortly after beginning the practice of medicine he had performed an amputation, and had been surprised to learn from an old country doctor that if he would swab the flaps with a solution of chloride of zinc of the strength of one drachm to the ounce, it would be perfectly safe to close the flaps. This he had done, and had secured perfect primary union.

Carbolic Acid in "Ivy Poisoning."—Dr. Carter S. Cole said that he felt especially grateful to the reader of the paper for the suggestions regarding carbolic acid, as he had already tested them in his practice and used this agent with much satisfaction in other conditions than those mentioned by Dr. Powell. He had employed the carbolic-acid treatment, for example, in a bad case of poisoning with "poison ivy," applying a two-per-cent. solution of the acid continuously, and it had controlled the inflammation more quickly than anything else.

Mastitis.—After the carbolic-acid treatment of mastitis, if pressure was properly applied, healing would be prompt, and no drainage would be required. He had tried the experiment of injecting abscess cavities with a mixture of carbolic acid and alcohol, but had not obtained as good results as when these two agents had been used successively.

Dr. S. Busby Allen inquired whether the alcohol was a solvent or an antidote to the carbolic acid in the sense that it produced with it an insoluble and innocuous compound.

Dr. A. Palmer Dudley said that Dr. Powell could justly lay claim to the discovery of this property of alcohol in checking the action of carbolic acid. For years he had himself made it a practice to point out to his students the great value of intra-uterine applications of pure carbolic acid in septic conditions of the endometrium. The ambulance surgeons of the Harlem Hospital had been instructed to pump into the stomach three or four ounces of alcohol in every case of carbolic-acid poisoning coming under their care.

Carbolic Acid for Burns.—Dr. Powell, in closing the discussion, said that as alcohol perfectly counteracted the effect of carbolic acid, it must be looked upon as a true antidote, whatever might be the theory as to its mode of action. He had also found the continuous application of carbolic-acid solution most useful in "ivy poisoning." In the treatment of burns it was his practice to keep the burned surface covered with compresses wet with a two-per-cent. carbolic-acid solution, or with a weaker solution in the case of children. He believed he had used carbolic acid freely in at least ten thousand injuries to the fingers, yet he had never seen any necrosis which had seemed to be fairly attributable to the carbolic acid.

Alcohol Internally in Carbolic-Acid Poisoning.—He had learned that a twenty-five-per-cent. solution of alcohol sufficed to counteract the effect of the carbolic acid. It was probable, therefore, that whiskey, brandy, and some of the wines might answer the same purpose. He had heard of an interesting case of carbolic-acid poisoning occurring in Pittsburg. A mother had hurried to the hospital during the night, coming a long distance with her one-month-old infant, who had been given strong carbolic acid by mistake. The physician at the hospital had immediately put a teaspoonful of alcohol down the child's throat. The child had recovered, although the parts had been almost black at the time of entering the hospital. About one week later the baby had contracted pneumonia, presumably from exposure on that night. It had died, and the attending physician had reported that the autopsy showed absolutely no damage to the œsophagus and stomach. Dr. Powell said that he had used carbolic acid very cautiously in gonorrhœa, but had found that it controlled the infection perfectly.

Diagnostic Value of "Signe du Sou."—Dr. A. Pitres states that the *signe du sou* is an interesting acute phenomenon which is heard when the chest is auscultated, while a coin placed on the back of the chest opposite to the examiner's ear is struck with another piece of metal. The Germans call this Stäbchenplessimeterperkussion. Over a healthy lung a dull wooden sound is heard. The sound is also dull over tuberculous or pneumonia areas, except when the consolidation is very extensive. If there is a large zone of air alone, *e.g.*, pneumothorax, then the resonance is brazen. Finally, when there is a large area of perfectly homogeneous matter, then the sound is clear and "silvery"; this occurs in extensive neoplasms, but especially in pleuritic effusions. If we find an area of dulness over one lung which extends from above downward, we may under certain conditions be in doubt as to how much of this dulness depends upon free fluid and how much upon pneumonic infiltration. In such instances the *signe du sou* tells the level of the layer of fluid. In a similar manner the differentiation between pleuritic adhesions and exudation is made.—*Deutsche Medizinal-Zeitung*, January 9th.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HUNTER'S DAY—METASTATIC ABSCESS IN TUBERCLE OF LUNGS—MYOPATHY—ENLARGED PROSTATE—PARLIAMENT—PROFESSOR WOODHEAD—INFLUENZA—THE LATE HENRY LEE AND PROFESSOR COATS—DEATHS OF BADER, CAVENDISH, AND DICKENSON.

LONDON, February 17, 1899.

TUESDAY was Hunter's day, and the annual oration at the Royal College of Surgeons was delivered by Sir William MacCormac. The Prince of Wales attended the lecture on this occasion, and was received by the audience with a warm welcome when he entered with the president, who prefaced his oration with a reference to the Prince's recent accident and the assurance that not only those present but the whole profession felt the deepest satisfaction at the recovery of His Royal Highness from an injury which is so often followed by disabling consequences. Loud cheers were raised, and the Prince several times bowed his acknowledgments. The oration itself will rank well among the accumulated performances on the subject. Every fresh orator seeks to give something new, and Hunter was so many-sided that the task is not difficult. A study of his works is, as Sir William MacCormac remarked, an education in itself, and the surgery of to-day could not exist if Hunter had not preceded us. It is necessary to grasp the position of science and surgery when John Hunter began his work in order to appreciate how far he was in advance of his time. The orator contrasted the manner in which Harvey and Hunter treated the subject of animal heat, commented on his observations on injuries to the head, and the manner in which he was led to tie the femoral for popliteal aneurism. The treatises on inflammation and gunshot wounds were regarded as "epoch-making," and that on venereal is full of important facts, although he was hampered by the idea that gonorrhœa and syphilis were due to the same cause. Hunter's "claim to our admiration," said the orator, "rests not merely on what he did but on what he suggested might be done."

A complicated case of some interest was related to the Clinical Society by Mr. W. G. Spencer. The patient was a negro, aged twenty-two years, who had for months had pain in his left knee and frequent headaches and vomitings. A large superficial abscess, extending from the scapula to the last rib, was opened, but no communication with the chest was found. A multiloculated abscess in the upper part of the left thigh and buttock formed, and on being opened gas and pus with fecal odor escaped. It communicated with the rectum. Later acute effusion into the right pleura occurred. On aspiration this fluid had a fecal odor. Septic fever continued, and foul yellow pus was discharged from the thigh in spite of frequent irrigation. An occasional cough and a few râles were the only chest symptoms. After five months he suddenly collapsed and died in four hours. A tuberculous cavity was found in the upper part of the right lung, filled with gummy, purulent fluid, and there were numerous caseous tubercles scattered through both lungs with extensive caries of several ribs. There was no ulceration of intestines. Dr. Fowler asked if bacilli had been found. He had not met gas or fetid effusion in the pleura except in gangrene or perforation of the lung. Mr. Makins suggested a mixed infection and that perhaps the abscesses were not directly traceable to the lung disease. Dr. Bryant asked about bacillus coli, which he had met with in a case of gaseous hepatic abscess. In reply Mr. Spencer said bacillus coli was found in the pus of the abscesses. Tubercle bacilli were found in the lungs after death. The abscess at the back might have spread from the lung by way of the rib, but he thought that in the thigh must have been metastatic.

The sequel of a case of myopathy in a child of five years, which was detailed to the Clinical Society in November, 1894, was given at the last meeting by Drs. Barlow and F. E. Batten. The child died of an attack of gastro-enteritis, and an autopsy showed great variation in the muscle fibres, vacuolation, deposit of fat, and a fine granular change. The laminæ of the lower vertebræ were absent. There was no lesion of brain, medulla, or spinal cord. Dr. Barlow admitted that the absence of the hereditary element in the case was remarkable, but thought it might be seen later if the family could be kept under observation. In the course of discussion it was remarked that too much stress was often laid on hypertrophy; that these myopathies, as Erb holds, have a common origin; that there were only slight differences between the various forms of myopathy described by different observers.

Mr. J. R. Lunn then related six cases in which he had performed operations for enlarged prostate. In some of these he had tried vasectomy, in others castration. Several seem to have been greatly relieved. In one double vasectomy was done on November 28th, and the patient was discharged quite well on January 6th.

The president, Mr. Langton, said before the introduction of castration for enlarged prostate, he removed a tuberculous right testicle from a man of sixty-eight years, who had greatly enlarged prostate, and had to get up to micturate twenty times of a night. Four years later he returned with the other testicle tuberculous, and it was noticed that the right half of the prostate had greatly diminished. He removed the other testicle with similar result, and the patient is now alive at the age of eighty-seven years, and is only disturbed two or three times a night. The president also referred to the mental disturbances that occasionally followed castration, and said he had observed acute senility two or three times.

Mr. Spencer remarked that some of the patients died of surgical kidney due to the enlarged prostate, showing that the operation did not render unnecessary the usual treatment of washing out the bladder, etc. He agreed that senility was sometimes acute, and in some cases a sort of eunuchoid condition had been described which might cause reluctance to advise castration.

Parliamentary news is not encouraging. The government have coolly announced that it is not their intention to bring in this session the revaccination bill. It was understood at the time that such a bill was the price of Lord Lister's support, and the action of the government will cost them a good many votes. It was stated that all pupil teachers and all men and boys entering the army and navy are required to be vaccinated. The midwives' bill is not to come on until April, and will then have little chance.

Dr. Sims Woodhead has been elected professor of pathology to Cambridge University, in succession to the late Dr. Kanthack. Here is another illustration of the attractive force of the old universities. Dr. Woodhead's work as director of the laboratories of the Royal Colleges has been of great value, and Cambridge is fortunate in finding so able a pathologist to supply her vacant chair.

Influenza is increasing. At present the type is mild. But these continual epidemics are by no means reassuring, in view of the frequent after-effects.

A portrait of the late Mr. Henry Lee by Mr. Stant, R.A., has been presented by the widow to the Royal College of Surgeons.

It has been determined to raise a memorial to the late Professor Coats in the form of a prize or scholarship on pathology in the University of Glasgow. The students of the university intend also to raise a separate memorial in the pathological class-room—either a bust or a tablet.

The deaths are announced of Mr. C. Bader, M.R.C.S., consulting ophthalmic surgeon to Guy's Hospital, in his seventy-second year. When on the active staff he enjoyed a considerable practice but he retired several years ago. Henry Jones, M.R.C.S., better known as "Cavendish," under which pseudonym he wrote a treatise on whist, well known as the authority to all devotees of the game.

STIMULATION BEFORE ANÆSTHESIA.

To the Editor of the Medical Record.

Sir: In the Medical Record of February 18, 1899, an article entitled "Notes on Anæsthesia" appeared, by Dr. Aronson, of Texas, and in speaking of the different ways to lessen the dangers of an anæsthetic he mentions the following in order: 1, alcohol; 2, morphine and atropine; 3, cocaine; 4, digitalis.

There seems to me to be a great tendency in the profession to over-stimulation of patients about to receive an anæsthetic. Even in our large hospitals it is a routine practice to give stimulation beforehand, rather than wait until stimulation is called for.

I have had several cases under ether from two and one-half to three hours (no stimulation being used), in whom the pulse and respiration were as good, if not better, at the end of the operation than before it. In nervous, hysterical women the "hypo" just before the operation may have a psychological effect, but the majority of patients are stimulated unnecessarily.

Walter B. Jennings, M.D.

113 East Twenty-eighth Street.

THE ROTHKRANZ HOME.

To the Editor of the Medical Record.

Sir: In your issue of February 18, 1899, is a communication from Henry W. Leonard, Esq., who signs himself as "counsel for the Rothkranz Home and Female Hospital." Mr. Leonard criticises an article by Mr. Elbridge T. Gerry, entitled "Midwives as Illegal Practitioners," which had appeared in your issue of December 31, 1898. In Mr. Gerry's article he gave at length an account of the evidence against a woman, named Christina Rothkranz, who was at that time held for trial upon the charge of violating section 288 of the Penal Code, and for unlawfully keeping a lying-in establishment.

Mr. Gerry's article was written before the trial; Mr. Leonard's after it. In the course of his letter, Mr. Leonard used the following language:

"Upon the trial of the case quoted, it was held by the learned justices presiding, after hearing all the matter, that the 'Rothkranz Home and Female Hospital' was duly and lawfully incorporated, and that there was no violation of the law by the defendant when persons were treated at the said place; and Mrs. Rothkranz was duly discharged."

While Mr. Leonard's statement that the defendant was discharged is true, nevertheless there is a material omission. The defendant had been held for trial, not only upon the charge of violating section 288 of the penal code, but also upon the charge of using the title of doctress illegally, in violation of the medical law, chapter 398, L. 1895. At the time of her arrest upon the charge of violating section 288 of the Penal Code, the Society for the Prevention of Cruelty to Children courteously called the attention of the Medical Society to the case; and, as a result, the second charge was brought.

In Mr. Gerry's article, above referred to, the evidence is quite fully set out.

As it happened, immediately after the defendant's acquittal upon the first charge, the second charge was taken up and tried. The evidence was practically uncontradicted. It abundantly appeared that the defendant had described herself, by signs on the house, by advertisements, and in conversation, as "Doctress Rothkranz." She had, of course, no medical degree.

Within a few moments of the time of her acquittal upon the first charge, she was convicted upon the second charge, and forthwith sentenced to pay a fine of $100, or, in default of payment, to stand committed for thirty days. This trial took place in the Court of Special Sessions, upon January 12, 1899, before a court composed of Jacob, P.J., Hinsdale and Holbrook, JJ.

Robert C. Taylor,
Counsel of the Medical Society of the County of New York.

FORMALDEHYDE DISINFECTION—A CORRECTION.

To the Editor of the Medical Record.

Sir: In your report on February 4th, upon my article on formaldehyde disinfection before the State Medical Society, you state that one thousand pastils of Schering's trioxymethelene should be used in ordinary room disinfection for each one thousand cubic feet, as contrasted with twelve ounces of formalin. This is, of course, an error, as formalin is only a forty-per-cent. solution, while trioxymethelene is practically one hundred per cent. of formaldehyde gas. One hundred to one hundred and fifty pastils about equal twelve ounces of formalin as used in the various forms of apparatus. This error may have been due to a verbal slip of mine. William H. Park, M.D.

New York, February 21, 1899.

TUBERCULOSIS IN THE COLORED RACE.

To the Editor of the Medical Record.

Sir: That a great vulnerability to tuberculosis has been acquired by the negro in recent years, is a common observation. Whether this is due to higher civilization with change of mode of life, or whether there are new conditions favoring the growth and multiplication of tubercle bacilli, is the unsolved problem.

Pulmonary tuberculosis was practically unknown among the colored race in the South before the civil war; but since that time it has steadily increased, and is now assuming gigantic proportions.

Heredity cannot be ascribed as a predisposing cause, since the negro was practically immune to consumption. During slavery, they waited on members of consumptive families. Housemaids slept in the same rooms, cleansing spittoons, caring for bedding, soiled clothing, etc., and never contracted the disease.

Whence came the opportunities of infection causing this rapid spreading of the disease?

After twelve years of close observation, I find:

(1) The antecedent tuberculous diathesis is not so characteristic as in the Caucasian.

(2) The susceptible period for the negro is from eighteen to twenty-five years of age.

(3) Tuberculous lymphadenitis in children and yonug adults is not increasing in equal ratio with phthisis pulmonalis.

(4) The dark members of the race are as liable to tuberculosis as mulattoes.

(5) Phthisis runs a more rapid course in the negro than in the Caucasian, conditions being similar.

(6) Hereditary predisposition does not play so important a part with the negro as with whites.

(7) Scrofula following the law of atavism has not been observed.

Now, departing from the subject, I will say that I have never seen a case of chorea in the negro, and have interrogated a physician of forty-six years' practice in this State and Mississippi, who has seen only one case.

J. A. FAISON, M.D.,
Recently First Assistant Physician to the North Carolina Insane Asylum.

BENNETTSVILLE, S. C.

OBSERVATIONS OF A SHIP SURGEON.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: From the study of the number of cases of epileptic attacks which occurred on board ship during my short experience of six months as ship surgeon of the Holland-American Line steamship *Werkendam*, I am led to believe that people subject to epilepsy are almost certain to have an attack of it when upon a sea voyage. The attack seems especially liable to occur if the person is seized upon by that most discouraging of diseases—discouraging alike to both patient and physician—sea-sickness.

Reasoning from the standpoint that a large percentage of epileptic attacks are brought upon the sufferer by toxic infection with uneliminated waste products in the system—auto-infection—it would seem advisable that a person who is subject to epileptic attacks should undergo a course of treatment having for its object the elimination of any accumulation of toxic products in the system before starting upon a sea voyage. I believe this would avert an attack in many cases.

One of my epileptic patients told me of a very remarkable method of treatment which was once most efficiently applied to her when she was seized by an epileptic convulsion. 'Tis certainly heroic treatment.

The patient, a German woman about twenty-eight years of age, was subject to epileptic attacks and generally carried amyl nitrite with her, which she inhaled upon being warned by the aura that an attack was imminent. Upon this occasion she had no amyl nitrite and was seized by a violent epileptic convulsion. Help was nearer than she thought it was.

She was at the time of the attack engaged in conversation with an old German woman whose feet were of notoriously foul odor. This old woman hastily removed her slipper and clapped it over the face of the epileptic, who immediately recovered. One breath of it was sufficient. I think this is truly a most remarkable case of "heeling."

Just a word about sea-sickness. If you intend to take a sea-voyage, have your friends come the evening before your departure. Get them to stay half the night at least. Open several bottles of "bon voyage" cheer; eat plenty of cake, ice cream, etc.; and if you are not good and sea-sick when you get out upon the waters, then you never will be sick.

If those about to depart upon a voyage would take eight hourly doses of one-fourth grain of calomel each on the day before embarkation, go to bed early that evening, and take two or three doses of one-fiftieth grain of strychnine nitrate the next forenoon, about one-half the cases of sea-sickness would be averted.

V. A. CHAPMAN, M.D.,
Lately Surgeon of Holland-American Line.

WEST UNITY, OHIO, February 23, 1899.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 4, 1899:

	Cases.	Deaths.
Tuberculosis	244	172
Typhoid fever	14	3
Scarlet fever	181	13
Measles	210	11
Diphtheria	167	27
Laryngeal diphtheria (croup)	9	5
Cerebro-spinal meningitis	0	9
Chicken-pox	49	0
Smallpox	7	1

Dangers Encountered by the Nurse.—Rumpel has recently reported 640 instances of disease acquired professionally among 2,349 Red Cross Hospital nurses in Germany; also 114 diseases with 10 deaths among 300 nurses in the Hamburg hospitals. Cornet (*Wiener klin. Wochenschr.*) states that two-thirds of the religious nurses actively engaged acquire and die of tuberculosis.

Eye Muscles and the Brain.—The brain in its relation to the muscles of the eye may be likened to a person driving a horse; the reins in the hands of the driver guide the animal perfectly when tractable and responsive, with scarcely a conscious effort on the part of the driver, their destination and intent being reached with a feeling of satisfaction and pleasure; but were the horse fractious and difficult of management, the driver would soon become nervous, irritable, perhaps explosive. When the muscles (reins) of the eye are too short or too long, too weak or too strong; or when the demands of the eye (horse) are unusual or irregular, the brain (driver) becomes irritated, agitated, exhausted, producing headache. The simile may be verdant, but it is apt.—DR. W. E. HAMILL.

The Japanese as Sanitary Reformers.—The Japanese government is said to have ordered the complete abandonment of the city of Leck Cham on the island of Formosa, which has frequently been subject to epidemics of such malignancy that thousands of lives were lost. While Formosa belonged to China no effort was made to ascertain or remove the cause. The Japanese have been in possession of the island for about three years, and soon after it passed into their hands they set themselves to discover the cause of the unhealthiness of Leck Cham. A committee of expert sanitarians reported that the city was built on a swamp from which poisonous gases came to the surface, and that the city was so thoroughly permeated with disease germs that disinfection was impossible. The government thereupon issued an order that a new and healthy site should be selected. Such a site was recommended and accepted, and was laid out by experts, with sewers, streets, pavements, waterworks, and all modern improvements without any expense to the inhabitants of the old city. Every property-holder in the old city, without expense to himself, was assigned the same area of ground in the new Leck Cham, and he was given twelve months in which to remove himself and belongings to his new abode. The result of this drastic experiment will be awaited with interest, though it can hardly be doubted that it will be highly successful if the thoroughness of the local authorities in the matter of scavenging in the future corresponds at all with that of the central authority.—*British Medical Journal.*

Medical Record

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Original Articles.

FINAL REPORT ON SCHLATTER'S CASE OF REMOVAL OF THE STOMACH.

BY CARL SCHLATTER, M.D.,

PRIVATDOCENT AT THE UNIVERSITY OF ZURICH AND ASSOCIATE SURGEON TO SURGICAL CLINIC.

Introductory Remarks by Dr. Edmund Charles Wendt, of New York.—The brilliant surgical performance of Dr. Schlatter, of Zurich, fully reported in the MEDICAL RECORD of December 25, 1897, has not failed to arouse widespread interest, even beyond the confines of purely professional circles. Through the courtesy of the operator himself the readers of the MEDICAL RECORD will now be able to follow the further history of this remarkable case. The woman lived for nearly fourteen months without the vestige of a stomach. She finally succumbed to general cancerous infection, proceeding from a carcinoma of the mesenteric lymph-glands. She had continued to gain in weight and strength until cancerous cachexia sapped her growing vitality. Her death was, therefore, not even remotely connected with the surgical interference. Nor can it be in any way attributed to the total abolition of stomachic digestion. Thus both in its physiological bearings and as illustrating a successful feat of advanced surgery, the case loses nothing in interest, despite the later death of the patient. Disseminated cancer is not amenable to surgical or medical treatment. But while cancer kills, the total removal of the human stomach has been shown to be anything but fatal. And this newly established fact will have to be counted with for all time to come.

Dr. Schlatter has kindly sent me two interesting pamphlets[1],[2] chiefly devoted to physiological and chemico-biological observations in connection with digestive processes, as affected by the absence of the human stomach. I believe, however, that this paper, which was intended chiefly to supplement the clinical history of the case, would be needlessly lengthened by copious references to these experimental laboratory investigations. I must, therefore, refer those interested in this aspect of the subject to the original publications. A successful case like that reported by Schlatter, and receiving such universal notice, has naturally led other surgeons to attempt similar operations. An Italian physician has quite recently (January, 1899) removed a cancerous stomach from a woman in Turin. But up to the present time I have been unable to obtain an authentic report of this case, and it is not certain that complete ablation was practised.

In a private letter Dr. Schlatter also informs me that he is not personally positive whether the new cases recorded in America[3] were, strictly speaking, instances of complete extirpation of the stomach. He has, for this reason, not attempted a critical reference to them in the present publication. Unfortunately the original reports of these cases have not been accessible to me, so that I am also unable to state whether the Schlatter operation has remained the unique case which it certainly could lay just claim to being at the time of its first publication in the MEDICAL RECORD. In any event, it can be safely assumed that Dr. Schlatter's final report will not be devoid of interest to the profession in the United States.

Report of the Case by Dr. Carl Schlatter.—A little more than a year ago I placed on record[4] a successful case of total extirpation of the stomach in the human subject. I will here only repeat that the patient was a woman, fifty-six years old, suffering from a diffuse carcinoma of the entire stomach. The operation was performed on September 6, 1897. At the cardiac end of the extirpated organ Professor Ribbert demonstrated the presence of œsophageal tissue, and at the duodenal extremity the pylorus was plainly to be made out. Professor Krönlein showed the extirpated stomach at the last congress of the German Surgical Society,[5] and reported briefly upon the then condition of the patient who had been operated upon. Further communications on the case are to be found in the "Grenzgebieten der Medizin und Chirurgie" (Bd. 3, 1898),[6] and in *The Lancet*.[6]

The patient died on October 29, 1898, one year and nearly two months after the operation. In the present communication I wish to make a final report on the case and on the autopsical findings, as a sequel to my previous publications.

My last report closes with the end of May, 1898. Soon after that time the patient, who felt and appeared well, left the hospital and spent some time visiting relatives. In August she returned to the hospital, still feeling well, but having lost two kilos in weight. This loss of weight the patient ascribed to the difficulty of obtaining suitable nourishment in the conditions under which she lived while out of the hospital, and it was with the object of obtaining better nourishment that she returned to the hospital. At first she complained now and then of pains in the side and back, but her appetite was good, and she took all the food allowed her. On August 22d her weight had again increased to thirty-eight kilos.

From the remaining institutional history of the patient I will extract the following data: About the beginning of September the patient began to complain occasionally of a painful sensation in the left hypochondrium after taking solid food, but after liquid food that was not complained of. On October 2d examination of the abdomen revealed the presence of a tumor, the size of a child's head, hard, nodular, and painful on pressure, extending from the middle line into the left hypochondrium and downward. The patient did not vomit, but frequently had eructations of a clear yellowish fluid. At the same time some enlarged and hard lymph glands could be felt in the left supraclavicular region.

On October 18, 1898, there occurred a profuse hemorrhage from the left nostril, which ceased only after plugging tightly with iodoform gauze. There were severe pains in the abdomen and lumbar region, and a general weakness confined the patient to her bed. Morphine was given.

October 28th.—The appearance of the patient has markedly changed since yesterday; the face is cachectic-looking and sallow, the pulse is rapid and markedly dicrotic, and dyspnœa is present, but there is no elevation of temperature.

October 29th.—The mental faculties are obscured, the respiration is rapid, the pulse is 146 to the minute; the tracheal râle is present. The patient died at two o'clock in the afternoon.

Post-Mortem Appearances.—The following are the findings of the autopsy performed by Professor Ribbert at nine o'clock on the morning of October 31st:

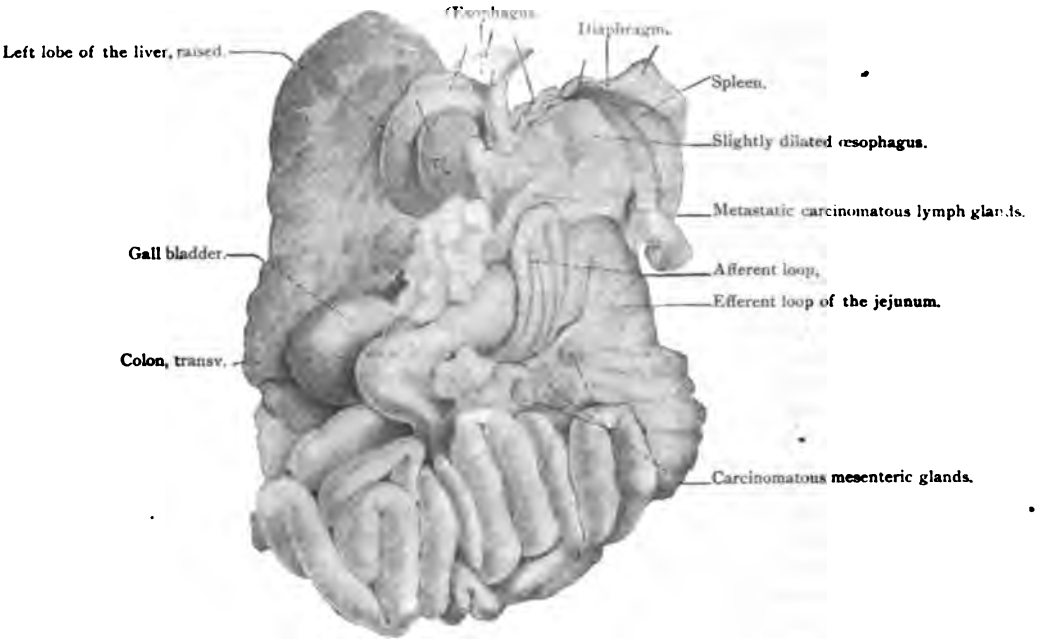
The body is emaciated, the skin is pale, the abdomen is slightly prominent and of a greenish hue. There is a slight œdema of the extremities. From the umbilicus extending toward the ensiform process is a scarcely visible cicatrix. The panniculus adiposus is but slightly developed. On opening the abdomen the parietal peritoneum is seen to be adherent to the superficial portion of the abdominal contents. In the peritoneal cavity is a tolerably large amount of a grayish cloudy fluid. In consequence of the adhesions the liver is strongly drawn to the left side, so that between the liver and diaphragm there is a cavity containing nearly a litre of fluid.

In the abdominal cavity are seen the folds of the small intestine, in part distended with gas and with metres of a reddish cloudy fluid. The right lung is heavy in proportion to its size. Its pleura, especially over the lower lobe, but also elsewhere, is studded with grayish-white, slightly elevated, firm nodules, from the size of a pinhead to that of a lentil, which are grouped in certain parts into large masses. On section the lung is seen to contain but little blood and little air, but is œdematous. Around the larger bronchi in various places are seen grayish-white nodules.

The left lung presents the same condition as the right.

All the intestines together with the œsophagus and trachea were now removed from the abdominal cavity. There was also found a mass of carcinomatous glands above the left clavicle.

Description of the Pathological Specimen.—The accompanying illustration of the specimen as removed from the abdomen shows very clearly the local conditions in the neighborhood of the field of operation. The chief point of interest is of course the seat of the œsophago-enterostomy. Immediately after its passage through the diaphragm the œsophagus bends almost at



Post-mortem Appearances of Abdominal Organs, Showing Cancer of the Mesentery. Drawn from nature by L. Schröter, Zurich.

pale serosa, and in the upper part the liver and greatly distended colon; the latter is adherent to the abdominal wall for a distance of about three fingers' breadth. The adhesions consist of tough connective tissue. Extending from the transverse colon is a mass of hard nodules, about the size of two fists, consisting of greatly enlarged mesenteric glands. The mesentery itself is almost lost in this mass.

The diaphragm has formed extensive adhesions with the fourth rib on the right side and with the liver and intestinal coils on the left. After removal of the sternum there can plainly be seen a somewhat flattened coil of intestine extending from the transverse colon downward and inward. It comes up from under the diaphragm in the deeper portion of the abdominal cavity and then dips down again underneath the colon between it and the mesentery.

The pericardium is non-adherent throughout its normal extent. It contains a clear fluid. The heart is small and contains fluid blood. The left lung is adherent at its apex, but free throughout the rest of its extent. In the left pleural cavity there is about a litre of opalescent fluid.

The right lung is somewhat more adherent. In the right pleural cavity is about five hundred cubic centi-

right angles to the left, and after a short horizontal course runs again vertically. The length of the subdiaphragmatic portion of the œsophagus is nearly eight centimetres. Its lowest portion is somewhat dilated, but not to the extent that the illustration would lead one to infer. The dilatation of the œsophagus is due in part to a carcinomatous infiltration of its inner wall. The illustration shows plainly the afferent loop of the jejunum extending from the plica duodeno-jejunalis beneath the transverse colon, the broad junction with the œsophagus and the efferent intestinal coil. Upon following up the afferent intestinal tube we find the end of the duodenum, forming a cul-de-sac near the pylorus, in no way altered—neither atrophied nor hypertrophied, and the efferent portions of the intestine are also in no particular abnormal. Large hard collections of lymph glands are found between the liver and œsophagus, in the mesentery, and behind the peritoneum. In the pancreas also nothing abnormal is to be seen so far as can be determined in examination of the organ, which is already in a condition of beginning decomposition.

The anatomical diagnosis is, therefore: Carcinomatous lymphatic metastases in the mesenteric, retroperitoneal, bronchial, and supraclavicular glands, and

studding of the pulmonary pleura with metastatic carcinomatous nodules.

Remarks on the Autopsical Findings.—The assumption that a dilatation of the œsophagus or intestine had formed a diverticulum in the digestive tract, taking the place of the stomach, is thus not confirmed. The slight dilatation of the lower end of the œsophagus does not warrant us to speak of a newly formed stomach. The subdiaphragmatic portion of the œsophagus had a capacity of scarcely one hundred cubic centimetres, and yet the patient had been able to take upward of three hundred grams of nourishment at one time without suffering any inconvenience. The only explanation we have of the ability to take such a large quantity of food is that the fluid and softer portion passed at once into the small intestine.

The well-known case of Schuchardt[7] presented evidences of a better regenerative process. In this case there was preserved a piece of the cardia, the width of two or three fingers, which remained attached to the œsophagus, and at the autopsy (made about two and a half years after the operation) a newly formed sac, having a capacity of five hundred cubic centimetres, was found in the place of the extirpated organ. Quite a fair-sized portion of the duodenum had, by gradual dilatation, taken part in the formation of this gastric sac.

Microscopical Examination.—The examination under the microscope of a portion of the œsophageal wall lying immediately next the site of the œsophago-enterostomy revealed a peculiar condition. (Professor Ribbert, it will be remembered, regarded the muscular layer of the excised piece as undoubtedly œsophageal tissue. The muscular wall presented itself in two distinct layers, an inner transverse and an outer longitudinal layer. Had it come from the cardia, it would have appeared as a confused mass of crossing interwoven muscular fibres.) The epithelium was, as was to be expected, absent in the sections made from the cadaver. Probably there had been cylindrical epithelium in this place, since squamous epithelium could hardly have remained in a place where the intestinal ferments were always present.

The remaining deeper layers of the mucous membrane were difficult to identify by reason of the presence of sparsely scattered glands. It was a typical mucous membrane neither of the œsophagus nor of the stomach. From one side or the other this mucous membrane must have grown over the muscular layer of the œsophagus. The intestinal mucosa can hardly be regarded as the starting-point of this growth, and it is much more probable that there was left a very small portion of the cardia from which there had been an extension over the edge of the œsophagus analogous to the covering with new mucous membrane of a healing gastric ulcer.

Final Observations.—In my description of the operation in the MEDICAL RECORD,[8] I stated that the incision between the œsophagus and stomach was somewhat oblique. The incision included on the outer side a portion of the œsophagus, as the finding of œsophageal tissue at the examination of the excised stomach clearly proved, and it is therefore very probable that on the other (inner) side the incision may have entered the region of the cardia, although no evidence of this was presented macroscopically. The exact boundary line between œsophagus and cardia can, however, be determined only by microscopical examination.

The presence of this minute portion of mucous membrane, even though it may have been from the edge of the cardia, could have had no influence whatever as regards the physiological conclusions based upon the operation, namely, that a degree of digestion sufficient for the nourishment of the human organism is possible even when the stomach is absent. It is superfluous to state here that patients upon whom jejunostomy has been performed may gain in body weight. Maydl[6] has recently reported the case of a patient who gained full twelve kilos after jejunostomy.

Conclusion.—It need hardly be remarked in conclusion that the death of the patient was due to the multiple carcinomatous metastases, and could not at all be ascribed to inanition from insufficient nutrition. An entire year had the fifty-seven-year-old woman lived free from suffering, without a stomach, and had even gained notably in body weight in that time. Up to within the last week of her life she had been able to go about outside of the hospital, but then with the appearance of cachectic symptoms had rapidly succumbed to her malady.

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CURSORY REMARKS ON ORGANIC AFFECTIONS OF THE STOMACH.[1]

BY GEORGE S. DICKINSON, M.D.,

ERIE, PA.

THE president of this society having assigned to me the preparation of a paper on diseases of the stomach, particularly non-functional diseases—cancer, ulcer, catarrh, and dilatation—I cheerfully comply with his request, in the hope that a consideration of this class of diseases will draw attention to the great advance made during the past few years in methods of diagnosis and treatment, and in the farther hope that a report of some interesting cases which have come under my personal observation in the course of my professional practice may prove of interest to the members of this society.

It is said a disease is known when understood, and understood when interpreted. Concerning the term non-functional gastric disturbances, there is much lack of agreement in interpretation. Perhaps no portion of the organism has so complex a sympathetic nerve supply as the stomach. Just why nature has provided this curious arrangement it would be interesting, but at this time extraneous, to discuss. The stomach, like a mirror, reflects pretty nearly every influence to which the organism is subject. Irritation of the brain, cord, testicle, uterus, kidney, or liver causes anorexia or perhaps vomiting. Grief, joy, worry, or pain leads to similar results. When there is toxæmia from constipation, or renal or cutaneous insufficiency, or the in-

[1] Read before the Erie County Medical Society in June, 1898.

fections, it is the stomach that raises the alarm. Einhorn has divided patients with stomach trouble into two large classes: First, those with organic lesions of the stomach; second, those with functional disturbances. The first class comprises: (*A*) The malignant diseases of the stomach itself or its orifices; (*B*) cicatricial strictures of the cardia or pylorus; (*C*) absence of secretory work of the stomach (achylia gastrica). In the whole first class, with the exception of group *C*, which lies, so to speak, between the first and second class, we are unable to accomplish much either by treatment or dietetics. In existing strictures of the cardia and pylorus, one will be obliged to seek surgical aid. Even in cancer of the stomach wall, resection of the affected part is advisable whenever the operation is possible. I cannot abstain from calling attention at this place to the splendid results of recent stomach surgery in our own country. In the *New York Medical Journal* of May 7, 1898, Dr. W. W. Keen states that whenever there is serious trouble existing in the stomach, he thinks it safe and very proper to make an exploratory examination. I recall a case in my own practice, in which, if an exploratory examination had been made, the patient would have had a good chance to recover. The case was as follows:

F. B——, fifty years of age, a bookkeeper, was riding on his bicycle, and was knocked off by a horse and seriously injured. He was taken to one of the hospitals and treated for several weeks; while there he began having symptoms of stomach trouble. He was taken to his home after recovering somewhat, but the gastric trouble did not improve. Instead, he grew gradually worse. When I first saw him he was weak and emaciated. I made a thorough physical examination but failed to discover anything positive; the stomach failed to empty itself, so of course there was no doubt that the pylorus was occluded; but what was the nature of the trouble, was the question. The patient did not suffer any pain whatever, even on pressure. There was no evidence of pain under any condition. The food remained in the stomach until it was washed out, and under strict observation it was found that about as much came out in the washing as he had taken in the previous twenty-four hours. One hour after an Ewald test breakfast, I obtained the stomach contents by means of expression. The contents were acid in reaction; total acidity, 10. There was no hydrochloric acid; starch, rennet, peptone, and propeptone were present. There was no lactic acid. I examined the contents of the stomach at three different times, and the result was the same. Urine, specific gravity, 1.022. There was no albumin nor sugar. With the absence of pain on pressure at any time, the absence of blood in the wash-water, the absence of lactic acid, while there was a marked diminution of hydrochloric acid, I was of the opinion it was a non-malignant stricture of the pylorus. In view of this, I was making arrangements to have the patient operated on, but before we could consummate our plans the patient died, from sheer starvation.

The autopsy elicited a funnel-shaped thickening of the anterior and posterior walls of the stomach, including the pylorus; the thickened apex occluded the pylorus entirely; the intestinal tract showed signs of ulceration in several places, and in other places almost complete occlusions. The liver was quite anæmic; the kidneys and other organs were, as far as we could see, perfectly normal. I excised the thickened tissues of the pylorus, made a microscopical examination, and found nothing but fibrous tissue. This was afterward confirmed by Dr. Max Einhorn.

The next case was one of achylia gastrica, with gastric atony or total absence of gastric juice: D. H. W——, fifty-five years of age, a mechanic. Five years ago he had a severe fright. Previous to this he was perfectly well, but shortly after he began to show symptoms of stomach trouble and diarrhœa, with exquisite pain; he had frequent eructations of gas. He was very despondent and lost considerable flesh; his heart and lungs were normal. The examination of urine was negative. One hour after Ewald's breakfast the stomach contents were examined: Total acidity, 10; no hydrochloric acid; no pepsin. The examination was repeated, with the same result. The patient was ordered to take five grains of benzosol every four hours, to correct the diarrhœa and arrest fermentation, and to take hydrochloric acid with pepsin after meals. His diet consisted of bread a day old, with meat, milk, and eggs; tea, coffee, and alcohol in small quantities. This condition is similar to that of the stomach in pernicious anæmia, in which the autopsy shows the disappearance of the gastric glands.

Pernicious anæmia and achylia gastrica must be kept strictly apart; whereas the former as a rule ends fatally, the latter does not necessarily endanger the life of the patient. Dr. Einhorn has had some cases of achylia gastrica under his observation for several years, and, with the exception of an attack of indigestion occasionally, these patients manage to live and enjoy life about as well as most people. I have had my case under observation for over a year. While there is no return of gastric juice, the patient has gained flesh and is doing his work. He says he feels perfectly well. Electricity and lavage formed part of the treatment of the case.

Dr. Ewald reports a case which he had observed for two and a half years. Although the patient gained forty-two pounds in weight, the chemical examination of the gastric contents showed a total lack of juice.

The literature on achylia gastrica is not very extensive.

Chronic Gastric Catarrh, a chronic inflammation of the gastric mucous membrane, causing various disturbances in the act of digestion.

Mrs. B. H. I——, forty-three years of age, has had trouble with her stomach for a year and a half; her appetite is very poor. She has dull, smothering pain in the gastric region, which is relieved by eructations of gas; she has water brash, which tastes like solution of soda; the bowels are greatly constipated; she has bad taste in the mouth in the morning. She has lost considerable flesh. She does not sleep very well and is exceedingly nervous.

Status præsens: The patient has a pale appearance. The color of the lips and cheeks is pale; her tongue is heavily coated with grayish-white fur. The epigastric region is tender on pressure; the stomach is dilated, the lower border being only about two fingers' breadth above the navel. You can get the splashing sound very distinctly over the stomach. The heart, lungs, and kidneys are normal. One hour after Ewald's breakfast: Hydrochloric acid, none; acidity, 20; rennet present, also peptone, with a great quantity of mucus. Treatment: Lavage; hydrochloric acid, nux vomica, cascara; the patient to avoid all pastry and eat small meals four or five times a day, also to avoid much liquid while eating. The case shows marked improvement, and is still under observation.

A peculiar coincidence in my practice was to find a husband and wife with a total absence of hydrochloric acid. From this, with the other symptoms they presented, I diagnosed gastric catarrh. They made good recoveries after a long course of treatment. Perhaps their manner of living had something to do with the disease.

Erosions of Stomach.—A condition in which the gastric mucous membrane becomes the seat of small, superficial exfoliations (Einhorn).

H. H. S——, twenty-three years of age, a draughtsman, has had stomach trouble for over a year; his ap-

petite is poor; he has lost flesh. He has considerable pain after eating. There is marked tympanites, with frequent discharges of gas per anum. Sometimes he has eructations of gas and vomiting. The pain is dull and cramp-like. The gastric region is sensitive to pressure. The tongue is always coated, and he has a disagreeable, sticky taste in the mouth in the morning. He has alternately constipation and diarrhœa. He is always tired and does not care to go into company, and is greatly depressed and irritable. He has always been a fast eater and careless in regard to diet.

Status præsens: The patient is pale and looks melancholy. The stomach is dilated. You can get a splashing sound two finger-breadths above the navel. The gastric region is quite sensitive to touch. The heart and lungs are normal. The urine contains no sugar or albumin; there is no enlargement of liver. One hour and fifteen minutes after Ewald's breakfast: Stomach contents acid; acidity, 140; hydrochloric acid, 120; rennet, peptone, propeptone, erythrodextrin present, with a quantity of dark-colored mucus. The following day the stomach was washed out while fasting, and a number of small pieces of gastric mucous membrane were found; they were of a blood-red color. Examination with the microscope showed well-preserved glands and some red blood corpuscles. The above examination was repeated two or three times, and the same result obtained.

Treatment: Solution of silver nitrate with Einhorn's gastric spray; electricity with Einhorn's gastric electrode, and lavage; mixture of calcined magnesia and soda, to correct hyperacidity; later, iron and nux vomica. The patient made a good recovery.

Dilatation of the Stomach cannot be classed as a special disease, as it appears as the result of a stricture or displacement or adhesion of the stomach. The word dilatation, like dyspepsia, has no precise meaning, and embodies false notions. The stomach may be large or small, and yet perform its work satisfactorily. Ewald reports a stomach which held fifty-six ounces, and one which held only eight ounces, yet they performed their work normally. You will recall, in the cases of gastritis chronica and erosions of the stomach, that the stomachs were greatly dilated. When there is dilatation, it is best to eat small meals and drink as little fluid as possible. A bandage will assist in correcting the enlargement.

Ulcer of the Stomach is one of the most dangerous and annoying of the diseases of the stomach, occurring most frequently between the twentieth and fortieth years, while its mortality is greatest between forty and sixty. Some authors claim that the disease occurs most frequently in women. Ewald is of the opinion that all classes are alike predisposed to ulcer. The typical gastric ulcer has a round or oval, sometimes oblong appearance; it extends to various depths of the gastric wall, the upper part being large, the inferior small, simulating a funnel. When microscopic sections are made through the margins of a recent ulcer, the ducts of the glands appear as though cut off toward the base of the ulcer. They are eaten away or digested up to the point where the tissues offer sufficient resistance to the digestive power of the gastric juice. The size of an ulcer is between the size of a five-cent piece and a quarter of a dollar, but may be much larger. The ulcer occurs mostly on the posterior wall and the lesser curvature. The ordinary symptom of ulcer is great pain in the epigastric region after eating, which grows quite severe on pressure, and disappears at the end of the digestive period. There is seldom freedom from pain. Patients with ulcer of the stomach as a rule eat less, on account of their suffering. The appetite is not affected in some cases; the tongue is dry and red, showing a white strip through the middle; the taste remains normal. There is not much belching. In case it does occur, it is odorless. There are some regurgitation and water-brash, and some pyrosis; in some cases vomiting occurs after eating. The history of the case will settle the question whether the blood ejected is from the lungs or the stomach. When the blood is from the lungs, there is not likely to be any vomiting; the blood may be clear red or coffee-grounds color. Blood is also found in the stools. I recall a case to which I was called in consultation. A shoemaker, about fifty years of age, had an ulcer of the stomach. When I arrived he was vomiting large quantities of blood. The attending physician and myself did all we could to arrest the hemorrhage, but the man bled to death in a very short time. It certainly was not a pleasant sight.

Sometimes patients feign ulcer of the stomach. I had an hysterical woman under my care for stomach trouble. Some one had told her she had ulcer of the stomach. I made a careful examination but could find no sign of ulcer. In the course of my examination I questioned her as to whether she had had a hemorrhage; she said she had not. In a day or so I got a quick call to see the patient. Upon my arrival I found her spitting blood, but I noticed that the blood was mixed with considerable sputa. Later I discovered that she had cut the inside of her cheek, and there was found the seat of the hæmatemesis.

Patients with ulcer should be required to rest in bed as much as possible. The diet should consist principally of milk, barley soup, beef tea, peptone, etc. If there has been much of a hemorrhage, the stomach should be given complete rest and the patient be kept nourished with nutrient enemata; if these are not tolerated, a five-per-cent. solution of chloride of sodium should be used; sterilized water should be injected, small quantities at a time; the lower bowel should be washed out fully an hour before the enemata are given. Laudanum will sometimes prevent the enemata from irritating the rectal mucous membrane. Brandy and milk, with yolk of egg, may be used as enemata. Morphine and atropine are the best things to check the hemorrhage. I do not think much of ergot, hamamelis, or persulphate of iron. Equal parts of bismuth subgallate, soda and magnesia calcined should be given internally, to neutralize the acidity which generally exists in ulcer of the stomach. Pellets of cracked ice may be allowed to moisten the mouth and throat. Silver nitrate may be given in solution or in pill, or bismuth in drachm doses several times a day. Lime water should be given with the milk when taken internally, and the quantity gradually increased; after the first week or ten days we can gradually add the semisolid foods, such as boiled egg, well-boiled rice, chopped meat, milk toast, etc. Milk has a tendency to neutralize the acid condition. About four pints should be taken in the twenty-four hours, in small quantities and often. Fruits, alcohol, beer, rich foods, pastries, and condiments should be avoided for a long period.

Cancer occurs, as a rule, in middle and advanced life. There is no marked difference as to frequency in the two sexes. The pain is less intense in character but more steady than in ulcer; there are seldom free intermissions during which no distress is felt in the gastric region. The pain is dull in character, while in ulcer it is sharp and lancinating. The appetite is very poor; the tongue is always coated. The taste is very often bitter or sour; belching is generally present, and very often associated with a disagreeable, even fetid odor; there is no water-brash. Pyrosis is quite intense. The vomiting occurs not after each meal, but once or twice a day, or once in two days, the quantity being quite large; when vomiting of blood occurs, the quantity is relatively small, the color is ordinarily coffee-brown, and the blood appears in a decomposed condi-

tion, presenting frequently a fetid odor. A tumor can generally be felt. The patient is emaciated and cachectic in appearance, and has exquisite pain in the gastric region on pressure. Cancer cells in the vomit will determine the diagnosis. I recall a case we had at the Soldiers' Home, a man about fifty years of age. From his symptoms and a physical examination, Dr. Chapin and myself diagnosed cancer of the stomach. The autopsy revealed a scirrhous carcinoma, the size of an orange, of the pylorus, which involved the spleen and liver. All through the mesentery were small tumors of the same variety; when cut into they would creak similar to the noise made in cutting a pineapple.

There is certainly no cure for cancer unless it is the surgeon's knife. Frequently in skilful hands the tumor has been cut out, and the patient has made a good recovery, without return of the cancer. The only medical treatment is to relieve the pain and make the patient comfortable, washing out the stomach with a decinormal salt solution and giving predigested food, as in cancer the power of digestion in the stomach is generally destroyed. There have been some cases of cancer reported cured under treatment with medicine, but I think there must have been a mistake in diagnosis. Condurango is said to do good in such cases.

With a few remarks on diet I shall conclude this paper. "All living organisms derive their nourishment from the vegetable kingdom, either directly or indirectly by living upon animals which in turn live upon a vegetable diet. Some people, like the Esquimaux, live on a nitrogenous diet; while others, like the Hindoos, live on a non-nitrogenous diet; but certainly the best people emanate from nations who have lived and live on a mixed diet." The healthy man does not know how to feed himself, and the diseased man is far less likely to know. The object of diet is to nourish the patient, and at the same time exert a remedial influence on the disease. The quality of the food should be sufficient to supply the needs of nutrition, and the composition of the diet should approach as nearly that of the normal diet as the variety of the disease of the stomach will permit. Those foods should be selected which can be best digested and utilized, and which are less likely to ferment or decompose. The physiological action must be such as to favor or to remedy the disordered functions and the anatomical lesions. Not only the disease of the stomach, but the state and power of other organs must be borne in mind. Victuals are composed mostly of all the three food groups, albumin, carbohydrates, fat and water, also inorganic salts; the relation of nitrogenous to non-nitrogenous food stuffs being about one to four.

A man takes, in the form of food, a daily average of 120 gm., or about four ounces, of albumin; 90 gm., or about three ounces, of fat; 330 gm., or about eleven ounces, of carbohydrates; and about 2,818 gm., or about ninety ounces, of liquids. One of my cases was of special interest to me; hence I determined to see whether his manner of living did not have some connection with his stomach trouble. The case is as follows:

H. B——, aged twenty, a student. Two years ago he began to have trouble with his stomach, and as a result he was compelled to give up his studies; he is very nervous, does not sleep well, has a sense of weight and pressure after eating, and has eructations of gas. His bowels are not regular, he does not care to go into company, and says he has lost all interest in life. He would not eat meat, milk, or eggs, as he claimed they disagreed with him; he lived on oatmeal, bread, and potatoes.

Status præsens: Patient looks fairly well nourished, although he is pale; his tongue is slightly coated, he has a despondent look, and there is some tenderness on pressure over the gastric region. The heart and lungs are normal. Examination of urine negative. One hour after Ewald's breakfast the gastric contents were examined; they were acid in reaction. Total acidity, 160; hydrochloric acid, 80; rennet, dextrin, and peptone present; no mucus.

Diagnosis: Neurasthenia gastrica with hyperacidity.

Treatment: Electricity with Einhorn's electrode, nux vomica, calcined magnesia, bicarbonate of sodium and bismuth to correct hyperacidity, sponge bath every morning, and exercise in open air. The patient was advised to eat meat, milk, and eggs. After I had directed him to eat more albumin, I had him weigh his food for a few days, in order to determine how much food he was eating per day. He ate on an average 160.89 gm. of albumin, 684.17 gm. of carbohydrates, and 93.93 gm. of fat per day.

160.89 × 4.1 = 658.74 heat units produced by albumin.
684.17 × 4.1 = 2,805.09 " " " " carbohydrates.
93.93 × 9.3 = 874.54 " " " " fat.

4,338.37 heat units produced per day.

My patient weighs 119 pounds, or 52,024 gm.; 52,024 ÷ 1,000 = 52 kilo, weight of patient; 4,338.37 ÷ 52 = 83.43 heat units per 1,000 gm. As 2,500 is the average number of heat units produced with proper food by the body per day, one can readily see that my patient was eating entirely too much food, especially of carbohydrates, thereby producing 1,838 heat units above the average. Since the patient has had his diet corrected and has been placed under treatment, he has shown marked improvement.

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21 EAST EIGHTH STREET.

PHLEBITIS; A CLINICAL STUDY.[1]

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DURING the past few years several cases of chronic phlebitis have been under treatment, with results so beneficial as to suggest that a report of them may be of interest to the members of the profession.

The first case, E. L. S——, reporter, aged thirty-five years, male, had a varicose condition of the veins of the left lower leg. The fact that this patient suffered more or less from chronic constipation no doubt contributed to the untoward result. His occupation necessitated much standing and walking. A localized inflammatory action was set up, with formation of a thrombus in the external saphenous vein at the junction of the lower and middle third. Treatment was instituted by means of lead lotions, the patient meanwhile continuing at his usual avocation. Pressure was subsequently applied, *i.e.*, a bandage from the ankle to the thigh, by the direction of the attending physician. As a result a coagulum was released, forming an embolus, which drifted into the circulation and found a resting-place at the junction of the femoral with the popliteal vein. He was first seen twenty-four hours after the application of the bandage; was then unable to stand or walk, and the leg was swollen, painful, and weak. Rest in bed, with attention to the bowels and general health, was prescribed; and some ten days later, although walking with diffi-

[1] Read before the American Electro-Therapeutic Association, eighth annual meeting, September 13-15, 1898, Buffalo, N. Y.

culty, he was able to be upon his feet and to come to the office for treatment.

In January of 1898 a second case, that of H. R. H——, lawyer, aged thirty-eight years, male, came under observation. His general health had been always good. He contracted typhoid fever in October, 1896, after a hard summer spent continuously in the city. The attack, a severe one, was complicated by shingles, and between the third and fourth weeks a phlebitis of the right leg developed. It followed the usual course, presenting typical symptoms. The leg was very much swollen and at first extremely painful. In addition to his enforced recumbency, lead lotions and wrapping in cotton wool were used. Convalescence from fever was finally established, and he was able to leave his house first in January, 1897. At that time the leg was swollen, stiff, especially at the knee-joint, and uncomfortable, but not acutely painful. He came under care January 15, 1898, just a little over a year after getting up from the fever. At no time in his life had there been any varicosities of the veins. During the year the entire leg was implicated, the trouble extending from the ankle to the junction of the thigh with the body, constantly swollen, worse at night, unwieldy and uncomfortable, and it was with the greatest difficulty he could walk or stand. A silk stocking, extending from the ankle to above the knee, was ordered when he first got up; and, after being worn for a number of months, was replaced by one from the ankle to the knee. Bicycle exercise was advised by his physician, but was not undertaken, owing to the bulk and extreme stiffness of the leg, as well as the constant discomfort experienced. A stationary bicycle was placed in his house, however, upon which he exercised to the best of his ability. Had he been a man of leisure, it is possible that by careful gradation of time and strength there might have come a time when sufficient bicycle exercise could have been taken to accomplish some good. At the time of coming under care the leg was practically in the same condition as for the preceding year, *i.e.*, stiff, swollen, worse at night, larger than the other (see measurements), and with constant sense of discomfort. Walking and standing increased all the symptoms, especially the swelling, and the legs could be crossed only by raising the affected one with the hands over the other. A silk elastic stocking worn constantly from ankle to knee was removed with difficulty at night, owing to increase in swelling.

Physical Examination.—Inspection: The leg was apparently much larger than the other; the skin was shining, purplish-red in color, inactive in appearance; there were no varicosities.

Palpation: The temperature was lower than in the good leg; the skin was tense, with no elasticity or flexibility of tissues, but a brawny feel with sense of infiltration and matting conveyed to the examiner's hand. There was no pitting on pressure.

Measurements taken January 18, 1898: Right ankle, 12 inches; left, 11½ inches. Right calf, 15½ inches; left, 14½ inches. Above right knee, 16½ inches; left, 15 inches. Middle of right thigh, 21 inches; left, 19½ inches. Upper right thigh, 22½ inches; left, 21¼ inches.

His general health was good, and general circulation fair, with a tendency to cold hands; the skin of the face and body was ruddy in color; well nourished; the appetite was good; there was no stomach indigestion; sleep was good; he had no heart lesion.

A third case, H. D. S——, aged thirty-eight years, male, civil engineer, came under care March 9, 1898. In the autumn of 1896 he had a very severe attack of typhoid fever coincidently with that of the preceding patient. He was up and about for some time before the nature of his illness was recognized, and even after he had a high temperature. The case was regarded as one of great gravity, and in the fourth week phlebitis developed, involving both legs. At first pain and swelling occurred in both upper limbs, which gradually disappeared, but later suddenly returned, with cramping and severe pain under right knee. The entire limb was subsequently involved, and the left from ankle to knee. The usual symptoms were present, and the same measures were resorted to as in the preceding case.

No improvement was made, and later on the actual cautery was used to the right limb from ankle to thigh, and left from ankle to knee. Convalescence from fever was gradually established, but without improvement so far as the phlebitis was concerned. When first up he walked with crutches, but left the hospital December 26, 1896, walking with the aid of two canes.

On January 6, 1897, he went to Lake Saranac in the Adirondacks by the advice of his physician, who directed that he should take active exercise, *i.e.*, walk and skate. A few days after arrival at Lake Saranac he went out skating, but soon became very tired and returned to the hotel with great difficulty. In an hour or two his legs were greatly swollen, unwieldy, and painful. Medical assistance was summoned, and he was told to keep absolutely still, with his legs in a horizontal position. The more acute manifestations of the trouble passed under this *régime*, and he shortly afterward returned to New York and to the physician who had attended him during his attack of fever, who directed him to get a battery, which he did, and used it, but without any knowledge whatever of what he was doing or why he was doing it, as no instructions were given him. In the summer of 1897 there were at different times minute ulcerations on both legs. In December, 1897, becoming impatient of restraint, he removed the elastic stockings which had constantly been worn up to that time. As a result there was breaking down of tissue midway between the knee and ankle, and about two inches from the tibial border on the inner aspect of the right leg. The stockings were at once resumed, and this spot after a time healed under the use of hydrozone, but no gain was made, so far as swelling, enlargement, and disability were concerned. His businss kept him pretty constantly on his feet, and also called him frequently from the city, delaying the beginning of treatment; but he finally came under care through the preceding patient.

Physical Examination: Silk elastic stockings were worn from ankles to knees on both legs, on account of weakness of the blood-vessels and œdema. The skin was of a dull purplish color, inactive in appearance; there were no varicose veins. There was a brownish spot at the site of the former ulceration, as large as a silver twenty-five-cent piece, while on different parts of both legs were small brownish spots, the site of minute ulcerations and abrasions, due to bruising and breaking the skin. The temperature in both legs was less than normal; there was less tension of the skin in this case than in the preceding one, but the same brawny feel with sense of infiltration and matting conveyed to the examiner's hand. Pitting on pressure marked both legs, especially along the tibial border, the inner aspect of the right leg, and about the former ulcerated area. No measurements were taken. There was constant stiffness, with a sensation of clumsiness and discomfort; the patient found it difficult to get around, and was unable to move quickly or with normal accuracy. His general health was good; the circulation, other than in the legs, was good; the skin of the face and body was of a good ruddy color; he was well nourished, and his appetite good; he had stomach indigestion, with gaseous eructations; slightly irregular bowels; sleep was good; there was no heart

trouble. The patient was of extremely nervous temperament and intolerant of all restraint. Coincidently with the illness of these two patients, a mutual friend had typhoid fever and also developed phlebitis before convalescence was established. From information received concerning his case, it is inferred that resolution took place promptly and that the patient made a very good recovery.

An inflammation of the veins—phlebitis—may involve chiefly the external layers—periphlebitis; or the internal—endophlebitis; or, as is very frequently the case, the entire wall may be affected. It may be caused by the presence of a thrombus, by injuries, or by infectious inflammation of the surrounding tissues. Thrombosis of the vein, either primary or secondary, is a very constant accompaniment of phlebitis. An acute phlebitis may commence as a suppurative periphlebitis or as a result of inflammatory processes about the vessels. The outer layers of the venous walls are congested, swollen, infiltrated with serum and pus. The inner coats may become infiltrated with pus, or they may be necrotic and disintegrate. Under these conditions a thrombus is constantly formed, which may for a time stop circulation and keep the products of inflammation and degeneration from mixing with the blood; but, on the other hand, the thrombus itself is prone to disintegration, and thus the exudations and decomposing fragments of tissue may enter the circulation. Or, owing to the presence of irritating or infectious material within the veins and the formation of a thrombus, the inflammatory process may be at the commencement an endophlebitis. But usually if the inflammation is severe the entire wall of the vessel will eventually be involved. The pus cells in both cases come without doubt from emigration from the vasa vasorum. An acute phlebitis may terminate in the absorption of the thrombus and the return of the vein to its normal condition; in the obliteration of the vein; or portions of the thrombus may become detached and find their way as emboli into the various portions of the body. In a chronic periphlebitis there may or may not be thrombosis. In the periphlebitis there is a thickening of the outer coats by formation of new connective tissue. The inner coats may also be thickened, with an additional thickening of the surrounding tissues coalescing with the walls of the vein and with a marked dilatation of the vasa vasorum. This is characteristic of a periphlebitis. An endophlebitis is characterized by an increase of connective tissue in the intima, which may obliterate the lumen of the vein itself. In chronic endophlebitis, which is rarer, the circumscribed patch of new connective tissue may undergo fatty or calcareous degeneration.[1]

In phlegmasia dolens, or milk-leg, the pathological changes are of the same nature as have already been indicated, the condition being that of a true phlebitis. In the cases just detailed the first was due primarily to the varicose veins and consequent changes in the endothelium, while the other two cases were due to an infection dependent upon the pathological changes of typhoid fever.

Arteritis is an occasional complication of typhoid fever, and is generally met with toward the end of the febrile period; but venous thrombosis, a result of the weakness of the heart's action, is more frequently observed. It occurs generally during the convalescence of cases which have run a severe course, and usually affects the veins of the lower extremities. Both femoral veins have been obstructed at the same time. Loomis[2] states that venous thrombi frequently develop in a protracted case of fever, rendering the prognosis unfavorable. The danger always exists of a portion of the thrombus becoming detached and producing an embolism of the pulmonary artery. Hutchinson[1] reports that all of his patients recovered from the complication of phlebitis, but does not mention the number. He reports, however, two deaths out of thirty-one cases collected by Liebermeister, and three out of seventeen collected by Murchison.

While the slowing of the circulation is given as the direct cause of the formation of thrombi, changes must be established in the endothelium before coagulation can take place. To reiterate, then, the general causes of a thrombosis are those which produce an abnormal condition of the endothelium, with a rapid destruction of the white blood corpuscles or a stagnation of the blood. In a phlebitis resulting from typhoid fever or the puerperal state, the morbid condition of the endothelium proceeds without doubt from an infection. These changes in the endothelium may be set up in the first instance by the action of the typhoid bacillus directly, or from the absorption of toxic substances which are produced as the result of the life processes of the bacteria at the point of their greatest accumulation and activity.[2] Infection from the pyogenic cocci produces many of the inflammatory complications. In the puerperium the morbid changes are without doubt set up by the absorption of septic material.

Thrombosis usually occurs during the third and fourth weeks of typhoid fever, sometimes earlier, and the veins most usually affected are the femoral and the sinuses of the dura mater. Their formation is attended with a rise of temperature and increased prostration. With thrombosis of the femoral vein there are pain and tenderness along the course of the vein and œdema of the leg.[3]

In establishing the electrical treatment of phlebitis, there are two things of importance to be considered. First, the nature of the pathological changes within the vessel itself, *i.e.*, the presence of vegetations or possibly of a thrombus along the course of the vein, as well as the presence of inflammatory exudates, more or less well organized, according to the duration of the disease, not only in the coats of the veins, but also in all the tissues of the legs; and second, to the selection of a current which from its physical properties and physiological action will best combat this pathology without producing untoward results. It is sufficient to refer to the rôle of muscular contraction and its effects upon the circulation, to appreciate why it is necessary to avoid the use of any measure that will tend to produce abrupt muscular contractions—as, for example, the disruptive discharge from an influence machine, or the sudden excitation characteristic of the slow interruption of an induction coil.

It goes without saying that the fast interruption of an induction coil is not to be thought of, as that produces a tetanoid contraction that tends, with its prolongation, to exhaustion of muscular structure. It is necessary to select a current capable of producing chemical changes, electrolytic and cataphoric, stimulating at the same time the circulation and increasing the activity of the absorbents, in order that the part may be freed as far as possible from the products of inflammatory action.

Physiological experiments show that even with a persistent closure contraction of the continuous current, and with fixed electrodes, rhythmical contractions are established, which, for example, during a closure of from one to two minutes, are less (two to three) with weak currents, and more (five to seven) with stronger currents; and the interval at which the

[1] Delafield and Prudden: "Pathological Anatomy and Histology."

[2] Loomis: "Practice of Medicine," page 678.

[1] Pepper: "System of Medicine," vol. i., page 294.

[2] Delafield and Prudden: "Pathological Anatomy and Histology," page 248.

[3] Delafield: "Lectures on Practical Medicine and Pathology."

waves followed varied between four and twenty seconds.[1] This is true not only of cardiac but of smooth muscular structures and under certain conditions of striated skeletal muscle as well. While it is true that in all quickly reacting and quickly conducting contractile substances the effect of excitation, as is expressed by change of form, is most marked when the current is made or broken, there is no doubt that the electrical current during its entire closure produces changes in the irritable substance—fundamental on the one hand to excitation, and on the other to antagonistic inhibitory processes.[2]

With a closure contraction such as would be maintained in the treatment of phlebitis, although these rhythmical contractions are going on throughout the interpolar circuit, there is no sudden violence done capable of loosening any fringe-like vegetation or thrombus, for that matter, from the wall or along the course of the vein itself. But by the action of the current a stimulus is imparted to the circulation, establishing relief from blood stasis and the return of fresh arterial blood to the part; while from the nature of their anatomical distribution there is imparted to the absorbents a continuation of this stimulus, resulting in increased functional activity. With the establishment of improved circulation, the danger of an obstruction to the venous circulation is minimized, and the indication for the application of a current capable of producing gross muscular contractions, in addition to the physical and physiological action of the continuous current, can be safely met. The selection of that current must be made with the form of its graphic curve and its time rate in view. It must have an unvarying rate of change and a graphic curve capable of producing long, wave-like, and undulatory muscular contractions capable of doing work in the tissues without violence to them. The sinusoidal current, because of the perfect equality of its negative and positive variation, fulfils these conditions best.

In Cases II. and III. the continuous current was used, supplemented by the sinusoidal. The indifferent contacts at first were made by placing the foot of the second patient and the feet of the third patient in a warm saline bath, one per cent.; temperature, 100° F.; while the active contact, an ordinary hand electrode, was carried to and fro over the surface of the entire leg, especially along the course of the veins involved, by the operator. Later on in the course of the treatment the indifferent contacts were placed in both cases over the lumbar enlargement and to the lumbo-sacral plexuses, in order that the stimulus might be applied directly to the origin of the nerve supply. This is preferably the correct technique.

"The fact that every nerve fibre is naturally connected with an organ of excitation and a peripheral organ renders it impossible that any direction of conductivity, other than from the former to the latter, should produce a recognizable effect."[3]

The indifferent contact was connected to the positive pole, while the negative pole became the acting one of the conducting circuit, because of its well-known action upon inflammatory exudates. In the first two or three applications a dose of eight milliamperes was used. The greatest care was taken not to break contact at any time during the treatment, that sudden contraction of the skeletal muscles might be avoided. When this is carefully done there is no muscular movement, save such as is characteristic of a persistent closure contraction, as is demonstrated by the absolute steadiness of the milliamperemeter needle. If this fluctuates, the fault lies with the operator. The immediate result of the first treatment in both cases was an improvement in the circulation, evidenced by a disappearance of the tension and dull purplish color of the skin, and also by the softer and more yielding character of the tissues communicated to the examiner's hand.

In the third case a localization was made over the area of former ulceration, with the hope that the tissues might be more nearly restored to their normal integrity, as by the chemical action of the current, electrolytic and cataphoric, an excess of fluids and salts so necessary to the nutrition was thus brought to the part, with the flow of fresh arterial blood. Daily treatments were given at first, lasting ten minutes. The dose was gradually increased from the minimum, eight milliamperes, to ten, fifteen, and finally twenty milliamperes. Beyond this it was not necessary to go. The average electro-motive force as indicated by the voltmeter was twenty volts. In both cases there was steady improvement. After four days the continuous current was supplemented by a sinusoidal of low frequency, in order to secure muscular contractions at about the normal rate of muscular response. In these, as in all other applications, the sinusoidal current was regulated with very great nicety through a controlling resistance, and applied with the same care as the continuous current. The arrangement of the electrodes was the same in every instance, and the time of application for the sinusoidal current varied from three to six minutes for each leg for the patient in whom both legs were affected, and from six to ten minutes for the patient in whom only one leg was involved. The contractions thus set up were profound and far-reaching in their effect, but of a gentle, undulatory character. Treatments were given daily for the first eight days, and after that from three to four times a week, while later on but two, and then one application was made during the week. The treatment was discontinued after three and one-half months in the second case, and after three months in the third case. Improvement established with the beginning of treatment was maintained, characterized by a more nearly normal circulation, increased elasticity of the walls of the veins, disappearance of the exudates, infiltration and binding down of the tissues, and diminution in size. In the second case, after one week's treatment, the patient, who had been unable to walk, stand, or take physical exercise, played golf for the greater part of a day, and walked ten miles during the progress of the game. On the following day, at the conclusion of his treatment, he remarked that so far as feeling was concerned he could discern no difference between the two legs. The stiffness in the knee disappeared under the first treatment. In the third case the same progress was made as in the second, with improvement of the circulation from the beginning, especially marked by contrast about the area of former ulceration on the right leg. In the course of the first ten days to two weeks, this patient reported his ability to get around much more quickly and accurately; that whereas in moving about before he was very clumsy, handling himself with difficulty, he was then able to move about in a perfectly normal fashion.

After the first ten days to two weeks' treatment, the stockings were removed, gradually in the beginning—that is, for part of the day, and after a few days entirely. At the end of a month both patients were advised to supplement their treatment by bicycle and other exercise. As in all chronic cases the improvement in the beginning was much more marked than subsequently, due to the chemical action of the current upon the less fully organized products of inflammatory action.

A much longer time is required to secure a marked effect upon the more fully organized products of inflammation, which, because of further pathological change, are less susceptible to the action of the cur-

[1] Biedermann. "Electro-Physiology." vol. i., pp. 197, 198.
[2] *Ibid.*, p. 313. [3] Biedermann, vol. ii., p 56.

rent. For their removal persistent and frequent applications are necessary. Improvement continued, and at the end of three months' treatment both men said that they appreciated very little difference from the normal, save that prolonged exercise produced fatigue more quickly than formerly. The second patient is now able to ride a bicycle from nine to twenty miles without any trouble, and both report that they have ninety per cent. better use of their legs than when treatment was instituted.

Early in August the third patient had an attack of rheumatic sciatica, from which, however, he promptly recovered under appropriate medication and his electrical treatment. Upon recovery he began taking exercise much more actively than had been possible since his attack of typhoid—rowing, swimming, playing tennis, walking, etc.—and decreased his weight twelve pounds in two weeks. While he was much better for this in a general way, there was too great a strain upon the right leg, and a considerable transudation took place in the lower two-thirds of the leg, especially along the tibial border and about the ankle. The fluid, as well as the discomfort caused by its presence, disappeared immediately after treatment, but returned at night, after he had been on his feet. The elastic stocking for his right foot and leg was again resumed, and after three successive treatments the swelling had entirely disappeared, and at this writing (September 11th) the patient is entirely comfortable, but remains under care.

At no time since removal has the elastic stocking been resumed by the second patient. Such are the results obtained after the pathological changes had existed for thirteen and fifteen months respectively. If these patients had been placed under skilled electrical treatment in the beginning of their trouble, before the products of inflammatory action were organized, much more complete restoration to the normal would have been established. It is impossible for pathological changes to go on so long as in these two cases without there being an effect upon the structure of the veins themselves, with loss of elasticity, which would have been obviated by early treatment.

In the first case, owing to a lack of time on the part of the patient, the treatment was established by means of the Franklinic current. Here there was a roughening of the inner coats of the vessel as well as a recent thrombus, and the greatest care was taken that no fragment from the roughened portion of the endothelium or coagulum should become detached and be allowed to drift into the circulation.

Bearing in mind the cardinal principle in the treatment of phlebitis, viz., that the form of electrical energy used should be expended in such a way as to avoid sudden and violent muscular contractions, therefore a careful localization with the convective discharge was made to the lumbar and sacral plexuses and to the entire surface of the affected leg, while the disruptive discharge was used for the opposite leg and the upper extremities.

It must not be lost sight of that with the convective discharge it is possible to do work in the tissues without gross muscular activity as a manifestation. "When we connect a sphere to a terminal of an electro-static machine having an electromotive force of, say, 200,000 volts, it will receive a comparatively large quantity of electricity, which will be a certain fraction of a coulomb. Suppose the charge connected to the sphere be $\frac{1}{1.000.000}$ of a coulomb, delivered at a pressure of 100,000 volts. In that case the work delivered to the sphere would be equal to 0.1 of a joule, or 0.738 foot-pound. This energy is received by the air and ether surrounding the sphere, and held there during the maintenance of the charge. It is distributed through the room, although not equally. A certain fraction of a joule is charged in each cubic inch of space, the greater amount being in the immediate neighborhood of the sphere, and lessening with the distance from the same."[1] "Just the same thing happens with the patient on the insulating platform, connected either directly or indirectly with the prime conductor. The air and ether about him receive the energy, and the work in this instance is delivered to the patient, representing work of so many foot-pounds or fraction thereof, according to the electro-motive force and coulombs furnished. The charge is passed into the ether by electric displacement. This takes place along defined lines or curves, which are called lines or curves of electro-static flux."[2] It will be readily seen, therefore, that there was work done in the tissues of the affected leg of definite foot-pound value, although there were no muscular contractions set up. The patient gradually improved so as to be able to walk more and more from time to time, and finally to dispense with his cane; and when last seen, some months after the discontinuance of treatment, he was very well and had had no further trouble. The progress, however, was not so rapid nor satisfactory as in the other cases.

This paper is presented with the hope that it will call the attention of the general practitioner to the value of electrical treatment in phlebitis, and the necessity for its early application. The treatment should be instituted in the acute or subacute stage, if non-suppurative, by means of the most careful administration of the continuous current. By the cataphoric action of the current, the transudation characteristic of a beginning inflammatory action can be overcome, while the establishment of circulatory changes and increased activity of the absorbents renders it impossible for exudative material to be thrown out, either on the inner coats of the vessels, externally, or, as ultimately happens, in the tissues surrounding the vessels. In the early stage a minimum expenditure of energy only is indicated, and the dose should not exceed five milliamperes, while a fraction to a single milliampere may suffice. The same care, and even greater, should be taken to prevent violent muscular contractions, as has been pointed out in the treatment of chronic phlebitis. For the treatment of these cases, as in all medical work, for that matter, the controlling resistance should be arranged in shunt, and an absolutely accurate instrument of precision used to measure the dose. From the results obtained in the management of exudative inflammations, the opinion is justified that if these cases are skilfully treated in the acute or subacute stages there will be a lessening of the disabilities incident upon the products of organized inflammatory action.

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Boric Acid and Iodoform in Stomatitis Ulcerosa.—A. Kissel describes a method which in his hands has yielded better results in the treatment of ulcerative stomatitis than those which have hitherto been described. The customary chlorate of potash is discarded, and systematic irrigation with boric-acid solution instituted; this is seconded by rubbing the affected spots with iodoform. In case this does not effect speedy amelioration of the symptoms the thorough use of the sharp curette is indicated, and then the boric acid and iodoform are usually sufficient to complete the cure.—*Archiv f. Kinderheilkunde*, vol. xxvi.. Heft 1 and 2, 1898.

[1] Houston and Keneally: "Electricity in Electro-Therapeutics."

[2] Margaret A. Cleaves, M.D.: "Franklinization as a Therapeutic Measure in Neurasthenia," Journal of the American Medical Association, November 14, 1896.

THE SPONTANEOUS MOTION OF THE RED BLOOD CELLS.

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In describing cell activity, and notably that which pertains to the spontaneous motion of the red cells of the blood, one is confronted with the difficulty of accurately describing what that motion is. That it is not always a true amœboid motion has, I believe, been illustrated in previous writings. In fact, there is one essential difference between the pseudopodium (sarcode or protoplasmic prolongation, flagellum) of the white and red cells of the blood, and that is, that the sarcode prolongation of the white cells may retract itself within the cell body like that of a true amœba, while the sarcode prolongation of the red cells usually moves from side to side. Cabot deserves some credit for having designated the motion of the red blood cells a "pseudo-amœboid motion," although he did not emphasize this peculiarity. But aside from this peculiarity in the sarcode prolongation of the red and white blood cells, the former may exhibit inherent contractions and changes in contour, which cannot be distinguished from those taking place in a white cell. The term "pseudo-amœboid motion" is not acceptable, however, because it does not explain what the movements really are, and may convey a radically wrong impression—and this is, that the cell does not possess spontaneous movement. If some of our great physiologists would awaken from their skepticism and investigate for themselves, I believe they will confirm a few things I have mentioned in relation to this cell. This cell, like the seminal cell, offers the best opportunity for the study of cell life. What I have described as the spirillum-like contractility of the red blood cell, occurring at times in pernicious and severe anæmias, is distinguished from the spirillum of Obermeier, in having a less spiral movement than this parasite, which occurs in a disease which has the clinical characteristics of relapsing fever.

SOME THOUGHTS ON THERAPEUTICS.[1]

By J. E. PARRISH, M.D.,

MEMPHIS, MO.

Therapeutics includes all that relates to the art and science (if we may call it a science) of the application not only of drugs and medicines for the alleviation or cure of disease, but of all other agents which may aid in bringing about the same result. As you all are aware, therapeutics is divided into two classes, to wit, natural or nature's cure, and applied therapeutics. Potter in his "Materia Medica and Therapeutics" says there is no more completely established dogma in science than that the living organism is in itself adequate to the cure of all its curable diseases. This natural law, he says, enables the homœopath to relate his sugar cures, aids the medical skeptic to hold to his infidelity, and helps all physicians out of more close places than most of them are willing to acknowledge before their *clientèle*. It seems to me that the doctor's argument is a little weak when he speaks of natural therapeutics helping the medical skeptic to hold on to his infidelity. He speaks of natural therapeutics as truth, and then calls the believer an infidel. It is paradoxical at least. Applied therapeutics embraces the application of agents foreign to the living organism, for the purpose of aiding nature to restore the body to a healthy condition. We can but acknowledge that empirical therapeutics has been largely in the ascendency in all of our treatments of diseased conditions in the past. I mean by that they have been used for the reason that they have been apparently successful in similar diseases in which they have been tried. Those who use this method claim for it that it is the result of long experience and close observation at the bedside. If we but notice the large number of new medicines that are being constantly brought to the notice of the profession through the journals and otherwise, we find their claims are nearly all empirical and are not that of rational therapeutics, which is brought about by the study of the actions of the medicines on the healthy subject, as well as to ascertain how their actions are produced in a pathological condition.

How many are there who prescribe medicine in a rational manner, knowing their specific action on the human economy; that they stimulate by paralyzing vasomotor centres, thereby dilating the arterioles; that the arterioles are contracted by irritating the nerve centres; knowing that each drug has its own specific action, and that when combined each may modify the action of all the others. That there has been a great advance in the knowledge of rational therapeutics within the last few years all will admit. But with all this advance in materia medica and therapeutics, have physicians been correspondingly benefited by the more successful results in their modes of treatment in diseased conditions, and do they feel that science has done so much for us that we should now feel perfectly content and wish for no more? Whenever I begin to feel that I have made some progress in the administration of medicines for the cure of disease, then it is that the old "*vis medicatrix naturæ*," nature's cure, comes up before my mind, and, as Potter says that it is able to cure all curable diseases, I then ask myself the question, How much has the medical profession gained in its power to control the ills that humanity is heir to? I am far from being satisfied with my knowledge and power over diseased conditions in either controlling or curing them, and would be very willing to admit my ignorance if I was the only one who failed in this respect; but unfortunately there are others. When we were only medical students and listened day after day to learned professors, who told us that this group of medicines was to be given in a certain class of diseases, and that group for another class, and so on to the end of the chapter, if used with judgment and in their proper order, the impression was made on our minds, as we listened, of wonder and admiration at the ease with which he recounted these remedies that so seldom failed to land the patient on the border land of health; the few who accidentally went down the dark river of death through the ignorance of the medical attendant was lost to us through the great admiration we felt for the professor's wonderful ability, and we thought to ourselves, Could it ever be possible for us to be so learned and so successful? Well, I believe the most of us will acknowledge that we are not so successful as our professors were when we were students, for we then thought they all got well if the professor was only called in time.

That our present knowledge of the application of remedies and their results is not satisfactory to the medical profession, I think all will admit. Then what is the remedy? If, as Potter says, nature is able to cure all curable diseases, then of course we cannot benefit the incurable ones, neither can we be the agents by which they might be restored to health. I do not believe Dr. Potter's declaration or dogma: neither does he. If he did, why was it he gave so much of his valuable time writing and compiling his "Materia Medica and Therapeutics" until it has now reached the fifth edition? He may take it for granted

[1] Read before the Eastern Iowa Medical Association, at Keokuk, Iowa, November 17, 1898.

that physicians are generally gullible; if so he has succeeded to his entire satisfaction. I do not believe that nature is able to cure all curable diseases. I know it is not able to do so, but often needs assistance from us, and that is what we should be able to do to the utmost. Why do we so often fail? Are there not limits to the advance in medicine? I will answer that there may be, but who will dare to draw the limit line, and say thus far and no farther? In my judgment there are two reasons for our frequent failures: First, we must know the disease and its nature, also the progress it has made on the patient; and then we must know the remedy if there is one. With all our boasted advance in diagnosis and therapeutics, we still have much to learn in both these divisions. The number of causes capable of producing bodily ailments seem to be endless. Some are caused by mechanical, some by chemical causes, and a very large number seem to be caused by micro-organisms. Our pathologists are now confusing us more than ever by telling us that the tubercle bacillus may cause pneumonia; that the microbes of erysipelas may attack the lungs also, and then we have erysipelas pneumonia; or that typhoid-fever germs as well as diphtheria germs may also find their way to the lungs and cause pneumonia, and many more too numerous to mention. There seems to be no end to these different causes of disease—and is it any wonder that Osler declares in his work on the practice of medicine that there are no known drugs that are capable of producing any special change in pneumonia, so far as a cure is concerned, but that it terminates by crisis independent of treatment? I am sure he is wrong, and that it does not always terminate by crisis, but that the change from worse to better is frequently very slow indeed in taking place. Is that not the experience of many who have practised medicine any length of time? Whether or not this declaration be true, it only shows our weakness and inability to control that class of ailments. We must be able to determine the class to which each individual case belongs, and then to know the remedy or medicine that has the power to control it, if there is one. Will we ever attain that knowledge? I am very willing to admit that to be a debatable question; but I do believe that when the Great Architect of the universe placed man here, he surrounded him with all that was necessary for the preservation of his health up to the time limit of his life, whatever that may be. I do not believe that we are surrounded by any controlling influence to prevent us from violating the laws of nature, or of abusing our bodies, or that there is a law, either natural or divine, that will prevent us from transmitting our diseases to our children, who must suffer because of the diseases of parents, if not for their sins.

If we accept Dr. Potter's "*ipse dixit*" and Dr. Osler's opinion, the future looks a little dark, I am willing to admit. But we need only to compare the past with the present and we find a great light surrounding us, where only a few years ago our forefathers groped along in semi-darkness. If we continue to advance in knowledge for the next fifty years as fast as we have in the last half-century, I hope we may feel like the young lady who had just graduated from boarding-school, with the exclamation, "Thank God, it is finished!" but the great wonder is that one head is able to contain it all.

Nephrectomy while the opposite organ is occupied by calculus is fraught with the greatest danger to life; whereas nephrectomy, after the opposite kidney has been freed of stone, will probably be followed by recovery from the operation, and possibly by very good health for many years afterward.—Henry Morris.

Progress of Medical Science.

The Piano and Neuroses.—Dr. Waetzold (*Journal d'Hygiene*, January 5, 1899) thinks that the chloroses and neuroses, from which so many young girls suffer, may be largely attributed to the abuse of the piano. It is necessary, says the author, to abandon the deadly habit of compelling young girls to hammer on the keyboard before they are fifteen or sixteen years of age. Even at this age the exercise should be permitted only to those who are really talented and are possessed of a robust temperament. Dr. Waetzold shows that out of one thousand young girls studying the piano before the age of twelve years, six hundred were afflicted with nervous troubles later on, while the number having affections of this kind was only two hundred for those who commenced the study of the piano at a later age, and only one hundred were affected among those who had never touched this instrument. The study of the violin produces even more disastrous results than those attributed to the piano.

The Diagnosis and Localization of Pulmonary Tuberculosis by Means of Potassium Iodide.—Wells (*Journal of the American Medical Association*, February 4, 1899, p. 216) records the results of a study of the use of potassium iodide in small doses in the diagnosis of various forms of pulmonary disease, and particularly tuberculosis. It has been shown that when this drug is administered its elimination takes place by the bronchial mucous membrane, with increased production of mucus, cough, and râles. Wells found that in health, and in the absence of disease of the lungs, the iodide in small doses caused in some cases diffused mucous râles. Comparable results were noted in cases of non-tuberculous disease of the lungs. In cases of suspected or demonstrable pulmonary tuberculosis, however, the development of râles after the administration of iodide made evident the locality and extent of the disease.

Filaria Demarquii in the West Indies. — In a brief communication to the *British Medical Journal* for January 21, 1899, p. 145, Galgey, colonial assistant surgeon at St. Lucia, reports that filaria Demarquii is to be found in the blood of many natives of that island, he having himself seen several specimens of the worm, which is smaller than the filaria nocturna. The body is long and slender, with a sharp, tapering tail. The head is blunt, and in a few specimens a small, fine, filiform projection was noticed, like the sharp tongue of a serpent. The appearance of filaria Demarquii under the microscope is described as exceedingly graceful and attractive, contrasting favorably with the thicker and coarser filaria nocturna, at least of the West Indian variety. The size of filaria Demarquii varies in different individuals, and sometimes, even on the same slide, worms of several sizes are found. All have the characteristic sharp tail, but some are exceedingly long and slender, others medium-sized, and others again very tiny, approaching in size filaria Ozzardi (British Guiana.) From the difference in bulk observed in the sharp-tailed worm (which may be the result of differences in the mode of preparation), it is believed that all are filariæ Demarquii. Some examinations seemed to demonstrate that filaria Demarquii has a periodicity of appearance in the blood, being found in some instances by night when they could not be found by day. Like filaria Ozzardi, filaria Demarquii is unprovided with a sheath. Filaria nocturna is said to be exceedingly rare at St. Lucia, and elephantiasis quite uncommon. The pathological rôle of the filaria Demarquii remains to be investigated.

Diphtheria Antitoxin and Mortality. — Riese (*Arch. f. klin. Chir.*, Bd. 57, Heft 4) in one hundred cases of diphtheria treated with antitoxin found a mortality of eight per cent. Eighty-two cases were examined bacteriologically and in seventy-one the Klebs-Loeffler bacilli were demonstrated; in the remaining instances the clinical diagnosis was unquestioned. Fifty-six patients were tracheotomized, of which four died. This makes a mortality of seven per cent. for those operated upon, and nine per cent. for the non-operated cases. The best results were obtained from those treated with serum until the second day. The tube was removed on the fifth day. In general, large doses of serum—especially from the third day of the disease—should be injected in severe cases of toxic diphtheria and in mixed infection.

Gonorrhœal Endocarditis. — Dr. Bjelogolowy (*Wratch*, February, 1899) draws the following conclusions: (1) The gonococcus, like other pyogenic bacteria, may be the sole cause of a severe general gonococcic pyæmia, whose clinical course reminds one very forcibly of the ordinary pyæmia. (2) Once lodged in the circulation, the gonococcus may give rise to an ulcerative endocarditis, with the clinical picture of a malignant endocarditis. (3) During the course of gonorrhœa a gonorrhœal endocarditis may occur without a preceding affection of the joints or any other gonorrhœal complication. (4) A positive diagnosis is possible only by means of a bacteriological examination, and this examination is all the more to be desired, inasmuch as the question of mixed infection in gonorrhœa is still very little understood.

Successful Cæsarean Section for Tumor of the Uterus Complicated by Twin Pregnancy.—Earle, government medical officer at St. Lucia, Jamaica, reports (*Lancet*, January 14, 1899, p. 86) the case of a black woman, about thirty years old, whom he found in labor for two days, with the abdomen greatly distended, uterine contractions being strong and frequent, but delivery not progressing and the patient in great pain. Vaginal examination disclosed a large, firm, elastic tumor, occupying the pelvic inlet and projecting into the upper part of the pelvic cavity, with a space of about an inch between the anterior surface of the tumor and the symphysis pubis, and a similar space on each side between the tumor and the pelvic brim. The tumor was fixed and could not be moved. The os uteri could not be felt at first, but, on curving the index finger behind the symphysis and pushing it up as far as possible, the os was felt above the pubes, slightly to the left of the middle line. The os was partially dilated and flattened antero-posteriorly, simulating a slit-like opening, and was on a level with the upper border of the symphysis. When the patient assumed the upright position, the distention of the abdomen was most noticeable, and on vaginal examination in this position the os could not be felt with the finger. Immediate Cæsarean section being decided upon, a vaginal douche was given, the rectum emptied by an enema, the urine withdrawn with a catheter, and the abdominal surface thoroughly cleansed and asepticized. Under chloroform narcosis a vertical incision, six inches long, was made in the middle line, from one inch below the umbilicus to about two and one-half inches above the symphysis. A vertical incision was made in the anterior wall of the uterus, commencing near the fundus and extending downward for about four and one-half inches. The membranes were ruptured, and a male child was extracted by the feet, the head being delivered last. It was then found that there was another child in the uterus, situated behind the first, with its head at the fundus and the breech at the lower segment. This was quickly extracted, the head coming first and the legs last. There were two distinct placentas, whose extraction required considerable manipulation, and on whose removal hemorrhage ceased. A large fibroid tumor of the body of the uterus was now discovered, involving the whole of the posterior surface and right side, from the fundus to the cervix, and extending from down behind the cervix into the pelvis. There was also a smaller fibroid on the left side of the uterus, about the size of a small apple. The uterine appendages on either side appeared normal. The uterine tumor was nine inches long, seven inches wide, and five and one-half inches thick. It was pear-shaped, being broader at the fundus and narrower at the pelvic brim. The uterine wound was closed by five large, deep, silk sutures, passed through the uterine wall, and ten small sutures of fine silk through the peritoneum. The parietal peritoneum was brought together by a continuous fine-silk suture, and the abdominal wound was closed by six large, deep sutures, passed through the whole thickness of the abdominal wall, about three-fourths of an inch apart and about one inch from the edges of the wound. Ten small, superficial stitches were then passed through the skin alone, and the wound was completely closed. There was no oozing from the wound after it was closed, and no drainage tube was employed. Recovery was complicated by congestion of the lungs, the abdominal wound healing without any trouble, except that a small amount of pus collected in two of the larger stitches in consequence of tension. The twins were thin, ill-nourished, and weak. The uterine fibroid underwent remarkable and rapid diminution in size.

General Paresis in the Young.—A thorough search through the literature since 1877 has enabled the author, C. Thiry, to bring together the histories of some sixty-seven cases of general paresis occurring in the young, under the age of twenty. In the majority of his cases a neuropathic family history is to be found and syphilis plays an important part, especially in its effects upon the general nutrition of these young cases, which would seem to predispose them to degeneration of the nervous tissues. He shows that the clinical picture resembles that found in the adult, both with reference to the cerebral and the spinal symptoms. The general progress of the disease, the author holds, is so characteristic even in children, that no mistakes need be made in the diagnosis. Remissions he thinks do not occur in the young, and the prognosis is always of the gravest. There would seem to be no special therapeutic measures available. Thorough antisyphilitic treatment, which, according to the author, may be of some avail in the adult type, is unavailing in the young.—*Thèse de Paris*, 1898, and *Gaz. hebd. de Méd. et de Chir.*, 1898, No. 45.

Successful Cœliotomy for Ruptured Mesenteric Artery.—Roughton (*Lancet*, January 14, 1899, p. 89) reports the case of a railway porter, twenty-one years old, who was caught between the buffers of two railway trucks, and who, when examined half an hour later, though collapsed, presented no external mark of injury. The abdomen was rigid and tender, and nothing definite could be made out. After a few hours the man rallied somewhat, but examination of the abdomen still revealed nothing definite. After the lapse of an additional four hours the man was decidedly worse, the pulse weak, and the general condition one of extreme collapse. Some serious abdominal lesion being suspected, cœliotomy was undertaken. Chloroform was administered, and as soon as the patient was under its influence a saline solution was introduced into the median basilic vein. This procedure was continued throughout the operation, the flow being

regulated by the condition of the pulse, two pints in all being injected. The abdomen was opened in the middle line by an incision, five inches long, and when the peritoneum was divided a large quantity of blood escaped. Liver and spleen were found to be uninjured, and the blood continued to well up from among the coils of the small intestine. After a little search it was discovered that one of the vasa intestini tenuis was torn across close to its origin from the superior mesenteric artery. The proximal end of the vessel had become occluded, but the distal end was bleeding freely. Both ends were tied, and the abdominal cavity was sponged out. No other bleeding vessel was found, and no other lesion, so that the abdomen was closed. Recovery was uneventful, and the patient was dismissed after four weeks.

The Toxæmic Factor in Diabetes Mellitus.—As the result of a clinical study, McCaskey (*Medicine*, January, 1899, p. 1) formulates the following conclusions: All cases of persistent glycosuria are cases of diabetes mellitus of varying grade. Diabetes mellitus is a disease of diverse origin, the unity of the clinical picture being for the most part dependent upon the glycæmia and the glycosuria, which are mere incidents, although dominating factors of the disease. Phloridzin-diabetes is not essentially different from clinical diabetes; it renders plausible the assumption of a chemical factor, either as a primary or as an important secondary element in the clinical type of the disease. Normal sugar transformation in the blood, the failure of which is responsible for the glycæmia and the glycosuria, results from the presence in the blood of a chemical product, derived in man principally, if not exclusively, from the pancreas and thrown directly into the blood from the pancreatic cells, without the intervention of a duct. The direct chemical antagonism of this substance by another is no more improbable than such an antagonism of a toxin by an antitoxin. It is probable, on both clinical and experimental grounds, that certain chemical poisons, for the most part of gastro-intestinal origin, but possibly also resulting from faulty tissue metabolism, or as a perverted internal secretion from glands not necessarily ductless, either directly or indirectly antagonize, in whole or in part, the sugar-destroying substance in the blood, thus giving rise to glycæmia and glycosuria, and thus in a certain group of cases either primarily causing or at least exaggerating the clinical phenomena of diabetes mellitus. If further investigation should corroborate the conclusions here provisionally set forth, it would be advisable hereafter to investigate the bacteriology of the stomach and the intestines in cases of diabetes mellitus; and if evidences of virulent bacterial, protozoan, or other parasitic growth are found, these conditions should be met by suitable treatment—not with the expectation of entirely supplanting dietetic treatment, but as an important auxiliary to the latter, possibly rendering its restrictions less severe, with less resulting impairment of nutrition.

Why Should Physicians Study Life Insurance?—Dr. J. T. Craig (*Medical Examiner*, January) makes the following remarks: "To study life insurance from a physician's point of view, we need not exhaust the entire subject of that kind of protection; however, it is a fact that it is becoming necessary for physicians fully to understand this subject in all its details. The physician is not only the medical adviser of his patients, but he is a friend, and in this connection friend means much. He is admitted into their household at all times and under all circumstances. It is necessary for him to know all their environments, and he is called upon for advice in this as well as in physic and hygiene. He knows what condition the family would be in should their bread-winner die or become disabled, and, as perhaps life insurance is their only means of protection, and knowing their circumstances, and what kind would be best for them to take, he should be equipped with a knowledge of life insurance, and know the plans of different companies and associations, in order to be able to advise them what best to do."

Changes which General Paresis has Undergone in the Last Ten Years.—Mendel, in the *Neurologisches Centralblatt*, vol. xvii., 1898, p. 1,035, recurs to this subject, which has been receiving some attention of recent years. From many sides it would appear that some change in the clinical picture is apparent. The present author believes that, as a rule, general paresis with simple advancing dementia is more commonly found now than formerly, and that cases with great impulsiveness and delusions of grandeur are fewer. His statistics show that in and about the year 1880 the typical cases observed were fifty-five in number out of one hundred and eighty instances, while in 1898 of one hundred and ninety-four cases observed only twenty-four were of the classical type. In 1880 only thirty-seven demented cases were observed, whereas in 1898 there were seventy of this kind. He also finds that remissions are commoner now than formerly, and also that the disease is, if anything, on the increase, in which particular its increase among women is to be noted, the proportion in his cases being four to one. General paresis in husband and wife is commented upon as well as the occurrence of paresis and tabes. Thus in seven cases both had paresis; in six, paresis appeared in the husband and tabes in the wife; in three, tabes in the husband and paresis in the wife; in four, tabes in both husband and wife were found. The author suggests that a change in the syphilitic virus might account for the variation in the type, and that some sort of a change in the virus has taken place is held by prominent syphilographers.

Suprapubic Cystotomy. — M. Xavier Delore (*Deutsche Medizinal Zeitung*, January 9th) is credited with the following: That form of suprapubic cystotomy known as Poncet's operation is nothing more than a high incision with subsequent suturing of the edges of the bladder to the abdominal wound. The technique of the operation, according to Poncet, is as follows: First step: Skin incision, vertical and median, six to eight centimetres upward from the anterior edge of the symphysis. Second step: Incision of the linea alba to the same extent. Third step: Seeking the anterior wall of the bladder; retraction of the abdominal wall. Fourth step: Uniting the anterior bladder wall with the edges of the wound, opening of the bladder. Fifth step: Suturing of the edges of the bladder opening to the edges of the abdominal wound. After the operation make thorough irrigation through the urethra and wound in the bladder; cover the wound with iodoform gauze and boric-acid cotton. Catheter and drainage are absolutely unnecessary. If the urine shows a tendency to stagnate in the bladder, then it is justifiable to irrigate in the interval. When the urine is ammoniacal, irrigations are indicated. Indications: (*a*) Temporary cystotomy has for its object drainage and disinfection of the bladder and free excretion of urine; it is performed in obstinate gonorrhœal cystitis, and indeed in every cystitis which responds obstinately or not at all to treatment through the urethra. Furthermore, in certain strictures complicated with fistulæ it is also indicated. (*b*) The definite cystotomy seeks the establishment of a permanent vesical fistula in the hypogastrium. In general it is indicated in all instances in which evacuation of the urine

through the normal route is impossible. It is especially performed in prostatic hypertrophy; in carcinoma of the prostate and in tumors of the bladder with severe hemorrhage or symptoms of an acute infection this operation is also indicated. In advanced tuberculous cystitis, on account of the severe pain and continuous tenesmus cystotomy is indicated. Furthermore, it has been advocated for cases of inoperable carcinoma of the urethra, and for those instances in which following a resection of the urethra and base of the bladder a new outlet for the urine must be established.

Precipitated Sulphur in Diphtheria.—J. A. Forsland has described (*Eira*, vol. xxii., 1898, No. 8) a method of treating diphtheria that he has employed for twenty years with marked success. The diphtherial exudate is to be thoroughly coated by insufflation with precipitated sulphur three times a day, some indifferent gargle, preferably sodium biborate 1:20, being used in conjunction. Under this treatment he states that his mortality has dropped to five per cent., and among his cases many severe ones were treated. The applications diminish the pain, are entirely harmless, easy to carry out, and inexpensive.

The Significance of Oliver's Symptom for the Diagnosis of Aneurism of the Thoracic Aorta.—Prof. A. Fränkel (*Deutsche Medizinal-Zeitung*, February 13th) makes the following remarks: In speaking of Oliver's, or more correctly the Oliver-Cardarelli symptom, we mean a pulsation of the larynx and trachea, which has this peculiarity, that with each systole these structures recede downward and backward when the head is forcibly extended and the mouth closed, and when at the same time the cricoid cartilage is fastened between the thumb and index finger and gently pressed from below upward. The author has devoted considerable attention to this subject in order to answer, first, what peculiarities the aortic aneurism must have in order to give rise to this phenomenon, and, second, whether similar symptoms are not observed in conditions other than aneurism of the aorta. In answer to the first question, the author states that as the result of his experience a systolic downward pulsation of the larynx and trachea must not be expected in all instances of aneurism of the arch of the aorta. This phenomenon occurs most frequently when the aneurism exists exactly at the crossing of the aortic arch and the main bronchus, or when —if the aneurism occurs at the beginning of the arch— there is an adhesion between the aneurism and the anterior wall of the trachea. In the first instance the dilatation must be at the lower part. As to the second part of the question, the author is of the same opinion as Pausini, namely, that the symptom in question must be considered in part a specific one, and that at any rate the mere accentuation of the carotid pulse, *e.g.*, in aortic insufficiency, is not capable of causing this phenomenon. The only pathological condition in which we would perhaps be justified in expecting the production of a similar phenomenon is tumor of the anterior mediastinum. These tumors must occupy the same situation as the aortic aneurism—that is to say, either press tightly against the bronchus by pressure on the arch of the aorta or lie between the lower part of the arch and the bronchus, or finally be united on one side with the trachea, on the other with the convexity of the arch. Thus far Fränkel has observed only one such case, and therefore he assumes that the Oliver-Cardarelli symptom, while not an absolutely positive sign, is still an almost certain symptom of certain forms of aortic aneurism.

Widal's Serum Diagnosis.—W. y. Leube (*Berliner klinische Wochenschrift*, January 30th) makes the following statements: The dilution of a twenty-four-hour fresh typhoid bouillon culture in the proportion of one to ten or one to fifteen is useless. Only in dilutions of one to thirty and one to fifty does the serum of non-typhoid patients give a negative result with certainty, while the serum of typhoid patients often shows agglutination in one to a thousand dilution. The microscopical is far preferable to the macroscopical reaction, the latter often appearing at a later period than the former. If we obtain a positive result, then a diagnosis of typhoid may be made with a certainty which is in direct proportion to the rapidity and strength with which the reaction occurs. The reaction may appear positive in non-typhoid cases when they have suffered from typhoid fever at some previous period not too far back. On the other hand, a negative reaction does not speak against typhoid, inasmuch as in exceptional instances the typhoid serum but slightly exceeds normal serum in agglutination. Furthermore the reaction occurs as a rule on the fifth to eighth day of the disease, exceptionally not until the second or third week, or indeed until convalescence has been established. In a doubtful case the reaction must be sought for from the first day and repeated every second day until a positive result is obtained; then the diagnosis of abdominal typhus is rendered certain.

Diphtheritic Angina.—Given an angina in which Loeffler bacilli have been demonstrated to exist in large numbers, such a throat is diphtheritic and must be grouped with diphtheria, membranous or otherwise. It should be unmercifully isolated, whether it isolates the patient from friends and family or sends the patient into a contagious ward where severe cases of diphtheria are treated. It has been maintained that the placing of such cases among severer ones is an injustice to the patient. Those who have studied diphtheria since the discovery of Loeffler must subscribe to the views brought forward by Escherich. These mild cases of diphtheria must be explained on the ground of immunity. They do not develop membrane and cannot develop severe diphtheria, because in these particular individuals there is a natural or acquired immunity which protects them against the severer manifestations of the disease. If you place them, therefore, in a ward in which there are very severe cases of diphtheria, no more injustice is done to the mild case of diphtheria than would be done to a correspondingly mild case of measles placed in a ward with very severe and complicated measles. On the other hand, these mild cases of diphtheria or lacunar diphtheria, or diphtheria "sine membrana," are capable of communicating fatal or severe diphtheria to others. If we grant the above, which is the result of years of work at the bedside and in the laboratory, the principal arguments of the alarmists fall to the ground. —Henry Koplik.

The Action of Antiseptics on Toxins.—Prof. E. Salkowsky in a series of experiments has developed some interesting facts with reference to the action of the commonly used antiseptics on toxins (*Berliner klin. Wochenschrift*, vol. xxxv., 1898, No. 25). In some experiments to determine what effect the expressed juices of the liver might have on the action of diphtheria toxin, this juice being obtained from rabbits' livers, he discovered that whereas in rabbits the injection of this product mixed with certain proportions of diphtheria toxin seemed to exercise no antitoxic effect, certain portions of the same mixture to which salicylate aldehyde had been added showed marked antitoxic action. Experiments with other antiseptics showed a similar condition of effects. Formalin and carbolic acid showed the same action, and the author came to the opinion that probably most antiseptics might form some chemical combina-

tion with the toxin and thus in a measure change its character. While he showed it to be true for diphtheria toxin only, it might seem, by analogy, that other bacterial toxins might be affected in the same manner. As a suggestion it is hinted that perhaps the action of the salicylates in rheumatism and mercury in syphilis is to be explained along some such line.

Catheterization of the Ureters.—Dr. Kreps (*Deutsche Medizinal-Zeitung*, February 13th) is credited with the following conclusions: (1) Catheterization of the ureters decides in doubtful instances whether a cystitis or pyelitis exists. The analysis of most of the differential diagnostic factors shows under certain conditions its absolute necessity. (2) If renal disease is positively diagnosticated, catheterization of the ureters decides which kidney is diseased or whether both are affected; it is also of great service in those instances in which heretofore the exploratory incision was the deciding factor. (3) In disease of one kidney catheterization of the ureters tells us the condition of the other kidney. (4) The catheterization of the ureters informs us of the existence of any obstruction in the ureters. (5) By its means vesical and ureteral fistulæ may be diagnosticated. (6) In gynæcological and urological operations injury to the ureters may be determined. (7) The diagnosis of a second kidney is made by its use. (8) It may be of therapeutic value. The possibility of an infection cannot be excluded with certainty; however, he who thoroughly understands the method will seldom have cause to blame himself for any harm done in catheterization of the ureters.

The Therapeutic Uses of Heroin.—Heroin is a substitution product of morphine. In animals large doses produce general narcosis with abolition of reflexes and sleep, together with a reduced respiration rate and ultimately tetanic convulsions. Strube has been administering it to consumptives in 0.005 gm. ($\frac{1}{12}$ grain) doses, never exceeding $\frac{1}{8}$ grain per dose, or 0.025 gm. ($\frac{5}{12}$ grains) per day. The result was a moderate degree of hebetude or somnolence, together with freedom from cough for a number of hours. In some cases it was ineffectual and as an analgesic far inferior to morphine. The respiration is reduced to a marked degree, in one instance falling from 52 to 36 per minute. Untoward by-effects were not observed; apparently a certain amount of toleration for the drug is established, and it is not yet determined whether chronic intoxication may be produced by it. The drug is to be used only under strict supervision and caution is to be recommended.—*Berliner klinische Wochenschrift*, 1898, No. 45.

Contraindications to the Exploratory Use of the Stomach Tube.—Dr. J. Boas ("Diagnostik und Therapie der Magenkrankheiten") makes the following statements. The use of the stomach tube is contraindicated: (*A*) In constitutional or local diseases in which the affection is aggravated by the local irritation or in which life is in any way endangered. Among these may be mentioned: (1) Cardiac diseases in the stage of uncompensation, cardiac neuroses, angina pectoris, myocarditis, fatty heart in its advanced stage. (2) Aneurism of the larger arteries. (3) Hemorrhages of recent date, no matter what their nature (lung, stomach, kidney, bladder, rectum, brain), and hemorrhagic infarcts. (4) Advanced cases of pulmonary tuberculosis. (5) Pulmonary emphysema with bronchial catarrh in its later stages. (6) Apoplexy of an incomplete or complete nature; cerebral hyperæmia, epilepsy. (7) Pregnancy. (During the period of pregnancy the stomach tube has been used with good results for irrigation, it is true. For the exploratory use of the stomach tube, however, this period seems to me to be a distinct contraindication.) (8) The existence of continuous or remittent fever. (9) Marked cachexia. (10) Old age.

(*B*) In gastric and intestinal affections which can be diagnosticated with the use of the sound. Under this category may be mentioned: (1) Ulcer of the stomach with a preceding hæmatemesis or tarry stools. (2) A palpable carcinoma of the stomach with emaciation, coffee-ground vomiting, and the remaining classical signs of carcinoma. (3) Many gastric neuroses, in which the true character of the affection is rendered clear by the other accompanying symptoms. (4) Acute febrile gastric or intestinal catarrh. (5) Gastric mucous membranes which bleed easily. (Slight capillary hemorrhages are not a contraindication.) (6) Secondary gastric affections, whose dependence on other primary conditions is very clear.

General Therapeutic Measures in Infectious Diseases.—Wassermann shows the great importance of general therapeutic measures in infectious diseases. The cure of the latter takes place by antitoxins which the organism begins to manufacture as soon as infection has taken place. When there is a sufficient quantity of these immunizing substances in the blood, the patient recovers. There being no specifics at present for most infectious diseases, the treatment will have to be directed toward helping the work of the hæmatopoietic organs. To these measures belong (1) a good rational diet, (2) hydrotherapeutic means, (3) intelligent nursing.—*Zeitschrift für diätetische und physikalische Therapie*, Bd. ii., Heft 1, p. 14.

The Germ of Syphilis.—V. Niesen (Wiesbaden) has demonstrated the germ of syphilis discovered by him. He was dealing with cocci, which, in the preparations shown, were ranged in the form of chain links, and were very prettily stained with carbol-fuchsin according to Gram. It may be mentioned that v. Niesen discovered this syphilococcus in pure cultures, in the bone marrow of children suffering with hereditary syphilis. Pure cultures of his cocci were injected into pigs and rabbits, and indurated plaques were formed at the point of injection. He then allowed these rabbits to pair, and, out of ten young ones which resulted, three were altogether rotten, and showed all the symptoms of hereditary syphilis.—*The Clinical Journal*, February 8th.

Animal and Vegetable Ferments.—Dr. A. E. Austin (*Boston Medical and Surgical Journal*, No. 23, 1898), after giving an account of various experiments carried out in the chemical laboratory of Tufts Medical School, draws the following conclusions: (1) Taka-diastase possesses a greater power of converting starches, in proportion to its weight, than does saliva or pancreatin, though perhaps the test was not fair to saliva, as the amount, one cubic centimetre, was arbitrarily taken as an equivalent to one-tenth gram pancreatin and taka-diatase; since, however, only five and one-half parts per thousand of saliva are solid, 5.5 milligrams are compared with one hundred milligrams. All of these digestants are practically nullified in an acidity equivalent to that of gastric juice, so that practically no digestion can take place in the stomach from any of these digestants. (2) These digestants are not destroyed by the acidity of the gastric juice and there is no practical reason why their activity should not go on after they have passed into the intestines and alkalinity is re-established. Taka-diastase apparently carries the process of amylaceous digestion a step farther than the other two, forming dextrose instead of maltose. In how far this is of value we cannot say until we know more about the condition attending the secretion of succus entericus, which contains the major part of the invertin, and whether it is ever absent.

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SCHLATTER'S CASE OF EXTIRPATION OF THE STOMACH.

IN the present issue we are enabled to complete Schlatter's remarkable case of total extirpation of the stomach, the first report of which appeared in the MEDICAL RECORD of December 25, 1897. By comparing dates between the operation and death, it will be noted that the patient survived nearly fourteen months without her stomach, and maintained fair health until the extension of the original disease into the adjoining mesenteric glands made the continuance of life a mere question of very limited time.

The great interest in this remarkable operative procedure is manifest in many directions. The first in importance is the demonstrated fact that digestion and assimilation can be carried on for a long period without the particular organ which has heretofore been considered as indispensable to those ends. Nor was there any attempt on the part of nature to compensate for the loss of the food receptacle by a corresponding dilatation of any portion of the upper intestinal tract. On the contrary, the food appears to have been simply received into this canal and to have been directly absorbed therefrom. That such nourishment was sufficient is proved by the statement that the patient held her own in weight and strength until the progress of the original disease made the turn in her physical condition. What would have occasioned vomiting in a case of cancer of the stomach merely gave rise to regurgitation of fluids, the physiological reasons for which are not difficult of explanation.

The greatest interest, however, centres in the utility of the operation itself. In the present instance it gave a doomed victim of a fatal disease a year's relief from great suffering; or, in other words, added a year of comfort to her life. This is saying a great deal when we consider the degree and persistence of the distressing symptoms which attend confirmed malignant disease of the stomach. Often the inability to retain any food whatever gives a double reason why the most desperate attempts at immediate relief should be made. Even gastro-enterostomy comes in under such conditions as the merest compromise between hopeless suffering and delayed death.

In the present instance it is obvious enough that the ultimate cause of death had no connection with the operation. On the contrary, if the disease had not spread beyond its original and apparently circumscribed site, there is no telling how long the patient might have lived. Certainly the conditions for a twelvemonth or more were favorable to the continuance of necessary nutrition for an unlimited period.

So far, then, the results would appear to vindicate the utility of the operation as a promising relief measure. Beyond this, however, we can scarcely go, when we take into account the inevitable tendency of the disease toward dissemination. Especially is this the case with these particular operations, which can be necessitated only when the entire organ is involved in disease. We can scarcely expect to be guaranteed against neighboring infiltration of cancerous deposits, when the original disease is of the duration and extent indicated. Evidently the rule was followed in this present instance, and, although life was prolonged but little over a year, from such a standpoint alone the operation was a great success and the daring operator is to be congratulated accordingly.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

IN admitting the important part played by the tubercle bacillus in the etiology of the group of diseases covered by the designation tuberculosis, the scarcely smaller importance of the conditions constituting, on the one hand, susceptibility, and on the other immunity, must never be lost sight of from the point of view of treatment not less than that of prevention. Two obvious duties obtrude themselves on the practical physician: (1) To prevent the dissemination of the bacilli; (2) to render unfavorable the conditions for their development in the human body. The first end is to be attained by the isolation and supervision of tuberculosis patients in so far as this is possible and practicable, and by disinfection of their discharges. The best known agencies at our command for the fulfilment of the second object consist, perhaps, in pure air, sunshine, and good food. There are, besides, numerous medicinal adjuvants, of which many have been lauded, while but few have redeemed their promise.

It has at different times been fondly hoped that a useful purpose would be subserved in the treatment of pulmonary tuberculosis by the employment of antiseptics, especially by inhalation, but such hope has not been realized. Various volatile substances have thus been recommended and used, *e.g.*, creosote, oil of cloves, oil of peppermint, etc., and the record of some observations made by Murrell (*British Medical Journal*, 1899, i., No. 1,987) are of more than ordinary interest in this connection. Twenty patients suffering from pulmonary tuberculosis at various stages were made to inhale, once or twice a day, air impregnated with either oil of cinnamon or oil of peppermint, or they were given a supply and instructed to inhale it almost constantly both night and day. The observations covered a period of six months, and the results were uniformly unfavorable. Bacteriological investigation further showed that the vapor of neither oil had

any deleterious influence upon tubercle bacilli in culture. It was found, on the other hand, that a six-per-cent. solution of formaldehyde (forty-per-cent. aqueous solution) was not only well borne by the patients, but proved capable of retarding and inhibiting the growth of tubercle bacilli in culture and yielded encouraging therapeutic results. Of twenty patients suffering from pulmonary tuberculosis treated with the inhalations, the results were inconclusive for various reasons in six. Of the remainder, twelve were much benefited and two were slightly improved. The irritating effect of the gas was most marked in the earlier stages of the aspiration and diminished as the inhalation progressed. A six-per-cent. solution was employed as a rule, but the proportion was increased or diminished according to the idiosyncrasy of the patient. In most cases the inhalation was practised once or twice a day, compressed air being made by a simple mechanical arrangement to bubble through the solution. In other cases the inhalation was practised constantly.

This plan of treatment certainly commends itself by reason of its simplicity and its feasibility, and not less on account of the knowledge we already possess of the exceeding utility of formaldehyde as a disinfectant. The method is assuredly deserving of extended and intelligent trial.

Murrell further expresses the opinion that the best way of treating pulmonary tuberculosis is to obtain the bacilli from the expectoration, to cultivate them, to pass them over various volatile substances until one is found that will arrest their growth, and then to administer it to the patient by inhalation. "This by no means precludes the use of fatty foods and other substances, such as cod-liver oil."

THE COLLIER ANTITOXIN BILL.

MANY a good cause has been killed by foolish or reprehensible methods employed by its advocates, and the Collier bill now before the New York legislature seems to be in some danger from this cause. The object of the bill is to prevent the sale of antitoxins and vaccine by the New York City health department, while not interfering with its manufacture of serums and free distribution of them for the use of the indigent sick of the city. The bill, we believe, is a perfectly proper one and its object is a reform greatly to be desired. But when its advocates can find no better weapon in its support than the publication in an out-of-town paper of a scurrilous attack upon one of the most efficient of the department's officials, a scientist of world-wide reputation, then it is time for the lovers of fair dealing and open warfare to stand from under. Marked copies of the sheet containing the cowardly attack (adroitly worded so as not to be libellous) were sent to many if not most of the physicians in this city, and there followed a circular, calling attention to the marked copy and enclosing a postal-card petition in support of the bill. While we repeat that we have distinctly favored the passage of the bill, we hope for the honor of New York physicians that there will be found few to join in this sort of attempt to force its passage by the legislature.

MEDICAL EDUCATION IN THE UNITED STATES AND THE LEGALIZING OF OSTEOPATHY.

THESE important questions have at various times been freely and fully discussed in this journal. Owing to the pressure of public opinion induced by the efforts of those who have the welfare of the medical profession at heart, many much-needed reforms in the regulations with regard to the training of the student of medicine have been brought into force in this country. Although the progress has been so far satisfactory, there still remains useful work to be done. The most disappointing features of the American medical education are the unequal standard required in different States and the unnecessary and pernicious multiplication of schools. In the MEDICAL RECORD of January 8, 1898, the whole question was entered into somewhat exhaustively, and as since that time but little change has occurred in the condition of affairs, a lengthy recapitulation will be superfluous. To the following points attention, it would seem, might with advantage be drawn: That in no instance should a medical degree be conferred unless the candidate has undergone a course of study for a term of at least four years, and that the final examination should be undertaken by an independent and unbiassed State board. If these provisions were firmly enforced throughout the entire country, there can be no doubt that the status of medical education would rest on a far more stable basis than it does at present. The legislation relating to osteopathy has during the past year or two been of surpassing interest to the medical profession. The osteopaths have been fighting for a legal standing with surprising pertinacity in every State in which they thought that they possessed any chance of gaining their object. In some legislatures their efforts have been successful, in some partially so, while in others their claims have been totally disregarded, but that the contest will be renewed with undiminished vigor at the earliest opportunity is certain. In Colorado, after a bill had been passed by the legislature granting special privileges to osteopaths, it was vetoed by the governor. A bill to the same effect passed by the Illinois legislature met with a similar fate. In Iowa osteopathy has been legalized, but in Kentucky a completely different course has been pursued. In Minnesota the interpretation of the law in a district court with respect to osteopathy was that the practice of it broke no law, so that at present the osteopaths are masters of the field in that State.

As regards Pennsylvania, the Bulletin of the American Academy of Medicine writes of the situation there in the following words: "A weak point in the Pennsylvania law is that no official oversight of those practising medicine is required—men who have failed to pass examinations or without qualifications opening offices and practising without hindrance because it is no one's business to inquire into their legal right to practise. In this way it may be possible for osteopathy to have acquired a foothold in this commonwealth without advertisement. Besides there have been several applications made to county courts for charters to

institute schools of osteopathy, with what result is not known at the time of preparing this article." Finally, the Columbus *Medical Journal* for January 3, 1899, quotes from a pamphlet entitled the "Ohio Osteopath," that "the osteopath . . . is now licensed to practise in Iowa, Michigan, North Dakota, Vermont, and Wisconsin, while he is unmolested in Illinois, Pennsylvania, and several other States." Taken together with the increasing and acute competition among the members of the medical profession itself, this unfortunate spread of osteopathy is a very serious matter, and to assert where the remedy lies is no easy task. This much, however, may be said, that it behooves medical men all over the continent of America to put their "backs against the wall" and fight in defence of their rights and interests with "tooth and nail." The war, too, should be an aggressive one. At the same time strenuous efforts should be made by legitimate medical practitioners to "set their own house in order" and to insist that a uniformly high standard of education should be introduced and maintained in every State of the country.

A MEDICAL NESTOR.[1]

It does not take long for the waves of oblivion to close over those who have taken a most prominent and active part in the affairs of the day; nevertheless, although it is now nearly six years since Dr. Pliny Earle passed away, it does not require the admirable memoirs of Mr. Sanford, his biographer, to place him before us. It, however, brings more vividly to our mind and causes us to stop in the busy whirl of to-day again to contemplate that unique figure in America's medical history and that powerful exponent of new methods in relation to insanity. In a time when medical education was at the best flimsy and the faulty empiricism had not vanished before the scientific spirit which prevails at the present time, Dr. Earle stood forth a brilliant forerunner of that which was to come. He prepared himself for his work by study abroad and by travel. His mind was ever open to new ideas and to new means of obtaining results. It is difficult for us to picture in these days the terrible treatment of the insane in the early part of this century. Asylums were little better than prisons, and these prisons were places of torture. The light was beginning to break when Dr. Pliny Earle added his investigations to the help of the insane, who were just beginning to leave behind them the heroic methods of the strait-jacket, the "tranquillizing-chair," the starvation, the shower-baths, the clanking chains, and the resounding whips. To Dr. Earle was given to elaborate the statistical, economic, and sanatory relations of the public care of the insane. He was connected with various institutions at different times and spent five years in charge of Bloomingdale Asylum. The average number of the patients when he was there was only one hundred and twenty-five. It was there that the first case of paresis was examined and described by Dr. Earle in 1847. He gave it the name of "partio-general paralysis." Subsequent observations of this disease were published by him in 1849.

Dr. Earle bequeathed to Mr. Sanford his letters and diaries, to be used, if he saw fit, in a memoir. The result is the book which has just come before the public. It is not only valuable as a monument to one of the pioneers in the investigation of mental disease, but as a comment upon manners and customs from the opening decade of the nineteenth century to the beginning of its closing decade. In these pages one sees again the mainsprings of thought and action and the results produced, and the wide differences of the *fin de siècle* from the beginning of the century.

[1] "Memoirs of Pliny Earle, M.D." Edited, with a general introduction, by F. B. Sanford, of Concord. Damrell & Upham. Boston, 1898.

ARMY EXAMINATIONS AND STATE LICENSE.

A very commendable form of special legislation is now engaging the attention of our law-givers at Albany. It is in effect that the young medical men recently graduated, who in consequence of enlisting into the military service during the late war were unable to appear for their regents' examination, shall by virtue of their army examination and subsequent service be entitled to a State license to practise.

This, it strikes us, is an eminently fit measure of relief for all the parties directly concerned. When once a medical man is admitted as such into the regular or volunteer army, there should be no question regarding his professional ability. An army medical board has a proverbially high standard of requirements, and the latter should not be questioned by any State board. It is a simple matter of justice to the men who have served their country and have become professionally qualified so to do by a proper tribunal, that they should not be hampered by technical and frivolous objections on the part of those who cannot be made to believe in any reasonable exception to ever so rigid a rule. By all means let Mr. Chapin's bill pass.

ADULTERATION OF FOOD.

The scandals in connection with the canned beef supplied to the army during the late war have had at least one good effect—the eyes of the American people have been opened by their means to the adulteration-of-food question. Up to the present time, although it has been for long well known that adulteration of food is one of the tricks of the trade most frequently practised, nevertheless the long-suffering public has endured the deception with exemplary patience—perhaps on the principle that "what the eye does not see the heart does not grieve for," or perhaps because the matter had never been brought very prominently into notice. Since, however, the secrets of some of the methods of food adulteration have been laid bare, it is likely that in the future more or less vigorous measures will be taken to ensure that persons really get the article for which they pay, and that when they ask for but-

ter or cheese the retailer does not foist on them an adulterated compound or a spurious article. An act dealing with the manufacture and sale of butter has recently been introduced in the New York senate, and will undoubtedly shortly become law. Much of the matter contained in the act is old; the new part provides that any butter which is not fresh shall be labelled to that effect, and that no preservative shall be used in butter or other dairy product. It should be understood that when butter has become rancid and when the process has not gone far, it is possible by rechurning it with milk or boiling it in water containing a little soda to get rid of the fatty acids which cause rancidity. This custom has been largely followed, and it is with a view to stopping the practice, or rather to prevent butter so treated to be sold as fresh, that the new provisions of the act have been framed.

The laws regulating the manufacture and sale of food as now revised appear to be sufficiently comprehensive and stringent, and if strictly enforced should go far toward putting an end to adulteration.

PROPOSED STATE HOSPITAL FOR THE TREATMENT OF PULMONARY TUBERCULOSIS IN NEW YORK STATE.

THE report of the special committee on establishing a hospital in this State for the treatment of pulmonary tuberculosis has just been issued. The war against consumption is being vigorously waged in almost every part of the civilized world, and with so great a measure of success that the belief is now freely expressed that by treating its victims on sound hygienic principles the disease will not only be greatly limited in its scope and effects, but that it will be ultimately stamped out. The great curative properties of plenty of pure, fresh air and of good, nourishing food in the treatment of phthisis are universally recognized, and these are the chief means by which it is hoped to stay its devastations. Unfortunately these desiderata are not within the reach of a large number of persons, and it has been for the purpose of considering the best method of suppying this want in New York State that the special committee has been pursuing its investigations. The conclusion arrived at after a fairly exhaustive study of the subject, and after consultation with the foremost lung specialists of this city and State, is that it will be advisable to erect a hospital in the country at the expense of the State for the benefit of those suffering from incipient tuberculosis who are too poor to care for themselves. A bill to this effect has been introduced in the State legislature. That the scheme possesses many advantages is true, but it would be idle to deny that it is not altogether flawless. In the first place, has it been proved beyond a doubt that it is necessary or desirable to saddle the State with the expense of maintaining an institution of this character? Would not convalescent homes in connection with the hospitals answer the purpose equally well? Is it not probable that too great stress is now laid upon the infectiousness of tuberculous disease of the lungs? That every person suffering from consumption is a centre from which the disease is let loose into the world is, of course, a well-established fact; but that pulmonary tuberculosis is infectious in the sense that scarlatina, measles, and smallpox are infectious, will hardly be claimed by the most rabid supporter of the new theory. From the evidence of physicians who have had long experience in consumption hospitals, it would appear that instances of direct transmission are of extremely rare occurrence. May not the influence of environment and of personal predisposition have been too much ignored? If the efforts of philanthropy were exercised in the direction of prevention, in endeavoring to stop overcrowding, and in taking every means possible to render the genera. sanitary conditions more satisfactory, might not the money thus expended in preventing the disease be more judiciously laid out than in attempting to cure it when contracted? Again, how many persons know when they are suffering from incipient tuberculosis? In many cases the physician is not consulted until the disease has passed beyond that stage. And lastly, what guarantee will be given that such a hospital as recommended by the committee will be run for the benefit of the patients alone, and that the hydra-headed monster of politics will not enter into its management?

Lastly, and more important than all, comes the question, How with the wide prevalence of phthisis is it possible, except on the most extravagant scale, to provide for even a majority of the sufferers? To meet the so-called necessity in a proper and practical way would require millions of dollars in hospital plants, and would far exceed the enormous and extravagantly outrageous appropriation for the State institutions for the insane.

News of the Week.

The President of the Board of Health. — A bill has been introduced in the legislature removing the restriction against a physician being appointed president of the board of health. The present discrimination against the medical profession in this regard is most unreasonable and unjust, and no argument for its continuance can be advanced. Certainly no physician could ever have made the public utterances, bringing the health board into ridicule, which the present president of that body has made, and that alone would seem to be a good reason for making one who knows something of health matters the mouthpiece of the board. Dr. Van Fleet, chairman of the committee on legislation of the Medical Society of the State of New York, writes that "there can be no doubt of the success of the bill repealing this unjust clause in the charter of Greater New York, if the medical profession will demand it. If a sufficient number of medical men will write to their representatives in the legislature, asking that this bill receive favorable consideration, their desires will be gratified. The bill does not make it mandatory on the mayor to appoint a physician, but

simply gives to medical men the right to enjoy one of the privileges the constitution gives to all citizens who are not imbeciles or convicts."

Professor Martin, of Berlin, will leave that city the end of this month to take the chair of gynæcology at the University of Greifswald.

University of Pennsylvania.—Dr. John B. Deaver has resigned as assistant professor of applied anatomy, which position he has held since the death of Dr. Joseph Leidy in 1891. He had previously been assistant demonstrator, and from 1883 was demonstrator of anatomy.

An International Medical Press Congress.—The French Medical Press Association held its forty-third meeting on February 3d, under the presidency of Dr. Cézilly. It was decided to organize an International Congress of the Medical Press, to be held in Paris in 1900, at the same time as the other congresses which are to take place there in that year.

Dr. George H. Simmons, the newly elected editor of the *Journal of the American Medical Association*, is a graduate of the Hahnemann Medical College of Chicago in the class of 1882, and, ten years later, of the Rush Medical College in the same city. His election was the result of a competitive examination of a number of candidates for the editorial chair. He was secretary of the Nebraska State Medical Society and editor of the *Western Medical Review*.

The Pennsylvania State Veterinary Medical Association held its annual meeting at Philadelphia on March 7th and 8th. The president, Dr. George B. Jobson, delivered the annual address. Demonstrations were given of operations on various animals for the relief of pain and the cure of disease. Papers were read as follows: "Importance to the Public of a Wholesome Meat Supply," by Dr. Alfred Stengel; "Diseases of Animals Transmissible to Man," by Dr. M. P. Ravenel; "Pathological Demonstration," by Dr. Robert Formad; "Suggestions for Improving the Meat-Inspection Service of Philadelphia," by Dr. John W. Adams; "Pathological Demonstration," by Dr. Robert W. Adams; "Tuberculosis in Dairy Cattle and How Shall We Get Rid of it," by Dr. N. E. Reinhart; "Prognosis," by Dr. J. C. Michener; "Stock-Farm Veterinary Practice as a Post-Graduate Course," by Dr. A. N. Lushington; "Castration of Cryptorchids (Ridglings)," by Dr. J. F. Butterfield; "Tracheotomy in Laryngitis and Choking," by Dr. W. S. Phillips; "Azoturia," by Dr. Otto Noack; "An Argument for Municipal Slaughter Houses," by Dr. Leonard Pearson; "The Use of Chloral Hydrate in Indigestion and Colic," by Dr. R. G. Rice; "Fracture of Tibia," by Dr. J. B. Irons; "Differential Diagnosis of Lamenesses Located Within the Hoof," by Dr. John W. Adams; "Prevention of Anthrax," by Dr. A. F. Schrieber. The following officers were elected for the ensuing year: *President*, Dr. J. Curtis Michener, of Colmar; *Vice-Presidents*, Dr. S. J. Harger, of Philadelphia; Dr. Otto Noack, of Reading; and Dr. J. C. McNeil, of Pittsburg; *Treasurer*, Dr. Francis Bridge, of Philadelphia; *Recording Secretary*, Dr. Clarence J. Marshall, of Philadelphia; *Corresponding Secretary*, Dr. W. L. Rhoads, of Lansdowne; *Board of Trustees*. Dr. George B. Jobson, of Franklin; Dr. James B. Rayner, of West Chester; Dr. W. H. Ridge, of Trevose; Dr. W. Horace Hoskins, of Philadelphia; and Dr. James W. Sallade, of Pottsville.

Cerebro-Spinal Meningitis in Philadelphia.—Thirty-four cases of cerebro-spinal meningitis were reported to the Philadelphia board of health for the first ten days of March, with twelve deaths, principally in the northeastern section of the city.

A Trachoma School.—A few months ago there was opened by the city authorities in Milan a school for children afflicted with granular conjunctivitis. The school is an annex of the Ophthalmic Institute and comprises two rooms, each of which can accommodate fifty pupils. At the present time the total number of children in the school is sixty. When lessons are over the children go to the institute to be treated, and only after treatment are they allowed to go home.

Typhoid Fever in Philadelphia.—There were reported to the Philadelphia board of health on March 6th one hundred and ten cases of typhoid fever and six deaths, on March 7th forty-six cases and eleven deaths, on March 13th ninety-four cases and two deaths, and on March 14th seventy-four cases and ten deaths. From January 1st the number of cases has been three thousand five hundred and ninety-two, and the number of deaths three hundred and seventy-two. A special committee of the board has been appointed to prepare a suitable resolution memorializing the mayor and councils upon the urgency of adopting immediately measures to diminish the prevalence of the disease.

In Favor of Compulsory Vaccination of School Children.—The associated health authorities of Pennsylvania have adopted resolutions in opposition to a measure introduced in the Pennsylvania legislature aimed at the repeal of an existing law making compulsory the vaccination of pupils in the public schools, and have delegated a committee to present these resolutions before the house committee on public health and sanitation.

Two Royal Invalids.—Mr. Henry Norman, the London correspondent of the New York *Times*, sends in a recent despatch two pieces of medical news concerning the rulers of Russia and Germany, which he says are undoubtedly correct. The first is, that the recent denials of the stories printed in Berlin about the Czar's health are diplomatically optimistic. His threatening danger is pulmonary trouble, and this has drawn much nearer lately. The cessation of semi-official Russian communications to the press about the coming peace conference at The Hague also seems to point to some interruption to the Czar's enthusiasm. For anybody with congenitally weak lungs the Winter Palace at Petersburg is the worst residence in Europe, low-lying, cold, and damp; yet the Emperor of Russia is virtually condemned to spend a large part of his life there. The second piece of news, which the writer vouches for as certainly true, is that the German Em-

peror's old ailment, chronic suppurative otitis, has recently grown worse, so much so that Dr. Doyen, of Paris, the leading French authority on aural diseases, has been invited to examine the Emperor, and will probably operate on him. To avoid comment Dr. Doyen will first visit some German baths, as if for his own health, but his destination is Berlin.

Dr. Samuel G. Dorr, of Buffalo, has just been appointed postmaster at that place. Buffalo already has a physician serving as mayor.

Dr. William A. Kahle, of Pittsburg, Pa., was shot accidentally and killed at Guanajay, Cuba, on March 8th.

Mortality in the Late War.—Adjutant-General Corbin has issued a statement giving the number of deaths of soldiers enlisted for the Spanish war and the causes thereof from May 1, 1898, to February 28, 1899. It shows: Killed in action, 329; died of wounds, 125; died of disease, 5,277. Total, 5,731.

Two Asylums Quarantined.—The board of health has placed under quarantine the Juvenile Orphan Asylum, in West Twenty-seventh Street, because of the presence of diphtheria, and St. Joseph's Asylum, in East Eighty-ninth Street, because of the appearance of measles among its inmates.

The Study of Tropical Diseases in England.—The House of Commons has voted a grant in aid of the school of tropical medicine in London. The necessary buildings are being erected in connection with the Dreadnaught Hospital in the Albert Docks. The grant was voted on the initiative of Mr. Chamberlain. There will be provision made also for instruction to qualified nurses in tropical diseases and hygiene.

A Nursing Celebration.—The twenty-fifth anniversary of the founding of the Bellevue Training-School for Nurses was celebrated at the Waldorf-Astoria one evening last week. The exercises were held in the large banquet hall, and were marked by boundless enthusiasm. Eight hundred nurses in uniform, from twenty city hospitals, were present. Bishop Potter presided and many prominent physicians and laymen occupied seats on the platform. The report of the board of managers of the training-school, read by the Rev. James Le Baron Johnson of Grace Church, was mainly a review of trained nursing in New York since 1872. This was followed by an address by Dr. William M. Polk, who spoke of the relation of the trained nurse to the hospital, and the great improvement that had been effected in the past quarter of a century by the labors of the skilled nurse.

Pathological Society of Philadelphia.—At a stated meeting held March 9th, Dr. D. Riesman exhibited specimens of extensive and profound typhoid ulceration of the intestine, with an enormous vermiform appendix, a narrowed aortic orifice, and four aortic cusps. The œsophagus also was the seat of ulceration. Dr. Riesman referred to the possibility of the aortic hyperplasia indicating lymphatism, which it was thought might have been the responsible factor for the suddenness with which death took place. Dr. Joseph Sailer exhibited a specimen of typhoid ulceration of Meckel's diverticulum. Dr. Sailer also described a case of lobar sclerosis of the brain, involving the anterior inferior portion of the central convolution and the parietal lobe, and associated with diminution in the size of the corresponding hemisphere and its constituent gyri. Dr. Alfred Stengel exhibited a specimen of colloid carcinoma of the stomach, with extension to the omentum and the peritoneum, and metastasis to liver and lungs. Dr. W. G. Spiller exhibited a specimen of bilateral internal hemorrhagic pachymeningitis from a feeble-minded girl twelve years old.

Denver and Arapahoe Medical Society.—At the annual meeting held January 10th, the following officers were chosen: *President*, Dr. H. B. Whitney; *Vice-President*, Dr. C. K. Fleming.

Philadelphia County Medical Society.—At a stated meeting held March 8th, Dr. E. W. Holmes, demonstrator of anatomy in the University of Pennsylvania, read a paper on "Modern Anatomy," in which he pointed out the subordinate part that should be played by didactic lectures in the teaching of this branch of medicine, and of the great importance of individual demonstration and instruction in the dissecting-room. In an animated discussion that followed it was pretty generally agreed that, while the didactic lecture could not be entirely dispensed with, and that it should be made rather a guide and furnish an outline for the student to fill in, the most important part of the work consisted in showing the student and making him manipulate the structures directly, with especial reference to their relations, their functions, and their conditions in disease. Remuneration for this service should not be apportioned according to the title of the incumbent, but according to the quantity and quality of the work done by each of the helpers. Dr. J. B. Roberts read a paper on the use of force in the treatment of Colles' fractures, in which he pointed out that for one reason or other the displacement often resulting when fracture at the lower extremity of the radius takes place from a fall upon the palmar aspect of the extremely extended hand can be corrected only by great force. When this has been done a simple dorsal splint and an adhesive dressing will be all that is necessary, and permanent deformity and stiffness of the fingers will be avoided. Illustrative cases were exhibited. Speakers in the discussion did not agree with Dr. Roberts, Dr. Allis pointing out that the occurrence of or the escape from stiffness of the fingers depended most upon the involvement or non-involvement in traumatism and inflammation of the tendons and their sheaths that pass over the dorsal aspect of the radius. A resolution was unanimously adopted expressing the disapproval of the society of the bill introduced in the legislature for the repeal of the present vaccination law with regard to school-children, and providing for the appointment of a committee to attend the public hearing before the committee on public health of the legislature at Harrisburg.

State Hospital for Phthisis.—A bill is now before the legislature to establish a State institution for the care of tuberculosis in the Adirondack region. Those able to pay for treatment are expected to do so, while the particular locality from which indigent patients are drawn are to pay for their care.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 11, 1899. March 4th.—Rear Admiral A. S. Crowninshield, W. K. Van Reypen, R. B. Bradford, E. Stewart, G. W. Melville, P. Hichborn, M. T. Endicott, C. O'Neil, chiefs of bureau in the Navy Department, rear admirals from March 3, 1899.

Examination for the Marine Hospital Service.—A board of officers will be convened at San Francisco, Cal., Tuesday, May 2, 1899, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States Marine Hospital Service. Applications for this examination must be received on or before April 22d. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: 1, physical; 2, written; 3, oral; 4, clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on the cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment the young officers are as a rule first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service assistant surgeons are entitled to examinations for promotions to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant surgeons receive $1,600, passed assistant surgeons $2,000, and surgeons $2,500 per year. When quarters are not provided, commutation at the rate of $30, $40, or $50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per cent. in addition to the regular salary for every five years' service, up to forty per cent. after twenty years' service. The tenure of office is permanent. Officers travelling under orders are allowed actual expenses. For further information or for invitation to appear before the board of examiners, address: Supervising Surgeon-General, United States Marine Hospital Service, Washington, D. C.

Meningitis Among Horses is reported to be doing serious damage in parts of Chester County, Pa.

College of Physicians of Philadelphia, Section on General Medicine.—At a stated meeting held March 13th, Dr. D. J. M. Miller reported a case of intrathoracic tumor of undetermined nature and origin, which presented superficially to the left of the sternum in the situation of the third and fourth ribs. There were effusion into the left pleura, displacement of the heart to the right, loss of weight, but no cachexia, no pulsation, no history of syphilis, no marked blood-change, and the formation had been noticed for ten months. Dr. C. W. Burr read a paper on some of the sensory symptoms occurring in cerebral palsies, relating several cases of unusual character. Dr. J. H. Musser reported a case of typhoid fever attended with hemorrhages beneath the skin and from the mucous membranes. Dr. H. A. Hare reported a case of acute thyroiditis with thyroid poisoning, occurring in a woman who struck her neck upon a chair, became unconscious, and developed palpitation of the heart, suffusion of the surface, with swelling of the thyroid gland. The symptoms disappeared under applications of ice, administration of cardiac sedatives, painting with iodine, and inunction with ichthyol.

Dr. Spencer Morris, professor of medical jurisprudence in the Medico-Chirurgical College of Philadelphia, was stricken with paralysis on March 13th, as he was about to deliver the concluding lecture of a series on medical jurisprudence and toxicology.

Dr. Simon Flexner, professor of pathological anatomy in the Johns Hopkins University, has been elected professor of pathology in the medical department of the University of Pennsylvania, in succession to Dr. John Guiteras, resigned.

Against the Collier Bill.—The medical board of the New York Foundling Hospital on March 13th adopted the following:

"The New York Foundling Hospital, in its regular care of twenty-one hundred infants and young children, has received special benefit from the early bacteriological diagnosis of diphtheria and from the liberal issue of diphtheria antitoxin. The method of early detection of the disease, the immunization of exposed children, the cure of infected cases, the determination of the moment when a recovered case can safely mingle with other children—all these methods and safeguards have been contributed to the institution by the health department through the immediate agency of its laboratories. It is not too much to say that diphtheria, in this institution, has been robbed of its terrors.

"*Whereas*, In the opinion of this broad, the health department of this city has set before the world an object lesson in the management and care of diphtheria, and has equalled the best examples in producing reliable diphtheria antitoxin and vaccine virus; and

"*Whereas*, The health department is investigating methods for the better care of other infectious diseases and the remedial uses of still other antitoxins; and

"*Whereas*, Any curtailment of its present facilities would react against the public good; therefore be it

"*Resolved*, That this board do hereby protest against the passage of assembly bill No. 451 introduced by Mr. Collier."

On March 13th the medical board of the Presbyterian Hospital passed the following resolutions:

"*Whereas*, The medical board of the Presbyterian Hospital believe that the health department of New York has, within the past few years, contributed most valuable services to the city in the prevention of the spread of infectious diseases, as well as by contributions to scientific medical research; and

"*Whereas*, There is pending before the assembly a bill called Assembly Bill No. 451, which would embarrass and curtail this work of the health department, designed to protect the health of the citizens of New York; therefore be it

"*Resolved*, That this board do hereby earnestly protest agains the passage of Assembly Bill No. 451, believing that such action would materially injure the interests of this community.

"*Resolved*, That these resolutions be spread upon the minutes of this board, and that copies be sent to the legislature, to the New York health department, and to the medical journals of this city."

W. P. NORTHRUP, M.D., *Secretary of the Medical Board.*

Sir Douglas Galton, F.R.S., died on March 10th, at the age of seventy-seven years. He was born in Worcestershire, and was educated at the Royal Military Academy, Woolwich, where he passed the highest examination on record, and took first prize in every subject. He received a commission in the Royal Engineers in 1840. From 1870 to 1895 he was general secretary of the British Association for the Advancement of Science, and from 1895 to 1896 was president of that body. He was also a member of the council of the Royal Society. He constructed the Herbert Hospital at Woolwich. He was the author of "Healthy Dwellings" and "Healthy Hospitals," and was one of the greatest British authorities on all questions of sanitation, ventilation, and the hygienic arrangements of public buildings.

Death of Dr. W. A. Heacock.—The West End Medical Society at its recent meeting passed the following:

"*Whereas*, Death has removed our friend and associate, Dr. W. A. Heacock; and

"*Whereas*, As colleagues we respected his professional attainments and his character as a man and physician; and recall his friendship and co-operation in all medical work,—

"*Therefore be it Resolved*, That we as members of the West End Medical Society, and of the medical profession, have lost an active, conscientious member; and

"*Resolved*, That we extend our profound sympathy to the family of Dr. Heacock in this time of bereavement; and

"*Resolved*, That a copy of these resolutions be sent to the family of the deceased and to the medical journals, and that they be incorporated in the minutes of the society."

Signed by the executive committee of the West End Medical Society, March 4, 1899.

Death of Dr. J. E. H. Nichols.—At the last regular meeting of the New York Otological Society, held January 24th, the following resolutions were adopted:

"The New York Otological Society has learned with sorrow of the death of Dr. J. E. H. Nichols, which occurred in North Carolina on September 12, 1898. Dr. Nichols was a charter member, a constant attendant at the meetings of the Society, and a most valued contributor to its scientific work.

"*Resolved*, That, in the death of Dr. Nichols, the society has lost one of its most respected and valued members, and otology a faithful and scientific worker; that the sympathy of the society be extended to his family in their sad loss; and, finally, that these resolutions be spread on the minutes of the society and published in the MEDICAL RECORD and in the *New York Medical Journal.*

"*Resolved*, That a copy be sent to his family."

J. B. EMERSON, ALBERT H. BUCK, GORHAM BACON, *Committee.*

Obituary Notes.—DR. EDWARD P. HURD, of Newburyport, Mass., died of pneumonia on February 24th, at the age of sixty years. He was born in Newport, Canada, and was graduated in medicine from McGill University in the class of 1865. He practised in Canada for a few years, but removed to Newburyport in 1870. He was at one time professor of pathology in the College of Physicians and Surgeons, Boston, and for two terms was president of the Essex North District Medical Society. For the past five years he served as medical examiner. He was a frequent contributor to the medical journals and made many translations from French medical literature.—DR. JOHN A. BENSON, of Chicago, died in that city on March 9th, of influenza. He was a graduate of the medical department of Columbia University, New York, in the class of 1880, and was professor of physiology at the College of Physicians and Surgeons, Chicago.—DR. J. D. LITTLEFIELD, of Jamestown, N. Y., died suddenly on March 11th, of heart disease. He was a graduate of the medical department of the University of Pennsylvania in the class of 1876.—DR. FRANK TAYLOR BARNIS, of this city, died on March 9th, at the age of thirty-eight years. He was a graduate of the medical department of Columbia University in the class of 1885.—DR. HENRY P. QUINCY, of Boston, died at his home in that city on March 11th. He was a graduate of the Harvard Medical School in the class of 1867.—DR. JEREMIAH WILSON died at Alexandria, Pa., on March 8th, at the age of sixty-five years. He was a graduate of the medical department of the University of Pennsylvania, but did not enter upon the practice of medicine, engaging in the study of art and becoming a most successful portrait painter.—DR. W. J. REINHARD died at Hellertown, Pa., on March 13th, in consequence of puncture of an artery while receiving an injection of cocaine into one of his arms.

Reviews and Notices.

TRANSACTIONS OF THE CLINICAL SOCIETY OF LONDON. Volume XXXI. London: Longmans, Green & Co. 1898.

THIS volume comprises the proceedings of the society during its thirty-first session, October, 1897, to May, 1898. One of the most interesting is the report of the antitoxin committee, with elaborate details. It is profusely illustrated and merits distinction as a scientific contribution from many authors.

THE CARE OF THE BABY. By J. P. CROZER GRIFFITH, M.D. Second Edition. Philadelphia: W. B. Saunders. 1898.

THIS manual is intended for mothers and nurses, or for emergencies arising in the sick-room until the physician can be summoned. The details given for the preparation of infant foods is certainly a wise one. We hope the book will receive the support it deserves, for it is full of practical points required by every mother and nurse.

MEDICAL DISEASES OF INFANCY AND CHILDHOOD. By DAWSON WILLIAMS, M.D. Philadelphia and New York: Lea Brothers & Co. 1898.

OF all pædiatric literature which has been pnblished within the last few years none will be more welcome than this book. Consisting of six hundred pages with some very good illustrations, it is well adapted to fulfil the object of the author. Nothing can be more impressive than a study of his three clinical pictures, showing the gradual disappearance of pseudomembrane eighteen, twenty-four, and thirty-six hours after antitoxin treatment. It certainly adds greatly to the many beautiful illustrations to see such pathological photomicrographs of acute catarrhal enteritis, which the author credits to Professor Baginsky. Great pains has certainly been bestowed by the author, and praise is well deserved.

AN AMERICAN TEXT-BOOK OF GYNÆCOLOGY, MEDICAL AND SURGICAL. For Practitioners and Students. By HENRY T. BYFORD, M.D., J. M. BALDY, M.D., EDWIN B. CRAGIN, M.D., J. H. ETHERIDGE, M.D., WILLIAM GOODELL, M.D., HOWARD A. KELLY, M.D., FLORIAN KRUG, M.D., E. E. MONTGOMERY, M.D., WILLIAM R. PRYOR, M.D., GEORGE M. TUTTLE, M.D. Edited by J. M. BALDY, M.D. Second edition, revised. With 341 illustrations, and 38 colored and half-tone plates. Pp. xxii., 718. Philadelphia: W. B. Saunders. 1898.

AS stated in the preface, essential changes have been made in the present edition of this well-known work, the success of which has been much beyond that of most of the composite books on the subject of gynæcology. We note that the editor has given particular attention to the elimination of those repetitions and contradictory statements which detract from the value of the popular text-books written by several different authors, the paragraphs on Operative Technic and After-Treatment, under each subject, being referred to separate chapters. Many new illustrations appear, but we note that some of the objectionable colored plates have been retained. The chapter on "Laceration of the Soft Parts" has been much improved, and the important chapter on "Pelvic Inflammation" shows evidence of careful revision. The final chapter on "After-Treatment" is excellent, though we note with surprise the elaborate directions regarding the use of the glass drainage tube, which we thought had been almost entirely abandoned long ago. The type, illustrations, and generai arrangement of this excellent work show a marked improvement over the first edition and reflect great credit upon the editor.

MANUAL OF THE DISEASES OF CHILDREN. By JOHN MADISON TAYLOR, A.M., M.D., and WILLIAM H. WELLS, M.D. Philadelphia: P. Blakiston's Son & Co. 1898.

THIS book of seven hundred and forty-three pages is presented not as a complete treatise on the affections of childhood but as a "brief and competent guide for the student and practitioner." Beginning with the physiology of infancy and childhood, which the authors discuss in a clear and concise manner, we are led into a description of the diseases of the new-born, those which interest the obstetrician as well as the pædiatrist. General hygiene of infants and children next engages the attention. This chapter, while short, nevertheless contains numerous practical and common-sense views. The subject of feeding, which is looked for with interest in every work on diseases of children, is taken up from many standpoints. Thus, a consideration of breast milk and breast feeding, of weaning, of feeding by a wet nurse; the use of modified milk and the care of the sources whence it comes, sterilization and pasteurization, the use of proprietary preparations (including a table of analysis), and the diet of children at various ages, are all dealt with in an interesting and instructive manner. This topic, which seems to be the bugbear of the general practitioner on account of the intricate tables usually given, is here presented in a very readable manner and quite holds the attention. Affections of the mouth are treated rather superficially, but dentition, with diagrams showing the ages at which the different teeth appear, is deserving of commendation. In diseases of the stomach no mention is made of congenital stenosis of the pylorus. In the discussion of intestinal affections, treatment receives the major part of their attention. Milk is strongly advised against in subacute milk infection, because "so long as milk is given the child, which is one of the best of all culture media for bacteria, just so long will the disease continue." Ileocolitis is used in preference to the old term of dysentery. Appendicitis is discussed from the present status, and the chapter on intestinal parasites, while concisely discussed, could be very much enhanced by a few illustrations of the commoner worms and their eggs. In the chapter on genitourinary diseases no mention is made of adenoids as an etiological factor in enuresis. In renal diseases the classification of Delafield is followed. The chapter on blood is introduced by some very practical remarks on the clinical methods for examination. All forms of anæmia, save anæmia infantum pseudoleukæmica (v. Jaksch) are thoroughly entered into. Then follows a chapter on general diseases—rheumatism, rachitis, scorbutus, marasmus, and diabetes mellitus. Diabetes insipidus, however, which is most common in children, is altogether omitted. In diseases of the heart it seems that the congenital affections are too briefly discussed. We are not so surprised if books on general medicine dismiss this subject abruptly, but in a work on pædiatrics we look for greater and more varied information. The methods of physical examination, functional and organic diseases of the heart, and diseases of the pericardium satisfy every condition. The chapter on disorders of the respiratory tract is very practical. The remarks on disorders of speech are worthy of special mention. Treatment of pneumonia is considered in a separate little article. Under nervous diseases we find a thorough consideration of infantile convulsions, epilepsy, and chorea. Night terrors are too briefly discussed. The exanthemata receive the necessary attention which the subject demands. Enteric fever with a history and remarks on the serum test of Widal is very interesting. Malaria, la grippe, meningitis, pertussis, and syphilis offer food for study. Idiocy and imbecility are treated in proportion to their importance. Cretinism and myxœdema could well stand elaboration. In the article on meningitis no account is found of Quincke's lumbar puncture nor of Weichselbaum's diplococcus intracellularis. Anterior poliomyelitis is thoroughly discussed, but where is an account of amaurotic family idiocy (Sachs)? The article on diphtheria is one of the best of the series. It is thoroughly up to date and gives what most books on pædiatrics do not—a complete discussion from every standpoint of the antitoxin treatment. Again intubation, which is too often hurriedly passed over in most text-books, finds a very concise presentation in this book. Two plates, one showing the method of introduction of the O'Dwyer tube, the other the method of after-feeding, add to the practicability of the chapter. The chapter on diseases of the skin is short, but thorough and to the point. It contains a very excellent table of differential diagnosis.

FORMULAIRE DES MÉDICAMENTS NOUVEAUX POUR 1899. H. BOCQUILLON-LIMOUSIN. Paris: J. B. Baillière et Fils.

THIS is a handbook of drugs, some of which, in spite of the title, are not new. The arrangement is alphabetical and a few lines are devoted to each drug, with a statement as to its nature, source, and physical and chemical properties. Jambol, nosophen, and trional, however, ought hardly be called new remedies, in spite of the fact that it may be worth while to call attention to their merits.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Special Meeting, March 9, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

AT this meeting the general discussion on syphilis, begun on March 2d, was continued.

Syphilitic Affections of the Heart.—DR. LEONARD WEBER read a paper with this title. He said that, in the absence of syphilitic stigmata in a given case, it would be almost impossible to arrive at a positive diagnosis in the early stages. From the endocarditis and myocarditis of alcohol and rheumatism, syphilis could generally be excluded. Such signs as weak impulse, accentuated second sound, irregular action of the heart, faintness, dyspnœa on exertion, and angina pectoris should always arouse the suspicion of syphilis, whether or not the patient admitted such infection. In the absence of any other satisfactory etiology, it was justifiable to assume syphilis provisionally as the cause. Even though antisyphilitic treatment failed to give marked relief, syphilis, as an etiological factor, would not necessarily be excluded.

Treatment.—Only very temporary benefit followed the use of the iodides alone, but if used in conjunction with mercury the effect was more marked and lasting. In a series of one hundred and twenty-five cases of constitutional syphilis that had come under his observation, and had been studied during a long period of years, the combined use of mercury and the iodides had in every instance yielded a satisfactory result.

The Lungs.—Chronic catarrh of the trachea and larger bronchi, with proliferation of the connective tissue, he said, had been seen in syphilitics and reported. He had observed cases of pneumonia of probable specific origin occurring in women who had given birth to syphilitic infants. Neither the general nor the local lesions had improved until antisyphilitic treatment had been instituted. The diagnosis of such affections must always remain difficult until the specific bacillus of syphilis had been isolated.

Syphilitic Affections of the Liver in Adults and in Children.—DR. J. GEORGE ADAMI, of McGill University, Montreal, presented this paper. He said that no distinctions could be drawn between secondary and tertiary syphilis in the study of the hepatic lesions produced by this disease. When the virus was powerful and there was a rapid proliferation, in such diseases as syphilis and tuberculosis, the effects on the tissues were modified so as to give generalized changes in them.

The Congenital Form.—In about ninety per cent. of the cases of congenital syphilis the liver was affected, the infection being through the placenta. The different forms of lesions met with in the syphilitic liver were: (1) Well-formed gummata; (2) miliary gummata; (3) an admixture of miliary gummata and generalized fibrosis, affecting the whole organ, which was, in consequence, considerably enlarged; (4) generalized atrophic cirrhosis, not associated with gummata, but accompanied by icterus. The second form was the commonest. The miliary and the gross gummata were not characteristic of different stages of the disease. The livers of syphilitic infants showed extensive fibrosis, while the lesions of the skin were those spoken of as secondary manifestations. It was not improbable that, in the excretion of toxic substances by the liver cells, the liver underwent a parenchymatous change so intense that death of the cells took place, followed by fibrous change. When many miliary gummata were present much fibroid change was eventually brought about by the tissue changes which followed their development. The various changes were briefly these: Syphilis might be due either to granulomatous deposits in the organ or to interstitial fibroid change; (2) the specific granulomata might be in the form of minute multiple gummata, or existed as larger isolated gummata, regarded generally as tertiary; (3) it was impossible to regard the one as secondary and the other as tertiary; (4) by analogy, the interstitial fibroid change so common in infantile syphilis appeared, in the main, to be secondary to the degeneration of the hepatic parenchyma produced by toxins upon the individual liver cells.

The Post-Natal Form.—Regarding this form, the speaker said that he knew of no thorough study having been made of the visceral changes occurring during the period of secondary manifestations. It was probable that in the majority of cases the liver was not greatly affected during this stage of the disease, otherwise it was quite unlikely that a fair number of instances of death during this period should not have been investigated. Jaundice was not uncommon in secondary syphilis, but its significance and causation had excited much discussion. He was of the opinion that it was an indication of the functional disturbance set up in the organ in connection with its efforts to excrete the toxins. A few exceptional cases of late jaundice had been shown to be the result of the pressure of enlarged glands. He had elsewhere pointed out that a fairly extensive fibrosis was not infrequently met with many years after the primary infection.

Gummata. — The large gummata were the most characteristic lesions of syphilis of the liver. Fibroid pittings and cicatrices of the liver remaining after absorption of the gummata were often met with in the livers of persons who had not for years presented any evidence of syphilis. There were gummata with cheesy contents surrounded by fibrous tissue, which were latent; and others, again, surrounded by hepatic tissue and an infiltration of small round cells, showing that the disease was still active. In the adult liver, as in that of the infant, gummatous development might occur at any period after the disease had become generalized throughout the body. The chief lesions met with were: (1) Large, well-formed gummata; (2) miliary gummata; (3) acute hepatatis associated with jaundice; (4) atrophic cirrhosis; (5) obsolescent gummata undergoing absorption; and (6) obsolete gummata, represented by a puckering of the organ and a relatively small amount of fibroid growth. A further alteration, not seen in the infant, was the development of tumor-like outgrowths, so sharply defined and so large as to lead sometimes to the false diagnosis of malignancy. Microscopically these outgrowths showed an outer layer enclosing dense fibroid tissue, with more or less evidence of gummatous degeneration scattered through it. In congenital syphilis, generalized fibrosis predominated; in the adult, the granulomatous changes were the most marked. The explanation was to be found in the fact that the young liver cell was more susceptible to injury by toxic substances, and was more prone to degenerate. The fibrosis was mainly of the replacement type, it should be noted, and this explained why the fibrosis predominated. The adult liver cells could relatively resist the toxins to a great extent. In the adult there was not so much tendency to excessive fibroid change as in the young. A similar fibrosis affected the other tissues to a certain extent; it had just been shown by the preceding speaker that it affected the heart. The chief reason, however, why the liver showed the fibrosis most prominently was because this organ had to stand the brunt of the injury produced by the toxins. It should be remembered that it was impossible, from a study of

the syphilitic liver, to draw any distinction of anatomical importance between secondary and tertiary lesions.

Visceral Syphilis in Children.—Dr. A. Jacobi discussed this part of the subject. He said that in the lungs of syphilitic children were to be found gummata or the so-called "white pneumonia." Combinations of syphilis and tuberculosis were found at an early stage, when syphilis had been inherited from the father and tuberculosis from the mother. The pneumonia of inherited syphilis should be diagnosticated only when there was interstitial granulation. The heart was not frequently affected, but fibrous myocarditis and gummata had been met with in the newly born. The small arteries showed endarteritis. A low percentage of hæmoglobin and a large number of nucleated blood cells had been observed in syphilitic children. Certain observations seemed to show a connection between purpura and symmetrical gangrene and syphilis. The thymus gland was not often affected by hereditary syphilis, but more frequently than was generally assumed to be the case. The bronchial glands were usually enlarged, but the other lymph bodies were not ordinarily affected. Visceral syphilis need not be generally so intense, but often persisted through infancy and childhood. Sometimes there was ascites. The jaundice of syphilis of the liver did not develop until a few weeks after birth, and was thus distinguished from common icterus of the newly born. The liver was large and hard, and its tissue was dark and hyperæmic. It presented various yellowish spots and cicatricial areas. In syphilitic infants born alive, and particularly in those who survived after successful antisyphilitic treatment, the liver was not always swollen. He had seen one case of atrophy of the liver, apparently of syphilitic origin, and therefore very rare. The spleen showed similar changes to the liver. Its capsule presented the results of chronic inflammation, and gummata were also present. The diagnosis of syphilitic enlargement of the liver during life should be made with great care. The normal liver of the young was comparatively large, and fatty liver was quite frequent. Other causes of enlargement must always be considered before making the diagnosis of syphilis of the liver. Cirrhosis of the liver, although in many cases syphilitic, might result from alcoholism, malaria, or contraction or obliteration of the biliary ducts. Ascites, when found, was rather the result of obstruction or of hyperæmia than of hepatitis. The intestine was not liable to exhibit many changes. In rare cases gummatous infiltration or ulceration might be found in the mucous membrane. Occasionally there was diffused infiltration or pseudomembranous peritonitis, with adhesions.

Retarded Syphilis.—The changes found in retarded syphilis were of the same general character. It was well known that syphilis did not always declare itself frankly, especially in infants whose parents had received treatment for the disease. He had seen children of five or six years without evidence of syphilis, who yet did not thrive. He was positive that the metasyphilitic condition of Fournier did exist, and that these children did not develop properly because of syphilitic infection in the parents. These children did not thrive under the administration of arsenic and iron, but showed very marked improvement under even mild antisyphilitic treatment.

Syphilis in Relation to Obstetrics.—Dr. Egbert H. Grandin discussed this phase of the subject. He said that when syphilis affected the uterus and its appendages, the lesions were the same as were found in other organs, and they ran the same course, so that, as a distinct entity, syphilis had never appeared of such importance to the obstetrician as had that other great venereal disease—gonorrhœa.

Danger from Digital Examinations.—There were in this city a number of physicians who were suffering from syphilis that had been acquired as a result of carelessly examining women carrying an unsuspected syphilitic lesion in some portion of the genital tract. By "carelessly" he meant that a digital examination had been made without a previous inspection of the parts. There was good reason for adopting the rule that inspection should always precede vaginal touch.

An Important Cause of Sterility.—Syphilis was one of the commonest causes of sterility, both relative and absolute—in other words, conception did not take place at all, or, if it did occur, was followed by abortion. In many cases it had seemed to him that the women conceived, but miscarried at the very next menstrual period because of the altered state of the endometrium. Syphilitic infection might at the present time be reasonably assumed as the cause of habitual miscarriage after other causes had been excluded.

The Fœtus Infected by the Male.—If a man were syphilitic, the woman might or might not escape, while the fœtus was still infected. In no other way could he explain the well-authenticated instances of children having been born syphilitic of women who had never presented any syphilitic lesion, or those cases in which syphilitic infants had infected their mothers. It was the syphilitic influence derived from the male which infected the infant, and this, in turn, infected the mother. Given a syphilitic woman at the time of conception, the fœtus could not escape. Given a woman becoming syphilitic during gestation, the fœtus might escape.

Infection Occurs through an Unhealthy Placenta.—Observations on animals had shown that most infectious diseases could be transmitted to the fœtus in utero. The transmission of tuberculosis, however, had not yet been noted, but it should be remembered that tuberculous persons were not apt to conceive and carry children to full term. Disease was carried throughout the system either by the blood current or by the lymphatic stream, no matter what the point of entrance of the disease germ. There was no direct connection between either the blood or the lymphatic system of the mother and of the fœtus; the fœtus received its nourishment through the maternal blood in an indirect fashion through the placenta. The process was either one of simple transudation, or else there was a transudation of leucocytes. Modern research favored the latter view. For the transfer of disease from the mother to her child in utero there must be a pathological state of the placenta—in other words, a healthy placenta constituted a barrier to the transfer of disease to the fœtus. If the mother should be infected during the development of the placenta, the leucocytes within the latter were either diseased, or the resisting barrier was so feeble that the fœtus became infected.

Treatment of Habitual Abortion.—When either parent manifested syphilitic lesions, both should be systematically treated according to the well-recognized methods. There could be little question that in this way the disease could be brought under control. When the mother became infected during pregnancy active treatment might spare the fœtus, particularly if the pregnancy had advanced to six months. In cases of so-called habitual miscarriage, both parents should be subjected to antisyphilitic treatment. Wet-nursing was obviously contraindicated when either parent bore evidence of syphilis, even though the infant had escaped. It was the imperative duty of the mother to nurse such a feeble infant whenever possible, but when this could not be done the child must be reared artificially.

The Marriage of Syphilitics.—He was of the opinion that the time would come when, for the protection of the community, legislation against certain marriages

would be demanded by public opinion. The syphilitic was, in many ways, as great, if not greater, a menace to the public than the victim of tuberculosis. Much had been said of late about the danger to the community of tuberculous patients, and yet the profession had been silent regarding those afflicted with syphilis and gonorrhœa. The speaker had been informed that in Massachusetts and in Texas there existed laws against the marriage of syphilitics, but he had not been able to learn what had been the result of this legislation. The results should be exceedingly good if the laws were properly enforced. Such laws could effect but little if applicable only to a few States, and hence such legislation must be national to be effective. This could come only by careful and persistent education of the public. Not one of the infectious diseases against which it was customary to establish quarantine was followed by such serious sequelæ as was syphilis.

The Iodides are Arterial Dilators.—Dr. Andrew H. Smith said the fact should not be lost sight of, that the iodides were not only antisyphilitic remedies but also arterial dilators, and that as such they not only combated syphilis, but rendered easier the work of a heart which had been more or less crippled by arterial fibrosis. He had always felt that the good effect of iodide of potassium in cases of aneurism was to be ascribed to its power to diminish arterial tension rather than to its action as an antisyphilitic.

The Iodides in Pelvic Inflammatory Thickenings.—Dr. A. Jacobi said that he had seen many cases of sterility, and of inflammatory thickenings in the female pelvis, which, although not syphilitic, had yielded gradually but surely to the persistent use of the iodides and of mercury. He had treated in this way for many months at a time women who, through carelessness or otherwise at childbirth, had developed such a pathological condition in the pelvis that they had been advised by others to submit to the removal of the uterine appendages. Some of these women had not only recovered, but had subsequently borne children. From our knowledge of the action of these drugs in the non-syphilitic forms of hepatic cirrhosis and of tabes, it was evident that the improvement or cure following their administration did not necessarily mean that the pathological state had been brought about by syphilis.

Action of Iodine in Syphilis.—Dr. B. Lapowski said that the action of the iodides in syphilis was to be explained by the fact that, when micro-organisms were present in the system, the iodides were decomposed, and the iodine was set free. It was customary to say about a case in which the father had been syphilitic, but had been treated before marriage, and the mother had become infected with syphilis during pregnancy, that the child would be born free from evidences of the disease. Syphilis existing for years in the father would naturally produce upon the tissues an autoinfection, and this, when transmitted to the child, did not take the form of true syphilis, but made itself manifest by evidences of malnutrition and imperfect or delayed development. Nevertheless, these children responded well to antisyphilitic medication.

A Vote of Thanks.—The Academy unanimously tendered to Dr. J. George Adami a vote of thanks for his kindness in coming and participating in the discussion.

SECTION ON PEDIATRICS.

Stated Meeting, March 8, 1899.

Henry Koplik, M.D., Chairman.

Three Steps in the Tuberculous Process in Children.—Dr. David Bovaird read a paper with this title. The facts presented were drawn from observations made in the autopsy room of the New York Foundling Hospital. Inasmuch as more than three-fifths of the children were cared for outside the institution itself in the humblest homes of the city, it seemed fair to assume that whatever peculiarities in the life history of the remainder which might be due to the surroundings and regulations of institution life were fairly neutralized, and the conditions found from observation of the material met with in the hospital might doubtless be considered as fairly representative of the conditions maintained among the children in this community in general.

First: The Primary Lesions in Tuberculous Children.—In 1891 Northrup published in the *New York Medical Journal* an article entitled "Tuberculosis in Children: Primary Infection in the Bronchial Lymph Nodes." In a series of 125 autopsies on tuberculous subjects he found 13 cases in which the tuberculous lesion was confined to the bronchial lymph nodes; 9 in which the tubercles were limited to the bronchial nodes and lungs; 42 cases of general tuberculosis in which the only cheesy masses were in the bronchial lymph nodes; 20 cases in which the oldest lesion was in the respiratory tract. Of the series of 125 cases he considered 88 examples of primary infection of the bronchial lymph nodes, 3 of the mesenteric lymph nodes, and 34 intermediate.

The conclusions drawn were based upon the records of a further series of seventy-five autopsies on tuberculous subjects in the same institution. Four cases showed a tuberculous lesion of the bronchial nodes alone, and in none of these did the lesion stand in direct relation to the cause of death. With one exception there was no other case in which the tuberculous lesion was confined to one particular anatomical area. In no case were tuberculous lesions of the intestines or mesenteric nodes discovered without similar accompanying lesions of the lungs and bronchial lymph nodes. In the great majority of cases the tract within which the primary lesion must have been born could be determined. The avenues by which the tubercle bacillus may be admitted into the system were: (*a*) The placenta; (*b*) wounds of the surface of the body; (*c*) the intestinal tract; (*d*) the respiratory tract. In none of the cases were evidences found of the entrance of the infection by either of the first two routes. The question then lay between the last two routes. In none of the seventy-five cases in which tuberculosis was found in the body was there a failure to find tuberculous lesions of the bronchial nodes. In sixty of these seventy-five cases evidences were found that the entrance of the tuberculous infection took place through the respiratory tract, the primary lesion being either in the lungs or bronchial lymph nodes. In eight cases the lesions of the bronchial and mesenteric lymph nodes were so nearly alike that the question of priority could not be determined. In seven cases the records were not complete.

Second: The Early Clinical Manifestations.—In cases in which the bronchial lymph nodes were alone affected no suspicion was entertained until the lesion was found at the autopsy, death having occurred from diseases which had no relation to these nodes. The physical signs usually given as indicating their presence were regarded as insufficient to serve practical purposes. Dulness over the upper part of the sternum, even if present, was more often due to the persistence or the enlargement of the thymus gland than to the enlarged bronchial or mediastinal nodes. The presence of the venous hum over the manubrium on hyperextension of the head was rarely found to be of any value. In the service of Drs. O'Dwyer and Northrup at the Foundling Hospital the diagnosis of tuberculosis of the bronchial nodes has never been made. Tuberculosis, long latent in the bronchial glands, may be roused and disseminated under the influence of the

outbreak of an intercurrent disease, the symptoms of the latter entirely masking the presence of the tuberculosis. This point was illustrated by cases.

On searching the records of cases for the early evidences of the invasion of tuberculosis, only two of importance were found—viz., (1) progressive emaciation, not explained by any other disease; (2) continued elevation of temperature similarly conditioned. It had become the recognized practice that any child over the age of six months, presenting symptoms of marasmus (progressive emaciation), should be carefully watched and examined for some explanation of the wasting, and frequently tuberculosis was the cause finally determined. Persistent fever, not otherwise explained, was also very suggestive, especially under the age of two years, by reason of the relative rarity of typhoid fever at that age. Cases might be met with which ran their course without fever or even with subnormal temperatures.

If local signs were to be found they must be sought for in the lungs. Of the seventy-five cases, the lungs were involved in sixty-five, the lesion varying from the smallest miliary tubercles to diffuse consolidation of a whole lobe or an entire lung with caseous degeneration and cavities in the final stages. The early manifestations were confined to râles, usually subcrepitant or coarse. It must be frankly admitted that the points suggested for the early diagnosis of the invasion of tuberculosis were insufficient; they might suggest the possibility of the presence of this disease, but they did not differentiate it. The truth was, that the great majority of young children affected with tuberculosis died without the recognition, often without suspicion, of the presence of the lesions, the disease being most often confused with chronic broncho-pneumonia or entero-colitis.

Third: Complications and Terminal Lesions.—These were found either in the extension or intensification of the local process in the lungs and bronchial lymph nodes, or in the general diffusion of the tuberculous infection. In some cases the softening and formation of abscesses in the bronchial lymph nodes had led to death either by extension of the process to the lungs or by rupture of the abscess into either the œsophagus or trachea. More often the process in the lungs led to the formation of large areas of consolidation and finally cavities, the child dying of exhaustion. Cavities were found in twenty-five of the cases. The final stage was more often reached by the dissemination of the tuberculous infection. A general miliary tuberculosis was recorded in fifty-two of the cases. Little was known of the process by which this dissemination was brought about, but it evidently might occur by the communication of a caseous nodule in the bronchial nodes or lungs with either a blood-vessel or lymphatic. The kidney was involved in thirteen cases, the spleen in thirty-seven, the liver in twenty-eight, the heart in one, the pericardium in two, the peritoneum in six, the adrenals in two, and the brain in twenty-two. In twenty-two cases tuberculous meningitis was found; in all but two the meningitis was either a part of a general miliary tuberculosis or was accompanied by advanced changes in the lungs—hopeless cases. To summarize briefly the points:

(1) The primary lesion of tuberculosis in children was regularly found in the bronchial lymph nodes or lungs. Combining Northrup's series with that included in the paper, we had:

	Northrup's	Bovaird's.	Total.
Infection by respiratory tract, (bronchial nodes or lungs).	88	60	148
Infection by mesenteric lymph nodes	3	0	3
Intermediate	34	15	49
	125	75	220

(2) The early manifestations of tuberculosis in children were extremely indefinite and uncertain. (*a*) Tuberculosis of the bronchial lymph nodes alone could not be diagnosticated with certainty. (*b*) Latent tuberculosis was often aroused and disseminated by the invasion of another disease, such as measles or diphtheria, the presence of tuberculosis being recognized only at autopsy. (*c*) The common type of tuberculosis in children was acute miliary tuberculosis; it might occur in well-nourished children. (*d*) The course of tuberculosis was most often confused with chronic broncho-pneumonia or entero-colitis. (*e*) The early manifestations, if any, were progressive emaciation, fever, and râles over the lungs; these were insufficient for purposes of differentiation.

(3) The terminal lesions comprised: (*a*) Extension of the tuberculous process in the bronchial lymph nodes and lungs, resulting in the formation of abscesses and cavities—chronic pulmonary tuberculosis. (*b*) Diffusion of the tuberculous infection, constituting acute miliary tuberculosis, the principal viscera being involved in the following order: spleen, liver, kidney, heart. Involvement of the brain was most frequent, the meningitis being regularly fatal. (*c*) When bone was involved and prolonged suppuration followed, waxy degeneration of the viscera might occur.

Stereopticon Illustrations. — Dr. William P. Northrup then illustrated by means of stereopticon views the pathological points of Dr. Bovaird's paper. Among others he showed the first lesions of tuberculosis. He said he liked to think of tuberculosis as a malignant tumor, and the first illustration showed a collection of cells characteristic of the first stage in malignant tumors. He next showed a section of the alveolus of a lung with a grouping of cells which was progressing to softening in the centre, this also being characteristic of malignant tumors with cheesy degeneration in their centres. First the breaking down of the cells, and at last granular masses passing through the stage of coagulation necrosis, were illustrated. Interesting views of sections of the liver, arteries, veins, brain, mesentery, etc., were shown upon the screen. There was also shown a streptococcal broncho-pneumonia having a double infection from measles and diphtheria, very similar to a tuberculous broncho-pneumonia.

Dr. R. G. Freeman said that all the bacteria carried into the air passages by dust found lodgment on the mucous membrane, and an inflammation or abrasion of this mucous membrane in some part of the air passage might offer an opportunity for the invasion of the human organism by some germ. The point of invasion depended upon the point of lodgment of the bacteria and the point of inflammation or abrasion of the mucous membrane. It was still a question whether the tonsil was a port of entry of primary tuberculosis, yet the lymph nodes of the neck might be considered a frequent starting-point, and often tuberculosis of these lymph nodes existed when there was no evidence of other tuberculous lesion. The frequency of tuberculosis acquired by inhalation was well established. Whether tuberculosis was ever due to the ingestion of food containing the tubercle bacilli was a matter that admitted of more discussion. He did not believe that any one in New York had seen at autopsy cases evidently due to intestinal infection. Eminent European observers took an entirely different view. Many cases seen at autopsy with considerable involvement of the intestinal lymph nodes seemed to the speaker more likely to be due to infection of the intestinal than of the respiratory tract. Dr. Prudden, in hundreds of cases of intra-tracheal injections in rabbits, did not recall a case of involvement of the mucous membrane of the intestines. Tubercle bacilli that gained access to the body by the intestine were

readily carried by the lymph stream to the thoracic duct, into the superior vena cava, the right side of the heart, and out into the lungs. Evidence of infection of the thoracic duct and veins was not often reported, because such lesions were frequently overlooked. In the opinion of those who were accustomed to look systematically into the thoracic duct and pulmonary veins in cases of general tuberculosis these were the common sources of dissemination of the bacilli. It had been proved that living tubercle bacilli could pass through the gastric juice of guinea-pigs uninjured, and the fact that lesions of undoubted intestinal origin were found proved that they could pass through the human stomach uninjured. Unless they proved rapidly fatal there possibly would exist, in the intestinal tract, lesions of the mesenteric lymph nodes, of the thoracic duct, of the veins, of the liver, and of the spleen. Frobelius found that in four hundred and sixteen autopsies of children the intestines were involved in about twenty-seven per cent., the spleen in eighty-six per cent., and the liver in eighty-eight per cent. Schwer, in one hundred and twenty-three autopsies, found the intestines involved in sixty-one per cent. of the cases. The speaker thought that we must conclude that when lesions found were everywhere advanced, it was impossible to state what the tract was in which the invasion originally occurred, for in cases of intestinal origin the lung and bronchial lymph nodes might very soon show very prominent lesions, while as soon as the lung became considerably involved a reinfection of the intestines from swallowed sputum might take place.

In opposition to the opinion that intestinal tuberculous infection was at all common we had the fact that clinical evidence of such infection was somewhat meagre. Dr. Sims Woodhead reported a case of a dairy in England where three cows were found to have tuberculous disease of the udder. In the institution to which the milk was supplied the mortality from tuberculosis during the last year was thirty per cent., and during the preceding year forty per cent., of the total mortality. Brouardel reported that in a boarding-school in which there were fourteen girls five contracted tuberculosis from drinking the milk of a tuberculous cow. Ollivier tells of another boarding-school in which milk from a tuberculous cow was used, and in which thirteen cases of tuberculosis occurred. Many other instances were reported. The speaker believed that inhalation tuberculosis was the much more common form, yet he did not think we were able to say that the intestinal origin was as rare as was generally held at present, since from experiments on the lower animals and from our knowledge of the channels by which the bacilli were disseminated, the lymph and blood vessels, we knew that in cases of intestinal infection with tuberculosis the bronchial lymph nodes and lungs were likely to show lesions.

Dr. Curran said that his experience in the autopsy room of the Infant Asylum tallied with that of Dr. Bovaird. Regarding those cases in which a diagnosis might have been made it was a common thing to find pain referred to the child's abdomen, and afterward to find tuberculosis of the spleen, of the lung, etc., particularly in marasmic cases; it was very common indeed and was not considered much of a joke that such a condition had not been thought of. There were many cases in which tuberculosis was not suspected, in which there was perhaps much emaciation, and, the child dying of diphtheria or broncho-pneumonia, evidences of a disseminated tuberculosis were found. As to the presence of cavities, twenty-five per cent. exceeded the cases noted by him; in only ten per cent. of his cases were cavities found. All cases of enlarged lymph nodes were not considered tuberculous without a microscopical examination. He did not think cases should be considered tuberculous unless a microscopical examination had been made. Regarding children who had been healed, the speaker said he had unquestionably had three or four cases in which the tuberculous process had been healed. He referred to two children, the pictures of health. Both died from diphtheria, and in both were found calcareous nodules, the size of a walnut in one and a disseminated process in the other. The tuberculous process was never suspected in either case, and yet these calcareous nodules were found in both. He did not attempt to explain it. Intestinal cases he did not have; he had had cases in which there was intestinal involvement, but never any in which the lung or possibly the respiratory tract seemed to be other than the seat of the primary infection.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, February 8, 1899.

T. Mitchell Prudden, M.D., President.

Complete Stenosis and Dilatation of the Appendix.—Dr. A. V. Moschcowitz presented an appendix removed by operation three weeks previously, from a girl of twelve years, who had had, while under his observation, two attacks of appendicitis. One of these had occurred last July, and had not been characterized by very marked symptoms. At that time operation had been advised, but had not been strenuously urged. The second attack occurred in December, and had also been mild. Neither the temperature nor the pulse had been high, and the pain had been moderate. Recovery had taken place in a short time, and the operation had been done in the interval, and by the method of blunt division of the muscles. The appendix had been removed without difficulty. He had then been impressed with the remarkable thinness of the appendix at the attachment to the cæcum. He had made it a practice, in operating upon cases of appendicitis, to disinfect the mucous membrane by the insertion of a fine point of the Paquelin cautery. This procedure had been impossible in the present instance, because the aperture would not admit even a fine probe. On cutting open the appendix a careful microscopical examination had shown the obliteration of its canal and disappearance of the mucous membrane and muscular layer, only the serous membrane and the connective tissue being left near its attachment to the cæcum, while the distal portion of the appendix was dilated in a balloon shape.

Complete Transverse Rupture of the Aorta.—Dr. Leon T. Le Wald presented a specimen showing complete transverse rupture of the aorta. It had been taken from a woman, seventy years of age. The pericardium had been distended with blood, and there had been a rupture into the pericardial sac from the tissues around the root of the aorta, together with a complete transverse rupture of the middle and inner coats of the aorta, one inch above the aortic valves. The blood had dissected its way up as far as the bifurcation of the carotid arteries, and down into the heart itself beneath the pericardium. Death had resulted from the pressure on the heart. There was no history of injury and no evidence of violence, so that the rupture had evidently been spontaneous. The patient had been found dead on the steps of a building, and it was supposed that she had died from exposure to cold, but as she had been suffering from bronchitis it was possible that the rupture had occurred during an attack of coughing.

Spontaneous Rupture of the Inner and Middle Coats of the Aorta with Dissecting Aneurism.—Dr. Le Wald presented specimens from another case of rupture of the aorta. The subject was a man, fifty

years of age, who had died suddenly while eating. The autopsy had revealed a rupture through an atheromatous patch in the descending arch of the aorta. There had been extensive hemorrhage into the right pleural cavity, and a smaller rupture into the left pleural cavity. The blood had dissected between the outer and middle coats of the aorta and its large branches.

Spontaneous Rupture of the Transverse Arch of the Aorta with Dissecting Aneurism.—He also presented still another specimen of this condition, occurring in a woman about fifty years of age. The immediate cause of death had been rupture of the dissecting aneurism into the pericardial sac. The extravasation and dissecting aneurism in this case had also been very marked, particularly in the abdominal aorta. Dr. Theodore Janeway had looked up the literature of the subject, and had found eighteen similar cases, in all but two of which the rupture had been spontaneous. In thirteen out of the sixteen cases of spontaneous rupture, the rupture had taken place into the pericardium, in two into the mediastinum, and in one there had been no special extravasation. In four of the cases there had been complete rupture without dissecting aneurism, and one with a dissecting aneurism. Of the remaining eleven cases the rupture had been of the middle and inner coats, with the formation of dissecting aneurisms in all but one case. Death had been sudden in eleven of the sixteen cases mentioned. Fourteen of the cases had been in men, and two in women.

Pulmonary Valve with Four Cusps.—Dr. Le Wald then presented a pulmonary valve having three cusps of good size, and a fourth larger than the others. Two of the valves were fenestrated. The specimen had been taken from a Chinaman, sixty years of age. No abnormal sound had been detected over the valve during life.

THE PRESIDENT recalled a case formerly presented to the society, in which, with a fresh rupture of the aorta and considerable extravasation, there was evidence of several earlier partial or complete ruptures of the vessel which had healed.

Adrenal Deposits in the Liver.—DR. W. B. NOYES presented gross and microscopic specimens of a liver which had been removed from an Italian, who had been treated in the Columbus Hospital for cirrhosis of the liver for a month before his death. The autopsy had revealed a hypostatic pneumonia, rather a typical, large, hobnail liver, and the lesions of chronic diffuse nephritis. The entire liver, besides presenting the ordinary appearance of a cirrhotic liver, contained a number of whitish nodules, about the size of an English walnut, and resembling areas of degeneration or possibly isolated gummata which had broken down. Under the microscope these nodules were found to be composed of glandular structure, bearing a very close resemblance to the suprarenal gland. In the periphery of the liver there was more normal tissue.

DR. CARLIN PHILIPS said that he had had an opportunity of examining this liver. On section, in the gross, it had presented a peculiar, mottled appearance, which at first did not suggest a secondary tumor formation. Scattered throughout the tissue were yellowish areas with indistinct outline, associated more especially with the portal vein. Many of the veins themselves were filled with whitish material. These areas microscopically were made up of large clear cells with small round nuclei, which resembled in every way those cells from the zona fasciculata of the suprarenal body.

DR. ISAAC ADLER said that he did not think this condition was quite so rare as would appear from consulting the text-books on pathology. Many specimens had doubtless been classed as adenomata when they had really been portions of the suprarenal gland. He had seen two undoubted cases of adrenal deposits in the liver. Such deposits in the pancreas had also been described.

A Case of Addison's Disease, with Simple Atrophy of the Adrenal Body.—DR. CARLIN PHILIPS read a paper with this title, in which he reported the following case: A man, forty-two years of age, had been admitted to the City Hospital, on August 10, 1897, with a negative family history. He had had his first attack of rheumatoid pains twenty years before, and stated that he had begun to turn yellow fourteen years ago. Six weeks before admission he had had an attack of weakness, associated with swelling of the feet and pains in the legs and ankles. At the time of entering the hospital his entire body had been of a yellowish color, which was especially dark over the areas pressed upon by his clothes. The ocular conjunctiva was pearly-white; the mucous membranes were very pale; he was mentally dull; the bowels moved three or four times a day. On September 11th he had had severe darting pains in the neck and occipital region, and more diarrhœa, followed by impaired resonance over both infraclavicular regions. On November 5, 1897, physical examination of the chest had revealed bronchial breathing and coarse mucous râles, but no cavity formation. Examination of the urine had been made at intervals, but with negative result. Death had occurred on February 17th. At the autopsy, which had been made a few hours after death, it was noted that there was extreme emaciation and that the skin of the entire body was of a brownish mulatto color, most marked on the anterior surface of the thorax, on the scrotum, head of the penis, and dorsum of the hands and feet. There was no pigment deposit on the buccal mucous membrane. The upper lobe of the right lung showed moderate anthracosis, while there were tuberculous nodules in the apex, and a few in the lower lobe of the left lung. The bronchial glands were enlarged and calcified. The pericardium contained about twenty cubic centimetres of fluid. The heart was of average size, and presented no valvular lesions, but the left ventricle was dilated and its walls were thin and of a pale brown color. The liver was small and reddish-brown; its lobules were easily seen and had darkish centres. The gall bladder was normal. The stomach was small, but otherwise normal. The pancreas was likewise small, and was the seat of interstitial hyperplasia. The mucous membrane of the small intestine was pale and covered with mucus. The mesenteric glands were small and firm. The spleen was somewhat enlarged. The right kidney was enlarged; its cortex was pale and yellowish, and its capsule stripped off, leaving a fine granular surface. The left suprarenal was two inches in length and three-fourths of an inch in width by three-fourths of an inch in thickness. The right kidney was of the same dimensions, and appeared normal in every way. The surface was smooth and pale, and the consistence was normal. The medullary portion was of proper thickness, and there was no evidence of tuberculous disease. The pia mater of the brain was extremely œdematous, opaque, and thickened. The brain itself was small, symmetrical, and very pale. On the under surface of the dura were small hemorrhagic extravasations. The left suprarenal was two inches in length, three-fourths of an inch in width, and one-fourth of an inch in thickness. The right suprarenal was of the same dimensions. The general appearance was normal in every way, possibly somewhat atrophic. The surface was smooth and pale; the consistence was normal. On cut section the medullary portion seemed to be of normal thickness relative to the cortex. No evidence of tuberculosis was present. The anatomical diagnosis was chronic miliary tuberculosis of the lungs and bronchial glands; subacute congestion of the liver, chronic interstitial pancreatitis; chronic

catarrhal enteritis; chronic interstitial nephritis; simple atrophy of the adrenal bodies.

The microscopical study of the case had been conducted with the aid of a great variety of stainings. Many of the sections of the adrenal bodies appeared normal on casual examination, but more careful scrutiny showed a definite pathological state. The intracellular substance was homogeneous, finely granular, and, in places, fibrillated. The fibrous capsule was apparently not thickened, and was free from inflammation, tuberculous or otherwise. The individual glomeruli varied greatly in size and appearance. In places this zone of glomeruli appeared much thinner than normal; in others it was entirely absent. The portion of the gland represented by the zona fasciculata presented many changes, particularly the irregularity of the tubules, the branching columns of cells having an irregular course and being intimately mixed with the zona reticularis. The protoplasm was finely granular, and the walls of the individual cells could not be made out. The fatty changes so commonly seen in this region were noticeably diminished, there being very few of the large, clear fatty cells so constantly seen in the normal organ. The most prominent departure from the normal was seen in the region adjacent to and including the upper medullary portion, or the zona reticularis. The cells here, instead of being in small anastomosing columns, remained more or less distinct, in groups of two or three—the most distinctive evidence of atrophy. The polymorphism of the cells was very noticeable. Many of the large homogeneous giant cells were seen. The protoplasm appeared nearly homogeneous and without definite limits. Many of the smaller cells of this zone also showed evidences of degeneration. The intracellular substance and fibrous reticulum were especially noticeable, probably because of the atrophy and disappearance of the cell columns in this portion. There was apparently no increase in the fibrous stroma of the gland. The reticulum throughout the gland was rich in nuclei, which stained deeply. The medulla of both glands showed but little evidence of disease. Here and there, as often seen in the normal organ, were portions of the cortex. At the junction of the medulla with the cortex were ganglion cells staining deeply with Nissl's stain. The right and left semilunar ganglia were stained in various ways. With Nissl's stain the cells appeared large and fully formed. The Nissl bodies were well formed, standing out clearly in the cytoplasm. Aside from the increase of the pigment there was no abnormality.

Summary of microscopical findings: (1) Diminution in size and number of glomeruli of the zona glomerulosa. (2) Diminution in length with great irregularity in course of the tubules in the zona fasciculata. (3) Diminution of the fatty contents of the cells in the zona fasciculata. (4) Colloid degeneration of circumscribed areas in the zona fasciculata. (5) Marked atrophy with increased pigmentation of cells in the zona reticularis. (6) General diminution in size of the medulla, with the presence of transposed cortical elements. (7) Presence of many mononuclear giant cells. (8) Thickening of the vessel walls with perivascular infiltration. (9) Complete absence of chronic interstitial or tuberculous inflammation.

Dr. Philips said that a review of the literature of Addison's disease seemed to indicate that, aside from tuberculous disease, simple atrophy was apparently the most common cause. Up to the present time, fourteen cases of simple atrophy of the suprarenal bodies had been reported, associated with symptoms of Addison's disease, the present case being the first reported in this country. Tuberculosis had been present three times, and in none of them had the changes in the glands been so insignificant as in the case just reported. In three of the cases the gland had been entirely absent. The pathogenesis of simple atrophy of the suprarenal gland was practically unknown. The case just reported was rather one of perversion than of total lack of function.

Dr. P. A. Levene said that the relation between disease of the suprarenal bodies and Addison's disease had not been fully established, and he understood that there were on record cases of Addison's disease without any pathological alteration of the suprarenal bodies. It was known that pigment could be produced by any proteid body, and hence such a formation could take place in any cell. He was disposed to believe that the chief symptom of Addison's disease—pigmentation—was a symptom of various diseases, just as glycosuria was only a symptom of diabetes. The pigmentation might result from various causes, and this would explain the different findings in the supra renal bodies.

Dr. Isaac Levin said that, while it had been shown that most of the cases of Addison's disease had been accompanied by some alteration in the suprarenal bodies, in twelve per cent. they had been perfectly normal. On the other hand, there were cases in which the suprarenal bodies were the seat of cancer or other lesions, and yet these lesions were not accompanied by symptoms of Addison's disease. Physiology alone seemed competent to answer the question as to the relationship of the suprarenal bodies to Addison's disease. Physiology had demonstrated that extirpation of the adrenal gland caused death in fifteen hours, proving that the function of this gland was important to the organism. It has been further shown that neurin, a product of proteid metabolism found in the urine of patients with Addison's disease, is toxic if injected hypodermically into a frog. A substance allied to neurin had been found in the suprarenal bodies themselves. Thus this neurin may be the factor which will show us the true relation between Addison's disease and the suprarenal bodies.

A Case of Weil's Disease, with a Short Experimental Study of Infective Icterus.—Dr. Harlow Brooks read this paper. He said that Weil's disease was characterized by a sudden onset, usually with chill, and always with high fever. This sudden and violent onset served as a valuable distinguishing sign between Weil's disease and typhoid fever with jaundice. In most cases delirium developed early, and albuminuria was a constant manifestation. Usually within eight or ten days the temperature would fall by lysis, and the other symptoms would become correspondingly better. Relapses were not uncommon. The disease often occurred epidemically, but was apparently not contagious. It was most commonly observed in healthy male adults, especially in Germans, French, and Russians. The disease was almost certainly the result of an infection, and the source was undoubtedly putrid animal flesh. It had long been known that butchers were very commonly affected, as were also those classes who consumed sausages largely. The speaker said that he had seen one case which had followed eating heartily of lobster salad. The disease was usually marked by congestion and swelling of the spleen and lymphatics, together with parenchymatous nephritis, swelling and parenchymatous degeneration of the liver, and the presence of pronounced icterus. There was a marked resemblance between a fatal case of Weil's disease and acute yellow atrophy of the liver. The microscopic lesions were quite similar in the conditions. Acute infective icterus might be easily confounded with mild yellow fever. Bacteriological investigation of the disease had, for the most part, yielded negative results. Jaeger had, however, studied ten cases of the disease, three patients having died, two coming to autopsy. He had succeeded in isolating

from these cases a special germ, and claimed that by inoculating it into mice he had produced lesions similar to those of Weil's disease.

Dr. Brooks then made the following report of a case that had come under his own observation. The patient was an American laborer, thirty-three years of age, who gave no history of having eaten tainted meat, and who had been in good health up to six days prior to admission to the hospital. The disease had suddenly announced itself by fever and great pain in the muscles, and, three days later, there had been marked jaundice, with diarrhœa and nausea. In a short time there had been marked delirium, and the patient had been comatose on admission to the service of Dr. Meltzer at the Harlem Hospital. At this time the jaundice was extreme, his temperature was 102° F., and the pulse full, strong, and slow; the urine contained albumin. He died the next day. At the autopsy the skin over the entire body was decidedly jaundiced; the pupils were widely dilated; the ankles were œdematous. All of the viscera were deeply bile-stained. The blood was fluid, and stained the hands a bright yellow. The liver was enlarged, its capsule tense, smooth, and non-adherent, the tissues were soft, and the lobules plainly marked. The entire liver tissue was stained with bile. The gall bladder was enlarged, and contained about thirty cubic centimetres of yellow, fluid bile. The duct was patent and normal. The liver weighed three and one-half pounds. The spleen was greatly enlarged; its capsule was tense and the tissue of a deep purple color. The mesenteric and retroperitoneal lymph nodes were enlarged and inflamed. The intestine was distended by gas, and contained a considerable quantity of soft, gray fæces. The kidneys were enlarged, their capsules were intimately adherent, and they weighed six ounces each. Microscopical examination of the cerebrum revealed a large number of degenerated ganglion cells, in a few instances with morphological destruction of both protoplasm and nucleus. The cerebellar cells also showed degeneration. The sections of the liver could hardly be recognized as liver tissue. The entire interlobular stroma showed extensive round-cell infiltration; this engorgement with small round cells extended even into the intralobular stroma. The most marked changes were in the liver cells themselves, and these changes could be divided into three well-defined classes, viz.: (1) Cells bordering on the larger capillaries of the portal system and medium-sized bile ducts, which were almost completely destroyed; (2) groups of cells representing the centres of degenerated liver lobules; and (3) cells from the centres of the lobules, but more nearly normal than in the second class. The cells of the third group remained in the general form of the liver lobule. The protoplasm of these cells, though least involved of all, was very granular and contained large fat spaces. There were numerous micro-organisms found. On bacteriological examination of the liver and spleen, bacilli were found, and these were of two varieties, viz.: (1) A rather short bacillus with rounded ends, staining best with Loeffler's blue, and having an irregularly staining or mottled body; and (2) a variety differing from the first in only being thinner and longer. Enormous cocci (involution forms) were also present, but they were much less numerous than the bacilli. The latter morphologically resembled very closely virulent diphtheria bacilli. It was concluded that the germ was a proteus, and it was found pathogenic to guinea-pigs and mice. It resembled very closely that found by Jaeger in an epidemic. The post-mortem examinations on the inoculated animals showed the mucous membrane of the mouth to be yellowish, and there was usually clear yellowish fluid in the peritoneal cavity. The liver, kidneys, and spleen were always much congested. Microscopical examination of the liver and spleen revealed acute parenchymatous and fatty degeneration of the liver and kidneys. The bladder contained highly acid urine. The bacillus was obtained in pure culture from the peritoneal exudate, the liver, kidneys, spleen, and lymphatic nodes, and was usually absent in the blood. The cortical ganglion cells of the cerebrum and cerebellum, under Nissl's stain, showed very extensive degeneration. The older cultures were found more virulent than the fresh ones; hence it was probable that a toxin was developed. Subsequent experiments demonstrated that the germ produces in culture media a toxin fatal to animals and causing the general lesions of the disease. Various attempts had been made to inoculate animals along the gastro-intestinal tract, but with negative results except in one case—a monkey. The pathological findings in this animal were similar to those in the guinea-pigs. Fatal and typical lesions were induced in a monkey by introducing the germ into the portal vein. Although jaundice was not produced in any of the experimental animals, the liver was always found to have undergone marked degeneration. The nephritis—one of the most important features of the disease—had been uniformly reproduced in the inoculated animals. Post-mortem changes in the tissues had been specially guarded against in the experimental studies. The delirium was probably the result of the degeneration of the ganglion cells. From the foregoing experiments, the speaker said, he did not feel like considering the bacillus a specific one of this disease. He believed that other germs gaining access to the system in the same manner might produce similar symptoms and changes. Weil's disease, acute yellow atrophy of the liver, yellow fever, and phosphorus poisoning were all conditions dependent upon toxæmia, bacterial or otherwise, the lesions found in all were similar, and the symptoms of each were practically identical; hence he said that he thought the pathogenesis in all four diseases was the same, although the specific exciting agent differed. The symptomatology was probably at least partly dependent on the extensive destruction of liver tissue.

Dr. E. Libman said that he had recently observed a case of appendicitis in the second attack. Dr. H. Lilienthal had operated upon the abscess, and from the pus there had been obtained a pure culture of the bacillus proteus fluorescens. On the following day the patient had developed jaundice, tenderness of the liver, enlargement of the spleen, and albuminuria. After a few days these organs had returned to their normal size, and the patient had been convalescent. When Jaeger had described a large group of cases associated with the bacillus proteus fluorescens, it had seemed proper to call the disorder Weil's disease, but the case just reported would throw doubt upon the wisdom of such a nomenclature. It would be better to call these cases infections with the proteus bacillus than to speak of them as Weil's disease.

Dr. P. A. Levene said, regarding the action of the liver on toxins, that this organ was ordinarily supposed to neutralize toxins; yet, according to the description given in the paper, certain bacterial products seemed to have been more toxic after having passed the portal circulation than before.

Pleurisy.—Dropsy—that is to say, anasarca and ascites—sometimes occurs even in acute pleurisy with effusion on one side only, there being no sign of nephritis or of disease of the heart, and the patient recovering completely in about three months. In such cases the dropsy must be due to stagnation of the blood in the right side of the heart.—Dr. Gee, Allbutt's "System of Medicine."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PARLIAMENT—ANÆSTHESIA BY MIXED GASES—PSEUDO-TUBERCULOSIS—ARMY SERVICE—INFLUENZA—THE NEW LYMPH—DEATHS OF PROFESSOR RUTHERFORD AND DR. ARKLE.

LONDON, February 24, 1899.

VACCINATION has several times been mentioned in Parliament. It appears that candidates for the civil services as well as the army and navy have to be vaccinated. The Peabody trustees decline to have anti-vaccination tenants, and the Home Secretary declined to interfere.

Mr. Boulnoir has secured a place for his bill to repeal the clause of last year's act relating to the conscientious objector. It is for second reading on March 1st, but is the fifth order for that day, so it is very doubtful whether it will be reached.

The water companies' bill is merely to enable them to combine to meet local scarcity such as last year's.

The government bill on the adulteration of food and drugs was introduced last night.

The public health acts amendment bill was down for Wednesday but had to be postponed. It is to come on again on March 29th, but is not likely to excite much interest, as it is a sort of consolidation bill, bringing together the powers that have been granted to local authorities in private acts.

It is doubtful whether the medical council's bill to amend the medical acts will be allowed to pass. Some of the corporations have already declared it touches their privileges, among them that inveterate obstructive, the College of Physicians. Fancy such a college objecting to so mild a proposal made by the council!

Anæsthesia was the subject before the Medico-Chirurgical Society at the last meeting. It was brought forward by Dr. F. W. Hewitt, who gave an elaborate account of his investigation into the effects of administering nitrous oxide in conjunction with oxygen or air. Careful records were made in two hundred and thirty-one cases, viz., twenty-two times administrations of pure nitrous oxide, one hundred and seven mixed with different percentages of air, and one hundred and two with oxygen. He found that the most conspicuous asphyxial effects of nitrous oxide (stertorous, embarrassed breathing, cyanosis, and anoxæmic convulsions) could be avoided without interfering with the anæsthetic effects by mixing a proportion of oxygen, either pure or as atmospheric air. The deep stertor of nitrous-oxide narcosis is replaced by soft snoring when a small amount of air is admitted. With thirty per cent. of air or thirteen per cent. of oxygen the respiration is noiseless and free from obstruction. Cyanosis disappears with similar proportions; convulsions cease with thirty per cent. of air or six per cent. of pure oxygen. Reflex and excitement movements were least likely to occur with twelve to sixteen per cent. of air or three to seven per cent. of oxygen. The duration of available anæsthesia was longest with three to eleven per cent. of oxygen. The best results were obtained by mixing oxygen, and the next best with air; the worst with pure nitrous oxide. No doubt the large quantity of useless nitrogen in the air accounts for this. To obtain the best results a regulating apparatus was recommended and the percentage of oxygen increased gradually from two or three per cent. to begin with, up to seven, eight, nine, or ten per cent. Deep anæsthesia can be secured by a mixture of oxygen and nitrous oxide at ordinary atmospheric pressures, which seems opposed to the asphyxial theory of nitrous-oxide narcosis; but Dr. Hewitt remarked that because no obvious asphyxial manifestations made their appearance during the inhalation it was not justifiable to assume that no such interference with oxidation was taking place.

Dr. J. S. Haldane admitted that Dr. Hewitt's research proves that in some cases the gas had a specific effect and that the anæsthesia was not asphyxial. But with gas alone or small percentages of air the time of inducing unconsciousness (fifty-five seconds) corresponded with what his own experiments had shown with nitrogen and hydrogen. He could produce anæsthesia with pure nitrogen, but not of a duration that could be utilized in surgery.

Mr. J. Fairbank confirmed the great advantages of combining oxygen and nitrous oxide, the mixture being easy to administer, while the comfort of the patient was increased both during inhalation and afterward.

Dr. R. L. Bowles was much interested, as in 1855 he was experimenting with Dr. Marshall Hall on asphyxia. They found mice put into pure nitrogen or hydrogen died in violent convulsions, but with very little air admitted, less than would let a light burn, the animal lived. In pure oxygen they lived only a certain time, being poisoned by the carbonic acid, although the jar contained enough oxygen to make a spark of tinder incandescent. Dr. Bowles was further interested in the classification of cases of stertor, which closely corresponded with what he described to the society thirty-nine years ago.

Mr. G. Rowell considered Dr. Hewitt's conclusions would be accepted by every one who tried the method. He agreed that the best results were to be obtained by giving the oxygen in progressively increasing percentage. Next in value he put the initial administration of pure nitrous oxide till the stage of excitement had passed off, and then occasional inhalations of air at regular intervals.

Mr. Paterson believed there might be internal asphyxia without outward evidence of it, and that the retching and sweating were signs of it. He told of a case of "analgesic borderland" when oxygen and nitrous oxide were being given for a long time for the removal of varicose veins, and the patient talked and sat up and looked at what was being done, and seemed to have no pain. The anæsthetic was continued, and afterward the patient had no recollection of the circumstances.

Dr. Hewitt in reply said Waller's experiments seemed to show that carbonic acid is not so toxic as is believed. He thought it difficult to accept the theory of "internal asphyxia," as he could see nothing to prevent the free passage out of carbonic acid. Nitrous oxide was easily absorbed by the blood, and seemed to diminish the oxygen-carrying powers of the red cells and also to have a specific action on the brain.

The discussion at the Pathological Society on "Pseudo-tuberculosis" was opened on Tuesday by Dr. Sims Woodhead, and after several speeches was adjourned to March 6th.

The examination for the royal army medical corps should convince the military authorities that the recent reforms are successful. Whereas previously candidates for admission to the service could not be found, there is now genuine competition. For twenty-four vacancies there were this time seventy candidates. Lord Lansdowne may felicitate himself on having put his foot down in the cause of justice and thereby secured a success which his predecessor may well ponder over.

Influenza increases. Though most of the cases are still mild the mortality returns are being affected, the deaths from the disease during the last three weeks

having been successively twenty-two, fifty, and seventy-four. The epidemic is not confined to the metropolis. It is spreading rapidly in the north of England. It is extending, too, in Scotland, as I hear from both Edinburgh and Glasgow that the attacks are very numerous.

The local government board has had the greatest difficulty in meeting the demand for the new glycerinated vaccine lymph. Private practitioners cannot be supplied, though many would be glad to pay for it.

It is proposed to raise a memorial to the late Professor Kanthack. The interest on whatever may be raised is to be given to the widow for her life, after which the capital is to be used to raise a permanent memorial to the late professor.

Professor Rutherford, of Edinburgh, died on Tuesday, aged sixty, from an attack of influenza which followed quinsy. As soon as the abscess discharged symptoms of influenza set in, with great weakness and irregularity of the heart. The temperature ran up to 104°, and there was great prostration. The eminent professor of physiology will be greatly missed in medical, scientific, and social circles in Edinburgh since his return to his alma mater in 1874.

On Wednesday Dr. Charles Arkle died. He was M.D. London, assistant physician, joint lecturer on medicine, and teacher of bacteriology at Charing Cross Hospital.

MOVABLE KIDNEY.

To the Editor of the Medical Record.

Sir: In the Medical Record for March 4, 1899, an editorial article on the subject of movable kidney concludes with the statement that when the medical man has gained sufficient knowledge from long experience he will in all probability be able to diagnosticate movable kidney as well with the patient in a lying as in a standing position. It seems to me that unusual difficulty in the performance of palpation of the kidney is suggested by the above quotation, and many younger men may not take steps for acquiring a proper method of palpation quickly. The trouble with older men, in fact, often seems to be that they have not taken even the primary steps for palpating the kidney according to the method of Israel, Guyon, Kellogg, or other familiar authors. I have seen well-known diagnosticians set about the work in a painfully crude and unsatisfactory way. It is really a very easy matter to palpate kidneys accurately in routine work. It is also not difficult to differentiate in movable kidney between the symptom-producing cases, the cases which do not produce special symptoms, and the cases in which movable kidney is associated with general enteroptosis. It is not difficult to use good surgical judgment in dealing with the different classes of movable kidney, if the physician who assumes the responsibility of delivering an opinion will first attend to the moral duty of making himself familiar with the simple, classified, elementary knowledge upon the subject.

Robert T. Morris, M.D.

49 West Thirty-ninth Street, New York.

Cod-Liver Oil in Phthisis.—Dr. H. A. Hare in his "Practical Therapeutics" makes the following statements: (1) Never use cod-liver oil when the disease has passed the primary stages of thickening of the lung and roughening of the respiratory sounds, unless fibroid changes are going on and the changes are very slow indeed. (2) The use of cod-liver oil when rapid degenerative changes are occurring in the lung is distinctly harmful, as it is not of any service, disorders the digestion, and destroys the appetite.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 11, 1899:

	Cases.	Deaths.
Tuberculosis	178	202
Typhoid fever	17	6
Scarlet fever	182	14
Measles	280	15
Diphtheria	192	26
Laryngeal diphtheria (croup)	11	5
Cerebro-spinal meningitis	0	12
Chicken-pox	37	0

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending March 11, 1899:

Smallpox—United States.

		Cases.	Deaths.
Alabama, Mobile	February 25th	1	
California, Los Angeles	February 17th to 25th	15	5
Dist. of Columbia, Washington	February 18th to 25th	10	
Washington	March 1st to 4th	5	
Georgia, Savannah	March 2d	1 *	
Florida, Jacksonville	February 25th to March 4th	3	
Illinois, Biggsville	March 7th	1	
Cairo	March 7th	26	
Dana	March 7th	1	
Murphysboro	March 7th	2	
Indiana, Evansville	March 3d	1	
New Albany	March 5th	1	

Indian Territory: Secretary Territorial Board of Health of Oklahoma states, March 4th, that nearly fifty deaths have been reported to him from Indian Territory.

		Cases.	Deaths.
Maine, Lewiston	February 25th to March 4th	2	
Michigan, Watervliet Township	March 2d	1	
Nebraska, Omaha	February 18th to 25th	3	
New York, New York City	February 25th to March 4th	7	1
North Carolina, Burlington, Franklin Co	March 1st	3	1
Ohio, Brooklyn	February 7th to 27th	1	
Dialton	February 7th to 27th	1	
Franklin	February 7th to 27th	2	
Gallipolis	February 26th	2	
Sandusky	February 7th to 27th	2	
Shenandoah	February 7th to 27th	1	
South Charleston	February 7th to 27th	1	
Sunbury	February 7th to 27th	3	
Toledo	February 7th to 27th	1	
Wellington	February 7th to 27th	1	
Willoughby	February 7th to 27th	1	
South Carolina, Harry County	March 9th	†	
Tennessee, Memphis	March 1st to 7th	14	
Virginia, Alexandria	March 6th to 9th	5	
Norfolk	March 4th to 7th	20	
Norfolk	March 8th	2	

* New case, origin probably North Carolina. † Outbreak reported.

Smallpox on Vessels.

Steamer *City of Kansas* at Memphis, Tenn., March 7th, 1 case.
Steamer *Thomas Brooks*, at Santiago de Cuba from Guantanamo Bay, February 3d.

Smallpox—Foreign.

		Cases.	Deaths.
Brazil, Bahia	February 4th to 11th	2	
Rio de Janeiro	January 13th to 20th	12	5
China, Tientsin	January 4th to 11th	1	
Russia, Moscow	February 4th to 11th	6	3
Odessa	February 11th to 18th	1	1
St. Petersburg	February 4th to 11th	3	1
Vladivostock (Siberia)	November 1st to 30th	1	21 *
Turkey, Constantinople	February 13th to 20th	10	*
Smyrna	February 3d to 12th	..	1

* In other parts of the same maritime district.

Yellow Fever.

Brazil, Rio de Janeiro	January 13th to 20th	32	13

Cholera.

India, Calcutta	January 21st to 27th	..	16
Madras	January 28th to February 3d	..	4

Plague.

India, Bombay	January 24th to 31st	..	540 *
Calcutta	January 21st to 28th	..	1

* Deaths officially reported; probably 1,100.

The Best Solution of the Race Problem.—The race difficulties in the South and in Illinois continue to be discussed in the newspapers, but there are signs of a gradual loss of public interest in the question, which is so characteristic of the American people and upon which Mr. McKinley is said to have relied as the best defence that Mr. Alger had. The negroes of New York have held a mass meeting, and this meeting

has been followed by others in different parts of the country. The negroes, at all events, are not losing interest in the matter, because their welfare and even their lives depend upon a proper settlement of the question. Notwithstanding the fact that the government owes it to itself and to its citizens to enforce the law, we do not see how the question can be finally settled without the aid of the negroes themselves, and upon this point Mr. Booker T. Washington and Mr. John C. Darcy have given their race excellent advice. It is, in effect, that they refrain from pushing forward into politics and from demanding public positions—in other words, from doing those things which alone seem to arouse the enmity of the whites who are determined that this shall be a "white man's government." The negroes by refusing to become spoils politicians will not be guilty of an act of cowardice, but will be doing an act of tactfulness which is demanded of them in view of the great blessing which the whites have given them; that is, the blessing of freedom.—*Harper's Weekly.*

Drug and Food Diseases.—In the Harveian Society lecture of December, 1898, delivered by Dr. William Ewart, and entitled "Disease and its Treatment and the Profession of Medicine in the Year 1899," the speaker (*British Medical Journal*, December 10, 1898) made the following remarks about certain modern methods: "There is a source of nervous ailments entirely special to this age, and the unexpected outcome of our nineteenth-century chemistry and advertising. Intemperance in drugs is becoming more common, and it may possibly outstrip the abuse of alcohol in its evil results. The manufacture of new chemical products is supplying the public with endless carbon derivatives of high molecular power, and of imperfectly known physiological action. Fortunately, many advertised medicines are harmless, but their prolonged use is detrimental if only by delaying the treatment required by the original affection. Others are most dangerous, and their continued indulgence leads to confirmed neuroses or hopeless neurasthenia, and it thus comes to pass that as the therapeutic activity of the profession tends to abolish disease, that of the public is manufacturing it. While the increasing purity of natural foods has reduced our mortality, modern ingenuity has been the unintended means of occasionally supplying poison in food. Fortunately, ptomain poisoning is an unusual accident. A much more serious and widespread evil has been the undiscriminating substitution by mothers of condensed milk and manufactured foods for the fresh supply of milk. This neglect of fresh milk and the untutored administration of artificial foods, even of the best kind, without due regard to proportion and to suitability, have been disastrous. To this cause may be attributed the fact that, in spite of modern hygiene, infantile mortality from diarrhœa and marasmus has shown no adequate decrease, and sometimes an increase over that noted before these modern inventions."

The Open-Air Treatment of Consumption.—*The Hospital* says: "With the coming of winter and with wind and snow swirling all around us come voices of protest against the attempt to undertake the outdoor treatment of consumption in England. One gentleman writing to a contemporary points out what the open-air treatment really involves, and urges that almost every necessary condition is wanting in England. The sun, he says, is often absent and without power, the air is often far from pure, and during the greater part of the winter is saturated with moisture. There is constant wind from all directions—southwest laden with moisture, northeast biting and often damp, and there are but few days in the winter and early spring in England when a patient with tuberculous lung disease could lie out of doors all day or walk about. Face which way the balconies or promenades in England will, they would be liable to be invaded with drifting rain or sleet and blown out with gales of wind. This is very sad, and all the more so that so far as it deals with the English climate it is very true. But that is not exactly the point. What we have to consider is not the badness of the English climate, but the very important fact—for we think that by now we may fairly call it a fact—that, notwithstanding its vagaries, many patients do better in the open air than in the house. With this before us it is of no use wringing our hands about the climate. What we have to do is to circumvent it and to build some structure in which patients may obtain as much good and as little evil from our wintry breezes as may be possible. Physicians and engineers should put their heads together and see what they can produce."

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

LEADERS IN HOMŒOPATHIC THERAPEUTICS. By Dr. E. B. Nash. 8vo, 381 pages. Boericke & Tafel, Philadelphia. Price, $2.50 net.

THIRTEENTH ANNUAL REPORT OF BIRTHS, MARRIAGES, AND DEATHS IN MICHIGAN, 1896. Edited by Dr. Cressy L. Wilbur. 8vo, 188 pages.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION, 1898. Vol. XIV. 8vo, 243 pages. Illustrated.

THREE THOUSAND QUESTIONS ON MEDICAL SUBJECTS FOR SELF-EXAMINATION. Second edition. 32mo, 189 pages. P. Blakiston's Son & Co., Philadelphia. Price, 10 cents.

THE POCKET THERAPIST. By Dr. T. S. Dowse. 12mo, 179 pages. Wilbur B. Ketcham, New York. Price, $1.50 net.

FRACTURES AND DISLOCATIONS. By Dr. L. A. Stimson. 8vo, 822 pages. Illustrated. Lea Brothers & Co., Philadelphia.

AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. By Dr. G. M. Gould. Royal 8vo, 1102 pages. Illustrated. W. B. Saunders, Philadelphia. Price, cloth, $6.50; half morocco, $7.50.

THE DAWN OF REASON, OR MENTAL TRAITS IN THE LOWER ANIMALS. By Dr. James Weir. 8vo, 234 pages. The Macmillan Company, New York. Price, $1.25.

MUSCULAR ANOMALIES OF THE EYE. By Drs. H. F. Hansell and W. Reber. 8vo, 182 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia. Price, $1.50.

THE PRINCIPLES OF BACTERIOLOGY. By Dr. F. Hueppe. Translated by Dr. E. O. Jordan. 8vo, 467 pages. Illustrated. Open Court Publishing Company, Chicago. Price, $1.75.

VACCINATION. By Dr. S. M. Copeman. 8vo, 268 pages. Illustrated. The Macmillan Company, New York. Price, $2.00.

DIET IN ILLNESS AND CONVALESCENCE. By A. W. Winthrop. 8vo, 287 pages. Illustrated. Harper & Brothers, New York.

CLINICAL CHEMISTRY. By Dr. E. H. Bartley. 8vo, 150 pages. Illustrated. P. Blakiston's Son & Co. Price, $1.00.

OCULAR THERAPEUTICS. By Dr. F. W. Max Ohlemann. Translated by Dr. C. A. Oliver. 8vo, 274 pages. P. Blakiston's Son & Co., Philadelphia. Price, $1.75.

TRANSACTIONS OF THE ASSOCIATION OF MILITARY SURGEONS. Vol. II. 8vo, 180 pages.

THE MICROSCOPY OF DRINKING-WATER. By G. C. Whipple. 8vo, 338 pages. Illustrated. John Wiley & Sons, New York. Price, $3.50.

LECTURES ON APPENDICITIS. By Dr. R. T. Morris. Third edition. 8vo, 185 pages. Illustrated. G. P. Putnam's Sons, New York.

TREATMENT OF DISEASE BY PHYSICAL METHODS. By Dr. T. S. Dowse. 8vo, 412 pages. Illustrated. E. B. Treat & Co., New York. Price, $2.75.

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Original Articles.

THE ETIOLOGY AND TREATMENT OF NEURASTHENIA. AN ANALYSIS OF THREE HUNDRED AND THIRTY-THREE CASES.

BY JOSEPH COLLINS, M.D.,

PROFESSOR OF NERVOUS AND MENTAL DISEASES IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; VISITING PHYSICIAN TO THE CITY HOSPITAL.

AND

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ASSISTANT IN THE CLINIC.

NEURASTHENIA, or nervous exhaustion, is the name given to a complex of symptoms constituted principally by head pains and paræsthesia, insomnia, a peculiar mental state made up of depression, fear, anxiety, anticipation, and distrust; myasthenia, rhachialgia and paræsthesia, disordered digestion and vasomotor disturbances, dependent upon disorder of the nervous organization, without recognizable change. In brief, neurasthenia is a neurosis without organic basis. Many theories have been propounded to explain the occurrence of the phenomena of the disease, but none of them is entirely satisfactory. The most universally accepted one seems to be that the manifestations of neurasthenia are expressions of persistent enfeeblement of neural energy. This enfeeblement is dependent upon nutritional change in the entire neuron, or in that part of it whose function is to convert the forces of reconstruction into neural energy and store it up. That an individual part of the neuron is thus concerned has not yet been satisfactorily proven, although it seems highly probable. To discuss this theory satisfactorily, it would be necessary to consider the origin of nerve force. Such discussion would carry us into a recital of speculations and facts that are beyond our present purpose.

ETIOLOGY.—A satisfactory knowledge of the causation of neurasthenia can be obtained from careful study of the cases of this disease that come under observation. We have therefore taken all the cases that have been encountered in the private and dispensary practice of one of us in two years, and subjected them to careful study, with the view of determining the predisposing and exciting causes of neurasthenia. The statistics are based on three hundred and thirty-three cases. Although about four hundred cases were to hand, it seemed advisable to take this number, because of the ease with which the percentages might be contrasted with one thousand cases.

Number of cases, 333.

Sex: Males, 183 (55 per cent.); married, 96 (29 per cent.); single, 87 (26 per cent.). Females, 150 (45 per cent.); married, 102 (31 per cent.); single, 48 (14 per cent.).

Age: Oldest, 67; youngest, 6; average, 33.3; most frequent decade, third.

Frequency according to decades: 10–20 years, 6.6 per cent.; 20–30 years, 39.6 per cent.; 30–40 years, 27 per cent.; 40–50 years, 16.2 per cent.; 50–60 years, 8.4 per cent.; 60–70 years, 2.1 per cent.

Occupation: Housewives, 94 (28 per cent.); tailors, 37 (11 per cent.); clerks, 26 (8 per cent.); indoor occupation, 264 (79 per cent.).

Nationality: United States, 145 (43.5 per cent.); Russia, 69 (20.7 per cent.); Germany, 34 (10.2 per cent.); Ireland, 34 (10.2 per cent.); Austria, 15 (4.5 per cent.; England, 8 (2.4 per cent.); France, 2 (0.6 per cent.); variable, 25 per cent.

Attributed causes: Overwork, 27; masturbation, 26; worry, 18; fright, 10; childbirth, 12; sorrow, 11; traumatism, 8; previous disease, 7; alcohol, 4.

An examination of the above statistics shows that the disease is more frequent in men than in women, although the preponderance of males is not so great as that given by almost every other writer. It occurs more frequently in the married than in the single, married women being considerably in excess of married men. This may be taken to mean that the entailments of marriage—anxiety concerning the material welfare of mate and offspring, incompatibility of partners, dread and depression attending sickness and death, the assumption of marital and maternal obligations, etc.—are contributory to the occurrence of this neurosis.

Consideration of the ages of the patients shows that infancy and senility are practically exempt. The youngest patient was six years old; the oldest, sixty-seven. The average age was 33.3. The most noteworthy feature is the occurrence of the disease during the years of fullest maturity, from twenty to forty. The epochal periods of puberty and the menopause do not seem to be particularly associated, and this is especially true of the former, with the occurrence of neurasthenia. The statistical information on this point goes to strengthen the belief that we have had for some time.

That the occurrence of neurasthenia has a very important relationship to occupation is shown by the fact that about eighty per cent. of the cases were in persons who worked indoors. This is a remarkable circumstance, considering the fact that the material of the clinic, from which the majority of these cases came, is not predominantly made up of those who work indoors.

Nearly one-half of all the patients gave their nationality as American. This number, of course, includes many who should be classified as German-, Irish-, and Russian-American. The frequency with which the disease occurs in Jews is attested by the fact that, although the clientèle is not conspicuously foreign, more than twenty per cent. of the entire number of cases occurred in Russian, Polish, and Austrian Jews. Indeed, it is highly probable that upward of forty per cent. of the entire number was of this race. The proportion of Germans and Irish is about equal. The Latin races are not well represented, but this is due to the fact that we see very few of these people in the clinic.

Heredity would seem to play an important rôle in the occurrence of neurasthenia, for upward of fifty per cent. of the cases gave the history of the occurrence of nervous disease or diathesis in the immediate ancestral or collateral family. No distinct frequent relationship between the occurrence of neurasthenia and what

is known as the arthritic or rheumatic diathesis could be made out. Special reference is made to this point, because the modern French writers lay great stress upon the rôle played by the neuro-arthritic diathesis in the causation of neurasthenia.

Although the patients were all interrogated as to the attributed or exciting causes of their symptoms, specification of such causes could be got only in one hundred and twenty-three cases. The remainder averred that they were quite ignorant of the factors that could be held responsible for their sickness. Of these one hundred and twenty-three cases, overwork and masturbation are apparently responsible for the same number, while mental factors, particularly emotional, such as worry, fright, and sorrow, were posited as the cause in about one-third of all the cases; physical injury and acute disease were believed to be the exciting agencies in a number of cases. Perhaps the most remarkable feature of the statistics bearing on the matter of the exciting causes of neurasthenia is that alcohol and tobacco were not admitted or noted to be causative of the disease except in very few instances. This is in fullest accord with previous personal experience and belief based thereon. Some writers have claimed that excessive indulgence in alcohol, tobacco, tea, coffee, narcotics, and other intoxicants plays a leading rôle in the causation of neurasthenia. With full appreciation of the perniciousness of these substances upon the nervous organization, and recognition of their great potentiality for mischief to this and other systems of the body, we repeat that they manifest their peccant activity upon the economy in other ways than in the causation of neurasthenia.

The effect of overwork and of masturbation (under which are included for convenience' sake other irregular forms of sexual indulgence) is generally recognized as being very important. Our statistics corroborate this view. In estimating the relationship of overwork to the occurrence of neurasthenia, it must not, however, be forgotten that in many cases it is not alone the physical and mental work which has to be reckoned with, but their mental, moral, and emotional entailments—which, indeed, are oftentimes more responsible for the occurrence of neurasthenia than the work itself.

Of the various causes that have been enumerated, some are all-important in one case, some in another. They are not by any means of equal neurasthenia-causing capacity, and no one can say beforehand whether one of the above-mentioned factors, or all of them, will cause neurasthenia in a given individual. It depends entirely upon the individual and upon his resistance capacity, which in every one is subject to unexplainable variations. Certain individuals are so vulnerable that the equilibrium of their nervous systems is quickly upset by the occurrence of any of these causes; while others have a nervous organization so stable and so susceptible to the aid of reconstructives, that they resist successfully one and all of them during an entire lifetime. Therefore, we say that the etiology of neurasthenia depends more upon the individual than upon anything else. Thus it is that heredity plays such an important rôle in the occurrence of neurasthenia. If one is born with a nervous system that is deficient in the capacity to produce neural energy or, what is the same thing, to maintain a proper equilibrium between production and expenditure of such energy, such a person is far more liable to develop neurasthenia as the apparent result of any of the exciting causes that we have mentioned, than is another person whose inheritance is a stable nervous organization.

It is not our purpose to speak of the symptoms of neurasthenia, except to say that the following summaries show the relative frequency in percentages of symptoms that are so constant in neurasthenia that they may be called stigmata.

1. *Physical symptoms:* Static depression, 22.2 per cent.; variable depression, 19.5 per cent.; lacking mental concentration, 13.8 per cent.; mental confusion, 10.8 per cent.; undefinable fear, 8.4 per cent.; irritable, 7.5.

2. *Headache:* A leading symptom in 55.8 per cent. (occipital, 10.8 per cent.; frontal, 8.1 per cent.; vertical, 7.8 per cent.; diffuse, 26.7 per cent.).

3. *Sensory symptoms:* General pains, 30.3 per cent.; vertigo, 14.1 per cent.; pains in the back, 12.3 per cent.; aeroparæsthesia, 12 per cent.; paræsthesia, 11.1 per cent.; epigastric pains, 5.7 per cent.

4. *Sleep:* Insomnia, 70 per cent; undisturbed, 30 per cent. The classification includes two forms: First, great lassitude and profound mental torpor after eating followed by restlessness and sleeplessness after one or two hours' sleep; and second, wakefulness and other phenomena of disturbed sleep without introductory somnolency.

5. *Motor symptoms:* Myasthenia, 37.2 per cent.; twitchings, 2.7 per cent.; tremor (as a complaint), 3.3 per cent.

6. *Vascular symptoms:* Palpitation, 22.8 per cent.; hot flashes, 9.6 per cent.; pseudo-angina, 1.5 per cent.; epistaxis, 0.9 per cent.; polyuria, 4 per cent.

7. *Digestive symptoms:* Stomachic indigestion, 18.3 per cent.; intestinal indigestion, 13.3 per cent.; poor appetite, 22.2 per cent.; good appetite, 26.7 per cent.; variable appetite, 21 per cent.; appetite not noted, 30.1 per cent.; constipation, 27.3 per cent.; stools regular or loose, 28.8 per cent.; stools not noted, 30.1 per cent.; coated tongue (noted), 6.6 per cent.

8. *Sexual symptoms:* Nocturnal emissions, 19.1 per cent.; impotence, 3 per cent.; loss of "vital" fluid on urination and at stool 5 per cent.; premature ejaculation, 1.2 per cent.; persistent masturbators, 1.5 per cent.; extreme prostration after coition, 10.2 per cent.

9. *Initial symptoms:* Headache, 27 per cent. (vertical, 3.6 per cent.; frontal, 3.2 per cent.; occipital, 6.6 per cent.; diffuse, 12.6 per cent.). General pains, 8.7 per cent.; myasthenia, 7.5 per cent.; epigastric distress, 7.5 per cent.; insomnia, 5.1 per cent.; melancholia, 3.3 per cent.; vertigo, 4.2 per cent.; palpitation, 1.8 per cent.; pains in the back, 1.8 per cent.; acroparæsthesia, 1.5 per cent.; unclassified, 26.4 per cent.

10. *Physical signs:* Reflexes—knee jerk exaggerated, 22.2 per cent.; knee jerk diminished, 3.3 per cent.; knee jerk normal, 74.4 per cent.; absence of the pharyngeal, 8.7 per cent. Tremor—of fingers, 30 per cent.; of eyelids, 8.4 per cent.; of lips, 6 per cent.; of tongue, 1.8 per cent. Weight—loss of flesh in 30 per cent. of the cases.

Stigmata of degeneracy noted in 14.4 per cent.

The Treatment of Neurasthenia.—In discussing the etiology of neurasthenia, we reached the conclusion that the individual who developed the symptom complex was, after all, the most important element. In speaking of the treatment, we shall say that individualization is more necessary to insure success than in almost any other disease. Although there are certain agencies of reconstruction—such as diet, hydriatics, massage, rest and exercise, environmental and climatic change, etc.—that are beneficial in every case, their application, at least their most successful application, is scarcely ever the same in two cases; so that which is said concerning treatment must be taken to signify that it is susceptible to variation in its applicability to each case.

Prophylactic Treatment.—Considering that the occurrence of neurasthenia has been shown to stand in

close and definite relationship to certain previously enumerated predisposing and exciting conditions, it is readily apparent that the prophylactic treatment is an important consideration. We are not of those who believe that neurasthenia is a disease of the epoch or that its occurrence is of modern times. Nevertheless, to a certain extent it is a sign of the times. There can be little doubt that, although the exciting factors of neurasthenia have existed in all times, the predisposing causes are predominantly of more recent date. Neurasthenia has increased in frequency as social, political, and economical conditions have made the struggle for existence more violent and the prospects of a quiet life more perilous. So long as such conditions exist and so long as mankind assumes voluntarily or compulsorily to cope with them, just so long will neurasthenia continue to occur, unless by process of evolution the human species becomes more capacious to resist these factors. As there seems to be little chance that evolutionary progress will hurl itself into the breach, it becomes necessary for the individual, that he may withstand the strife, to adopt measures that will contribute to the fortification of his neural resistance and equilibrium. Such fortification is the more necessary to him who is handicapped by heritage with an unstable nervous organization. The preventive treatment of neurasthenia should be begun simultaneously with the development of the individual. Parents who are cognizant of neuropathic possessions should strive to maintain their health, so that they may bring forth sound progeny. The same attention should be given to pregnancy and to the early years of childhood that is bestowed on the hysterical and epileptic. The physical and moral education of the child should be conducted so as to result in the harmonious development of the individual's *psyche* and *soma* and particularly the development of general equilibrium of the organism. From the beginning measures should be taken to increase the physiological resistance of the nervous system and to fortify the energizing capacity, by bringing the systems of the body to the highest possible point of development; a high degree of physical health is incompatible with the development of the neurasthenic state. Outdoor life, in the country if possible, with its superabundance of air and sunlight, and opportunity for physical exercise, is naturally more conducive to the development of resistant physique than the life of a crowded city, with its enforced limitations in all these directions. Unfortunately, such environment is possible only for the few; but nevertheless much can be done in the way of securing some of the advantages of the country by the utilization of the parks and the aquatic and territorial environment of every large city. Children born of neuropathic parents should be given physical education first, and mental education afterward. It is unfeasible to reform the methods of education which have been found to be of greatest benefit to the greatest number, in order that the few whose inherited shortcomings are an unstable nervous organization may be benefited; but such individuals should not be required to conform to pedagogical formulary at the expense of the development of their bodies. Outdoor exercise should be supplemented by gymnasium practice which will develop physical strength and endurance. Moreover, children of nervous parents should have greater care bestowed upon their personal hygiene and alimentation than those sprung from healthy parents. They should be accustomed early to habits of bathing, especially in cold water, so that they may receive the tonifying and sedative benefit of such application, which contributes so much to the prevention of fatigue and exhaustion. Luxuries of diet, stimulants, and sedatives must be absolutely excluded.

The moral education of such children is quite as important as the physical education; in many instances, indeed, it is more important. Unfortunately, it is almost universally neglected. It is difficult to state in a few paragraphs a formulary that shall encompass the proper bringing-up, from a moral point of view, of the children of nervous parents. It would seem almost unnecessary to attempt to do so, not only because this is beyond the province of the physician, but because parents have their own views on the matter. Nevertheless, the physician may do much by emphasizing how necessary it is to inculcate habits of obedience and self-repression, eradication of egotism and selfishness, restraint of temper and capriciousness, and the development of moral courage and of physical and mental self-confidence. Bad instincts should be thwarted by suggestion, by precept, and by example. Inclination toward bad humor, sadness, pessimism, egotism, and superciliousness should be combated early, and the youthful person taught that sentiments of insociability, if allowed to develop, are more potent to produce personal unhappiness than almost any other factor. He should be taught to accept adverse decisions without black looks or mean resentment; to take banter as well as to give it; to control a hasty temper and to stamp out a sulky one; to bear failure and disappointment with a smiling face and a determined will. Too great care cannot be directed toward the harmonious development of such an individual's emotional life. Premature knowledge of sex, which unfortunately they often gather from literature, the theatre, and the pulpit, is not infrequently the means of awakening morbid and introspective tendencies.

The period of puberty in the boy and in the girl should be jealously guarded. Children who are carefully apprised of the pitfalls of masturbation, with which the years from twelve to twenty are beset, will be most apt to go through this period without injurious experiences.

The prophylaxis of neurasthenia in the adult is in reality the avoidance of those causes which we have found from examination of our statistics to stand in relationship to the development of this neurosis. In the majority of cases the physician is not in position to advise persons who develop the disease how to arrange their lifes and labors that they may avoid the occurrence of neurasthenia. He may, however, do much to prevent the recurrence of the attack. Once neurasthenia has occurred and been recovered from, it is very liable to relapse. If it be kept in mind that it is not so much physical and mental work or overwork that produces neurasthenia as it is worry, anxiety, depression, and their entailments of sleeplessness and disordered digestion, the individual may be shown how to avoid a relapse, even without curtailment of the activities which are necessary for his existence.

Treatment of the Attack.—The treatment of neurasthenia after the disease is developed requires for its successful issue a deeper insight into the understanding of mankind than almost any other bodily or mental disease. The physician who has the good fortune to inherit or to acquire such capacity will be immeasurably more successful in aiding his patients to recovery than he who is devoid of it and at the same time master of physiology and materia medica. Nothing is more certain than that the patient's mind requires as much or more treatment than the body and its functions. The truth of this is apparent from many reasons, but from none more definitely than a knowledge of the important rôle played by the mind, the stress and abuses of it, in the development of neurasthenia, and the diverse manifestations of mental asthenia throughout the course of the disease. The introspectiveness, anxiety, undefinable fear, painful anticipation, keen realization of incapacity despite the pressing needs for action, the mental depression with its association of

morbid thoughts, sleeplessness, and perpetual unrest, are all undoubtedly benefited and sometimes overcome by the use of physical therapeutic agencies; but they are much more surely and frequently eradicated by the simultaneous utilization of the proper kind of psychical or moral therapy. Such psychical treatment does not consist alone in the confidence which the successful physician inspires in his patients, nor in the maintenance of authority, manifest by the patient's obedience to instructions and amenability to suggestion. Much less does it depend upon the utilization of means that appear to the patient to be supernatural, such as hypnotism. On the contrary, such mental treatment may be one of the most important therapeutic attributes of the physical means which experience has shown to be so serviceable in the treatment of neurasthenia. These measures are powerful agencies for suggestion, and as the neurasthenic is in a psycho-physical state of increased suggestibility, they furnish fruitful soil for all kinds of suggestion. Next to the influence of the physician, the most important measures in the treatment of neurasthenia are the following:

(1) The general hygiene of the neurasthenic. (2) Dietetics and alimentation. (3) Hydrotherapy and balneotherapy. (4) Electricity. (5) Rest, exercise, and massage. (6) Climatotherapy. (7) Mode of treatment, disciplinary or moral hygiene.

General Hygiene.—The general hygiene of the neurasthenic patient entails a severance from associations and environment that are apparently causing or maintaining the neurasthenic condition, avoidance or removal of all factors that tend to emphasize or to remind the patient of his infirmities, and procurement of surroundings that will contribute to mental equanimity, general quieting of the mind, and restoration of nutrition. Without these, the treatment of neurasthenia, especially if the disease be of a severe type, is often foreordained to failure. The physician who strives for the fulfilment of these indications before attempting the methodical treatment of the patient will have immeasurably greater success than he who neglects them. In many instances, unfortunately, the patient's social and financial state offers an unsurmountable obstacle. In dispensary practice, where neurasthenia is seen more frequently than are all other kinds of nervous diseases, the problem that has to be continually contended with is to devise a plan of treatment that will replace such indications. That such a one has not been found accounts for the fact that the treatment of neurasthenia among the poor is still woefully unsatisfactory.

Isolation and Discipline.—The indications just mentioned require for their fulfilment relatively complete isolation, which usually cannot be obtained at home, unless it is possible to set apart a portion of the house for the exclusive use of the patient and the attendant. Even when this is possible, there are many reasons why the patient is much more auspiciously lodged in a boarding-house, hotel, or house conducted for the reception of such patients. Such isolation acts beneficially in many ways: it severs the patient from the sympathizing family and solicitous friends, who are ever ready to indulge him in numberless selfish acts and deeds which are invariably detrimental, and to interrogate solicitously concerning the manifold real and imaginary ailments constituting the symptom complex. Moreover, it removes him from surroundings that not only remind him of his illness and incapacity, but that tend to make him more self-centred and selfish. It serves to interrupt injurious customs, to break up pernicious habits, and, more than all, to impress him that something is being done earnestly to bring about his recovery. Many patients, especially women and their friends, are firmly convinced when such a step is proposed that its application is tantamount to driving them mad. They argue that such a plan may be adapted to others, but, considering the peculiarities of their mental constitution, and certain essential requirements for the continuance of even a miserable existence, the step is unfeasible beyond debate in their own case. Oftentimes this is the first opportunity for the physician to display that insight into the human character which we have previously spoken of as being so essential in the treatment of this disease, and his capacity to inspire confidence and secure obedience. He knows from experience, and from the statement of others, that such relative isolation is rarely if ever injurious to even the most sensitively organized person, and is almost invariably conducive to the quietude, peacefulness, rest, and bolstering of nutrition, which are essentials in bringing about restoration of health. Very rarely does the step increase the patient's introspectiveness and tend to exaggerate the consciousness of his symptoms, anxieties, and fears. Naturally it is not necessary that every neurasthenic be subjected to isolation. In many cases it will be sufficient to insist that the patient withdraw for certain times during the day to the quietness of the individual chamber; to give over certain occupations or duties calling for the expenditure of energy that cannot be spared; or to postpone the time for arising until midday. In the average severe case, however, no compromise in the matter of isolation should be made. It is an essential feature in the rest cure, which we shall speak of later in the treatment of neurasthenia, but here we are considering it apart from any other component of treatment. Isolation may be carried to excess, both in point of completeness and in duration. There can be no doubt that prolonged isolation, if not counteracted by other means, is of itself sufficient to cause neurasthenia. The lesson to be learned from this is that individualization is very necessary in the treatment of neurasthenia, even in advising concerning the general hygiene.

The Securement of Sleep.—The next most important measure in the general hygiene consists in securing a proper amount of sleep, and as insomnia is one of the most constant stigmata of neurasthenia, this is not infrequently a difficult thing to accomplish. In many cases the use of measures that contribute to the improvement of general nutrition and physical repose—such as hydriatics, electricity, massage, gymnastics, exercise, or enforced rest—help materially in overcoming the insomnia, especially if they are aided for a short time in the beginning by the administration of sulfonal, trional, chloralamide, or one of the other modern hypnotics. As a rule, the patient has already exhausted the sleep-producing capacities of such drugs before coming under treatment; but despite this, when given under the auspices that we are describing, they rarely fail to have a degree at least of the desired effect. Oftentimes the physician is too insistent upon securing prompt effects from the administration of sleep-producing medicines, or from the utilization of measures that contribute to somnolency such as massage, the cold pack, and drip sheet. It should not be forgotten that absolute physical rest absolves the necessity of so much sleep as is necessary under ordinary circumstances. Moreover, physical measures that contribute to sleep may not succeed fully after the first few applications, while success crowns their repeated use. Of the hydriatic measures, the most important in securing sleep are the cold wet pack, the prolonged warm bath, the drip sheet, and the wet compress known as the Neptune girdle. The latter, which consists of a bandage of coarse linen which reaches around the entire lower part of the trunk, fastened in front so that the abdomen has a double covering, is wrung out of water of 60° to 65° F., and covered with

a dry bandage. Applied on retiring after the parts have been bathed with cold water, this simple means is often very serviceable in contributing to sleep. The prolonged warm bath, temperature 95° to 100° F., the patient being kept in from twenty to forty minutes, is likewise very serviceable in bringing about relaxation of mind and body preparatory to sleep. The drip sheet—which is applied by throwing a linen sheet, which has been loosely wrung out of water at 65° F., around the patient, who is standing in a foot tub of comfortably hot water, and with a Turkish towel wrung out of iced water about the head; then bringing the sheet in apposition with every part of the skin by a few quick rubbings of the attendant's hand; the sheet being then removed and the patient dried and the reaction supplemented by light massage or rubbing —is oftentimes very serviceable in overcoming insomnia. These hydriatic measures should be tried in succession. When one does not succeed, it is very likely that another will. Some neurasthenic patients have no difficulty in going to sleep early in the evening, but awaken after a profound, unrefreshing sleep of two or three hours, to remain awake for the rest of the night. In such cases, especially in women, prolonged and severe massage of the entire body, of about an hour's duration, sometimes succeeds in causing the patient to sleep. In others the hydriatic procedures above mentioned are successful. Occasionally the administration of from six to twelve ounces of warm milk, plain or peptonized, seems to have an effect in bringing about mental and physical composure which tends to the occurrence of sleep. In cases of this kind one has to decide the advisability of preventing the patient from going to sleep immediately after the evening meal, so that the regular time for going to sleep will find the patient more ready.

Dietary of Neurasthenics.—The dietary of the neurasthenic patient will depend largely upon the state of his digestive functions and upon the type of neurasthenia. Certain neurasthenics, whose fears, thoughts, and anxieties are predominantly of their viscera, and in whom careful physical and chemical examination shows no considerable abnormality, either of the digestive system or its contents, are made more self-centred and hypochondriacal if any considerable stress is laid upon the diet or attempt made to modify or regulate it. Such patients should be advised to satisfy their appetites for food as if they were rugged individuals, and to partake especially of coarse, green vegetables, which will have an effect to produce large and ready evacuations. They should be urged likewise to drink freely of water. In other patients there will be found slight derangement of the digestive function—such as temporary excessive acidity or diminished acidity of the gastric juice, stomachic and intestinal fermentation, sluggish vermicular action, flatulency, etc. — which readily respond to the administration of the indicated symptom medicines, particularly if general treatment for the neurasthenic state be applied at the same time. Patients when first coming under observation frequently dwell upon the fact that they have been under the treatment of a number of physicians, usually specialists, for the relief of first one symptom and then another, and they produce a package of prescriptions to attest the amount and variety of medicines that they have taken to overcome what seems to them, and apparently also to those who have treated them, their ailments. The failure of such local treatment is easily understood. It is like attempting to repair a shattered fence without first renovating the foundation.

In some neurasthenic patients the general asthenia is manifested predominantly in the digestive tract, and we have to deal with a gastro-intestinal atony, whose prolonged existence leads to dilatation of the stomach and the intestines. The results of such conditions are that the viscera are unable to pass the ingesta along with appropriate facility and thoroughness. This, in connection with the existence of deficient secretion of the digestive juices, which is indirectly dependent upon the atony, leads to fermentation and to the formation of substances which when absorbed into the system are injurious. Such fermentation and auto-intoxication cause symptoms which the patient believes to be of great seriousness, thus adding to the mental depression and strengthening the conviction that his disease must be an unrecoverable one. The indications for local treatment in such a case are to be determined by the administration of a test meal, that it may be observed how long it takes for the stomach to pass the food into the intestines, and that the contents of the stomach may be removed for analysis to show the relative proportions of the constituents of the gastric juice. After this information has been obtained, and after the stools have been subjected to scrutiny to determine whether they contain undigested foodstuffs or are of shape and size pointing to impaired activity in different parts of the large bowel, the physician is in position to decide what local or symptomatic treatment is required. An enumeration of the various substances that must be used to fulfil special indications in individual cases would not be profitable. The most important measure in overcoming the gastro-intestinal asthenia, which is primarily at the bottom of all the digestive disturbances, is the utilization of the physical measures which experience has shown to be so valuable in the treatment of neurasthenia. The patient should be assured, repeatedly and convincingly, that no organic disease or irremediable condition is present. Careful observation should be made to determine the foodstuff that disagrees with the patient, and this, with all substances that are very difficult of digestion, should be eliminated from the diet. As a rule, a mixed diet is best for the neurasthenic patient, but meat should not be given more than once a day, and then only the most digestible forms. Cereals, such as rice, sago, cracked wheat; green vegetables, such as spinach, string beans, and celery; peas, fresh beans, and potatoes, prepared in purée form, can usually be taken by almost every neurasthenic patient. As a rule, white vegetables are to be avoided. Bread is to be taken in moderation, and preferably in the shape of bread made from the whole grain, toast, and zwieback. Not infrequently regulation of the amount of bread is of the greatest importance, as a considerable proportion of these patients have starch indigestion. There is a general impression, both among the laity and the profession, that fats have a special capacity to nourish the nerves. Aside from the fact that they are the most important carbon constituent of food, and therefore require greater oxidation for their combustion, there is no ground for such belief. Care must always be had in estimating the amount of fats that can be given to a neurasthenic individual, because they not only have a tendency to disorder the digestion, but by causing satiety they stand in the way of other and more important foodstuffs, such as the vegetable proteids. Sufficient fats can usually be given in the shape of milk, butter, and cream. Patients who believe they have an idiosyncrasy for one or two of these substances may be able to take the other. The most eligible way of administering cream is by giving cream toast, which is prepared by taking a piece of thoroughly toasted bread, sprinkling it with a few drops of water and a pinch of salt, and then pouring over it a thick layer of cream, fresh from the icebox. Neurasthenic patients can usually take this once or twice a day

without interference with their appetite or digestion. When the patient can tolerate it, milk, or some preparation of it, should be given to supplement regular meals. Personally we have found the most advantageous time to administer milk to be one-half hour before eating or two hours after a meal. When it is given a half-hour before a meal, and the patient is instructed to keep absolutely quiet until meal-time, it very often seems to have no effect whatsoever in depreciating the appetite. Many writers on neurasthenia contend that three times a day is sufficiently often to feed neurasthenic patients, but such is not our experience. Many of these patients have their only minutes of well-being for a short time following each meal, while, on the other hand, they are usually much depressed by going without food for several hours.

The Interdiction of Stimulants. — The physician's course in determining whether or not alcoholic drinks, tea, coffee, tobacco, etc., shall be taken, is shaped very largely by the patient's habit and reaction to these substances. If the development of the neurasthenia stands in any relationship whatsoever to such indulgence, they should be absolutely excluded. If, on the other hand, the patient has been accustomed all his life to taking a small quantity of light wine or beer at meal-times, and if it is apparent that such indulgence contributes to help the appetite and digestion, the indications are favorable to the continuation of such habits. Nevertheless, it may be stated as a general rule that all of these substances tend to derange digestion rather than to contribute to its restoration, and they should therefore be avoided. Malt liquors especially seem to possess the capacity to start fermentation. I have not been able to convince myself of the reputed reconstructive and nutritive qualities of any of the malt extracts. They may assist sometimes in creating an appetite, but they can be satisfactorily replaced, and without any of their disadvantages, by the use of simple bitters.

The dietary indications that have thus far been spoken of are applicable to the neurasthenic individual who is not afflicted with other disturbances of the gastro-intestinal tract than those enumerated. Unfortunately, from five to ten per cent. of all neurasthenic patients present some graver form of gastro-intestinal atony and its accompaniments, which require very particular treatment, as the disorder of general nutrition which they condition is obstinately opposed to repossession of the neural equilibrium. The most uncommon of these graver forms of digestive trouble is that known as hyperchlorhydria, associated with slight or considerable dilatation of the stomach. When this condition occurs in elderly persons, associated with the neurasthenic state, it is one of the most difficult to overcome. It should be treated by regulation of the diet, by cutting down the animal proteids and increasing the vegetable proteids and easily digested starches, by the administration of milk in connection with some alkali, such as bicarbonate of sodium in from twenty to sixty grain doses, preferably at bedtime, and by the administration of alkaline drinks, such as natural Vichy. Intestinal fermentation should be counteracted by the occasional administration of small doses of calomel, followed by one or more doses of Carlsbad salts and by the interrupted administration of ichthyol, one of the bismuth preparations, resorcin, etc. A useful formula is the following:

℞ Menthol. salicylat.,
Pulv. rhei.....āā ʒiiss.
Ichthyol.....ʒi.
M. ft. caps. No. xxiv. S. One capsule t.i.d.

The most important elements in the treatment are regulation of the diet and the administration of a suitable amount of alkali. If the condition be one of hypochlorhydria, such alkaline administration would be decidedly injurious. In addition to the general treatment to overcome the myasthenia, the galvanic current may be applied to the stomach through the abdominal parietes or preferably by the intragastric method of faradization or galvanization. In our experience the latter method has shown itself of greater service than the former. Very little benefit is to be obtained from the use of some constituents of the digestive fluid, artificially prepared, such as pepsin and pancreatin. If they are used at all, it should be for only a few doses. Many neurasthenic patients come to the physician with the history that they have been in the habit of washing out the stomach regularly for many months. On general principles it may be said that benefit will follow immediate cessation of such custom. Moreover, it may likewise be said that the only condition that justifies repeated lavage of the stomach is one of chronic gastric catarrh, with an accompaniment of considerable secretion of mucus. Even in such a case its use should be alternated with intragastric electrization and frequently intermitted and replaced by the administration of copious draughts of warm or hot water.

Constipation is an accompaniment of the disease in the majority of instances. In about five per cent. of all cases there is a history of symptoms that leads to the diagnosis of mucous enteritis, the prominent accompaniments being irregular diarrhœa with variable amount of mucous discharge. To overcome the constipation is usually not a difficult task, if the physician keeps in mind that the two prominent elements entering into its causation are sluggishness of vermicular action a manifestation of the myasthenia, and a deficiency in the watery constituents of the stools. To overcome these it may be necessary to employ, in addition to the general treatment for neurasthenia, abdominal massage, such drugs as strychnine and belladonna that are known to have special action to cause contraction of unstriped muscular fibre, and laxatives, on the one hand; while the second factor in causing constipation is thwarted by having the patient take freely of water and of substances that lend bulk to the stools. If this is not sufficient, our own experience has taught us to rely upon enemas of olive oil or cotton-seed oil, administered to the patient in the knee-chest position, through a tube which is carried beyond the junction of the rectum and colon. From six to eight ounces of oil are introduced very slowly, and after the patient has become somewhat accustomed to the procedure there is no difficulty in retaining it. It should be repeated about every fifth day. The phenomena of mucous enteritis are best combated by the use of the Neptune girdle externally, and by copious flushings of the large intestines with plain water or with water to which some alkali or antiseptic, such as boric acid, has been added. These cases require careful selection of the diet and regulation of the amount that can be profitably administered. In some cases in which the taking of food is immediately followed by a desire to go to stool, with the voidance of a small amount of fæces and a large amount of mucus, the occasional administration of one of the bromides is beneficial.

Neurasthenia occurring with excessive formation of uric acid, or relatively defective elimination of this substance, requires special dietary treatment. A narration of the details of such treatment will not be made here, as it differs in no wise from the most approved dietary treatment of any of the manifestations of the uric-acid diathesis. The most important thing to be borne in mind is that a too rigorous insistence on an anti-uric-acid diet may prevent the recuperation of nutrition upon which recovery from neurasthenia is dependent.

Hydriatic Treatment. — The value of hydriatic procedures in the treatment of neurasthenia can easily

be overestimated. It is, nevertheless, perhaps the most important member of the physical measures upon which experience has taught us to rely. It owes its beneficial effect to the powerful appeal that it makes alike to the body and to the mind. It is a very important measure in aiding constructive metamorphosis by stimulating the peripheral and deep circulatory fluids; it is an important agency to excite and sedate the peripheral nerves and their central and peripheral distribution; its utilization is almost invariably accompanied by at least a temporary feeling of well-being, attendant upon reaction, which, by making an impression upon the patient's mind, helps to restore the loss of confidence and to overcome the mental depression which play such a conspicuous part in the disease. In these ways and in others it overcomes the myasthenia, it promotes the appetite for food and facilitates digestion, it contributes to repose and to slumber, and it tends to overcome the numerous paræsthesiæ which constitute such a conspicuous feature of the patient's complaint. The method of utilizing water advantageously in the treatment of neurasthenia varies with the individual, and particularly with his capacity to react. It therefore varies with the same individual in different stages of the disease. There is no such thing as a stereotyped hydriatic prescription, because the instructions that may be beneficial to one patient will very likely be injurious to the next. When the conveniences of a hydriatic institution are to be had, the physician should avail himself of them, because the mode of applying water can be there more carefully and accurately done, while the seemingly complex apparatus makes a leading appeal to the patient's mind, a result at all times to be striven for in the treatment of neurasthenia. The possession of such hydriatic apparatus is one of the most important claims for the advantages of sanatoria treatment of neurasthenia. Much benefit, however, may be obtained from the application of water with no other apparatus save the attendant's hand, a pitcher, and a sheet. The customary hydriatic procedures in the treatment of neurasthenia are cold ablutions, the dripping sheet, the spray, and the simple douche. Of these the latter is by far the most important. In order that the douche may be used successfully, it is necessary that a certain amount of pressure which can be readily graduated is available. For the average neurasthenic individual of the depressed type, the customary procedure is to prepare him for the application of the douche by a few treatments with cold ablutions (80° to 65° F.), the water being applied from the attendant's hands, accompanied by brisk friction, while the patient stands in warm water, with a cold compress about the head. If the patient reacts well after being dried and made to take lively exercise in the open air, or after having been put to bed, the cold-douche treatment may be begun. When the patient is sent to an institution, some such procedure as the following is employed: the cutaneous circulation is stimulated by encasing the patient's body up to the chin either in a hot box or in dry hot sheets for a few minutes, never up to the point of considerable perspiration, except in the irritable varieties of neurasthenia and in those accompanying the uric-acid diathesis; then the douche is employed with from ten to fifteen pounds pressure, and with water from 85° to 55° F., for from thirty to sixty seconds, and applied all over the body. The treatment is then terminated by the application of a spray (called the Fleury spray, after its French originator), with water of about the same or a little higher temperature and with equal or somewhat greater pressure. The patient is then quickly dried and reaction facilitated in the customary way. It depends entirely upon the degree and completeness of reaction what the formulary for the next treatment will be. If reaction is satisfactory, the temperature of the water is diminished on each succeeding day and the pressure somewhat increased, but never above eighteen or twenty pounds. The Scottish douche is rarely used, unless it be for the purpose of counteracting neuralgic pains and painful paræsthesia. When the hydriatic treatment must be carried out at home, cold ablutions and the dripping sheet are most serviceable. The application of the former is very simple, and may be done in one of two ways. A linen sheet is wrung out of water from 75° to 65° F., and thrown about the patient, who is standing upon a warm, dry surface or in warm water; then the attendant makes friction for from thirty to ninety seconds through the sheet, which is then removed and substituted by a dry sheet, through which the frictions are kept up until the patient begins to react thoroughly. The reaction is then kept up by utilization of the customary measures. The dripping sheet is oftentimes more serviceable than the one just described. The linen sheet is thoroughly saturated in water of the same temperature, but is not wrung out. It is applied in a similar manner after the patient has been given a brief ablution with water of the same or somewhat higher temperature, and removed after from thirty to sixty seconds, during which time friction is kept up through the sheet.

The other applications of water, such as the prolonged lukewarm or warm bath, the half-bath, the sitz-bath, the local and general cold pack, may be utilized to meet special indications. In the forms of neurasthenia characterized by erethism, mental excitement, physical unrest, continual expression of dissatisfaction, the general cold pack repeated once or twice daily, and kept on from two to four hours, is a very important and beneficial measure.

The Use of Electricity.—The rôle played by electricity in the treatment of neurasthenia is a much less important one than that of water. A discussion of the mode of its beneficial action does not seem to us necessary. The conviction seems to be increasing that its capacity for good stands largely in relationship to its effect in making a psychical appeal to the patient. Its unknown nature, its wondrous manifestations, its attributed health-restoring capacities, all tend to impress the patient with its potency for benefit. It really matters not how it acts or upon what it acts, so long as it may be utilized for the patient's benefit. Nor does it matter particularly what form of electricity is used. The form that appeals most powerfully to the patient's emotion and the form that is given from the most complicated and elaborate apparatus, according to the most studied plan and with the greatest care, is the one that will act most beneficially. It is because these essentials are best provided by the static apparatus that the application of this form of electricity seems to be more beneficial than either the faradic or galvanic. The next most useful form of electrization is the electric bath with interrupted current. We do not mean to deny that faradic and galvanic electricity are not sometimes useful in neurasthenia to assist in overcoming certain conditions, such as pain and myasthenia, by virtue of certain physical properties which they possess. For instance, general faradization, if not carried to the point of fatigue, may be of considerable assistance in tonifying the relaxed muscles. On the other hand, the rapidly interrupted current may sometimes be used advantageously to counteract pain and paræsthesia, while the positive pole of the constant current is now and then useful in overcoming local pain, such as rhachialgia. The latter current should never be used about the head, because of the vertigo that it is liable to produce, which may be fastened upon by the patient as a new symptom, which, sinking into the morbid memory, will but add

to his suffering. Formerly the use of faradic electricity, to produce muscular contraction and therefore make for tissue metamorphosis, was thought to be very essential in the rest cure; but it is gradually being discarded in favor of massage, passive exercise, and graduated active exercise, although it is still used for its effect as an indirect psycho-therapeutic agency.

Rest and Exercise.—The utilization of rest, exercise, and massage in the treatment of neurasthenia will depend largely upon the individual and the type of the disease from which he suffers. In some cases, particularly in women who are run down from social, maternal, or household duties, and in those in whom neurasthenia followed some such exhausting experience as prolonged suffering, repeated illness, protracted attention to the claims and wants of others, especially when associated with anæmia, more or less loss of flesh occurring either in men or women, absolute rest in bed for a number of weeks is a very essential element in the treatment. The utility of rest, combined with forced feeding and passive exercise, was first demonstrated by Dr. Weir Mitchell, and it is generally known as his rest-plan of treatment. In my own experience, it is applicable to a relatively small proportion of all neurasthenics, when carried out in a radical way. A modification of it is, to be sure, one of the essential features in the plan of treatment which we are attempting to outline. But in many cases it is more essential to prescribe some exercise that is consistent with the patient's strength and purse, in connection with a certain amount of enforced rest in bed. In beginning the treatment of a severe case of the anxious, depressed type of neurasthenia, it is as a rule advisable to keep the patient in bed for two or three weeks, during which time exercise necessary to combat the myasthenia and to promote tissue reconstruction is got by the use of massage and resistance movements. After such a time the patient is kept in bed from fourteen to eighteen hours out of the twenty-four, the remainder being taken up in hydriatic and electrical treatment, walking, cycling, golfing, riding, fencing, boxing, rowing, etc., whichever is most feasible and suitable to the patient. The variety of exercise that is beneficial in neurasthenia depends somewhat upon the type of the disorder, but more upon the individual. The greatest difficulty is experienced in deciding upon the exercise that is most suitable for women who, from one end of life to the other, have never tasted the sweet weariness that follows accustomed toil or whose age precludes them from indulging becomingly in the varieties of exercise that have been mentioned. For them walking is tedious and lends itself to introspection; cycling is looked upon as unfitting their years and dignity; golfing is too spectacular and violent, and so on throughout the list. It is in such cases that the patient should be sent into some new country, especially a hilly or mountainous one, whose attractions invite exploration, and to accomplish which requires walking, climbing, donkey riding, etc.

The safest criterion in the election and insistence on certain varieties of exercise is the effect that it produces, not the effect that the patient says it produces. If indulgence in exercise tends to make the patient accept the enforced rest and isolation more gracefully; to increase the appetite and facilitate the action of the bowels; to promote a feeling of relaxation and sleep—then it is beneficial and should be continued, increased, and varied. If, on the other hand, it produces the antithesis of these, it should be curtailed or entirely stopped for a time, and enforced rest rigorously carried out, while the exercise necessary to promote tissue metamorphosis is obtained by passive movements. It is often advantageous for a patient who is isolated and who is taking a moderate rest cure, to indulge in certain occupations which help to pass the time and to distract the mind. Women should be encouraged to sew, to knit, to play cards, etc.; while men should be allowed to play billiards, backgammon, etc., providing these are not looked upon as tasks and do not cause fatigue.

Exercise in the open air, particularly when it engrosses the interest, is particularly beneficial in those whose neurasthenia is apparently the result of sedentary labor, absorbing mental occupation, worry, care, anxiety, etc. It is also very essential for those who have the uric-acid diathesis and tendency to catarrhal condition of the bowels. In the forms characterized by anxiety, vasomotor manifestations, and profound myasthenia, and in some cases with profound disturbance of the sexual sphere, it is not so valuable.

Massage is often overrated as a therapeutic aid in the treatment of neurasthenia, and perhaps sometimes underrated. It is needless to say that it has no specific virtue. Like all physical agencies that are useful in the treatment of this neurosis, it owes its beneficial effects to the aid which it gives to processes of metabolism, and to the appeal which it makes to the mind of the sufferer. The latter overshadows the former. Massage is therefore oftentimes more beneficial when it is given according to a complicated system, in which all the details are rigorously carried out, and when it is given with complicated mechanical apparatus. The usefulness of abdominal massage in overcoming constipation has already been mentioned. No definite rules can be given for the utilization of massage, for so much depends upon the individual and upon the type of his disease. Some patients, particularly men and those with anxiety type of the neurosis, do not tolerate it at all; while others, women, depressed neurasthenics, and fat individuals, enjoy it and frequently sleep after a séance. Massage operators aver that the efficacy of massage depends largely upon the manner of its application and upon the system with which it is utilized. Their view of the matter is an interested and a biassed one. It may be used advantageously to overcome constipation, stiffness and soreness of the joints and extremities, and myasthenia. Insomnia can sometimes be combated by the use of vigorous massage of the entire body for an hour or more just before retiring, or by downward stroking of the sides and back of the neck. This procedure seems to influence the intracranical circulation by facilitating the flow of blood in the veins.

Climato-therapy. — The influence of climate in the treatment of neurasthenia is not very great. The neurasthenic patient recovers more quickly in a climate that allows him to spend comfortably a portion of the time in the open air, and to have plenty of this important element in a pure state in his living apartment. A climate that is so moist and warm that it tends to general enervation, or one that is so cold and dry that it requires the expenditure of a great deal of energy to withstand it, is contraindicated. The benefit that is obtained from change of climate is more often due to the new environment, with its absence of strife and distressing annoyances, and the attention to diet, rest, exercise, and hygienic rules which it entails, than to climatic conditions. A sojourn in the hills or mountains for those on whom the seaside or plain palls on account of long association, is beneficial, and *vice versa* for the same reasons. The influence of beautiful scenery, inspiring surroundings, and the wonders of nature may impress upon the self-centred patient how trivial and uninteresting he is when compared with it all, and help to lift him out of himself. Like everything else in the treatment of neurasthenia, very much depends upon the individual.

The question of travel for neurasthenic patients is

not a very difficult one to decide. For the majority it is impracticable, and the minority are better off without it. For one neurasthenic patient who is benefited by aimless "travelling for health," ten are injured by it.

Drugs in the Treatment of Neurasthenia.—The medicinal treatment of neurasthenia is the least important duty of the physician, though it is oftentimes difficult to convince patients of this, and physicians as well. Symptom medicines are invaluable to meet certain indications, and disease medicines assist in overcoming certain organic conditions, such as anæmia; but, despite this, the majority of neurasthenic patients would reach the goal of recovery just as surely and speedily if drugs were entirely discarded. At least it may truthfully be said that it is oftentimes as important to forbid the patient all medication as it is to prescribe it. Neurologists will probably agree that the majority of patients that come to them for advice and treatment, after they have been under treatment by their family physician or desultorily by a number of physicians, are so thoroughly bromidized that this state demands treatment. I do not mean to say that the bromide salts are not oftentimes of signal benefit to relieve certain distressing symptoms, such as head pressure, cardiac palpitation, abdominal fluttering, etc.; but they should never be given continuously, promiscuously, or without special indication. Although the pharmacopœia contains no drug that has special virtue to "strengthen" the nervous system or to restore its equilibrium when the balance is once disturbed, there are certain drugs which, by creating an appetite, facilitating digestion and assimilation, forcing oxidation and elimination, and by adding to the constituents of the blood, are serviceable when such indications exist. The simple bitters and stomachics can be given for a short time with a considerable confidence that they will cause a greater relish for food. Arsenic, nux vomica, and quinine oftentimes not only create a greater desire for food, but seem to have a general tonifying effect, particularly upon the muscular system. Cod-liver oil, which is supposed to be of especial service in the treatment of neurasthenia, has no other virtue than to provide an easily digested carbonaceous food. In anæmic individuals suitable preparations of iron and arsenic, alternated or combined with the simple bitters, must be given. In administering iron it should not be forgotten that it has been proven experimentally that the quantity which the blood will take up stands in no relationship to the amount administered. Not infrequently beneficial effects follow repeated inhalation of oxygen. This procedure not only affords a general fillip to the system but has a desirable mental effect. In the use of arsenic and quinine, it is well to bear in mind that the former has a tendency to produce disturbance of the stomach and intestines, which may have a very distressing mental effect upon the patient; while the latter, if given in other than very small doses, is sure to produce ringing in the ears and vertigo, which the patient will be likely to interpret as most disastrous manifestations. The administration of aphrodisiacs in sexual neurasthenia is conceived in error, and should never be tried except for the mental effects. Drugs that make powerful appeal to the mind by insulting one of the special senses—such as valerian, for example, particularly when given with assurance that it will be beneficial—are oftentimes of great comfort to the patient, and thereby useful. Hypnotics are rarely necessary when rest and exercise, hydrotherapy, and massage are properly and faithfully utilized. It is oftentimes necessary to give one of the simpler hypnotics a few times, in order to secure sleep until the physical measures just mentioned have time to become effective. They should be given in sufficiently large doses to make their effect decided, so that the patient may be impressed that a medium is readily at hand that can easily cope with the insomnia.

Local Treatment. — Reference has already been made to the absurdity of depending upon local treatment alone to cure neurasthenia, whether such treatment be directed to the prostate, the eye muscles, the uterus, or the stomach. All of these organs are very liable to reveal considerable disorder of function in neurasthenia, but so does every other tissue or organ of the body in varying degree. They all need treatment, and thus it is that hydriatic procedure, diet, rest, and exercise, etc., have proven to be the really trustworthy therapeutic agencies. Occasionally neurasthenia occurs sequentially to rectal abscess and fistula, to enlarged prostate, to prolonged and excessive use of ill-balanced eye muscles. In every such case the effort should be made to rid the patient of these evident infirmities. This is tantamount to saying that the causal treatment of neurasthenia should never be neglected. If such treatment suffices, the patient and the physician have good cause for mutual congratulation. Unfortunately, however, it does not suffice in about ninety per cent. of the cases, and it is unwise to neglect the ninety merely to reach the ten. The picture is more enticing when reversed.

The Plan.—From all that has been said, it will be readily inferred that the physician himself is the important measure in the treatment of this neurosis. His success in handling neurasthenia will stand in direct relationship to his capacity to inspire and maintain the confidence of his patient, and the thoroughness and persistence with which he utilizes the physical measures for the improvement of general nutrition of the body and the mind that we have detailed. To carry such treatment to a successful issue requires great individualization, tact, perseverance, and, above all, strict personal attention to detail. As a rule, it may be said that a patient with neurasthenia should be examined and treated with the same attention to detail as a patient with typhoid fever or endocarditis. That such careful examination and methodical treatment encompass a cure, in part or largely through their appeal to the mind of the individual, in no way detracts from them as tangible therapeutic measures. On the contrary, there is all the more reason for their utilization. The more often they are employed the less frequent will be the reports of cures by Christian scientists, faith curists, negro hoodoos, incantation men, and other fakirs and mystery mongers.

The physician who has neither the time nor the inclination to devote such attention and care to the neurasthenic patient should have the frankness and moral courage so to inform the patient, and not keep him on by promises of recovery which he cannot back up with results; while the physician who feels that he is discharging his duty by telling the patient that his sufferings are "imaginary," "mental," "trifling," can scarcely be said to have the modern conception of this neurosis, and is therefore unfitted to deal with it. The plan of treatment being so important in neurasthenia, the physician and the patient will have to decide whether it is feasible to carry it out at home. If it is not entirely so, it had better not be attempted, as each failure adds jeopardy to the patient's chance of speedy recovery. No compromise should be made with the patient or with the family relative to his conformation to all the conditions on which treatment is undertaken. If the patient is unwilling to do all that the physician assures him is necessary, he soon comes to view the matter in a different light when told that the treatment of his case cannot otherwise be undertaken. Occasionally it will be necessary to avail one's self of the facilities of sanatoria which are fully equipped with hydriatic and mechanical devices for

the application of massage, passive exercise, etc. There is much to be said against and but little in favor of such institutions. As a general rule, it may be said that institutional treatment is inimical to individualization, and should rarely be recommended.

ERUPTIONS OF THE FACE DUE TO NASAL PRESSURE.

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The intimate relationship which exists between the various organs of the body makes it impossible to advance in one branch of medicine without learning something of interest in another. This I have found especially true in connection with rhinology and its bearing on reflex neurosis.

By reflex neurosis I mean a functional disturbance when there exists no organic lesion of the nerve centres. In the nose the trigeminus, or fifth cranial nerve, which supplies the anterior part of the septum and inferior turbinates and meatuses, is the principal sensory nerve involved in this phenomenon. The other sensory nerves in the nose are the branches from Meckel's ganglion and from the Vidian, these supplying the superior posterior part of the septum and the superior and middle turbinates and meatuses. The peculiar manner in which the neurosis is produced remains a matter of some doubt. John MacKenzie and Sandman were among the first to locate certain spots which when irritated produced reflexes. Lennox Browne carried on this investigation and pointed out the fact that such areas are especially found over spurs and projections caused by deflections, and that their situation varies greatly. Some writers, like Rossbach, Heyman, and Reinbold, maintain that a neurotic predisposition is necessary for the exhibition of such reflex; this might be the rule, but it certainly does not always hold good, as noticed herein.

It is interesting to note a few of the reflex neuroses already traced to nasal obstruction, namely, vertigo, ocular affections, stammering, hay fever, nocturnal incontinence, twitching of the facial muscles, aphonia, salivation, cough, chorea, and one I have not as yet seen described, that of face eruptions, the subject of this paper.

A general *résumé* of the subject of skin diseases of the face is probably essential to a more comprehensive understanding of the matter in hand. There are those dependent upon some specific germ, such as syphilis and erysipelas; those of a tuberculous and strumous nature, such as lupus erythematosus and lupus vulgaris; there are those dependent upon a parasite and fungi, such as the itch mite and favus; those upon anomalies of secretion, such as acne seborrhœa; others upon inflammatory deposit, such as hyperplasia; others from congenital anomalies, such as nævi and moles; and lastly those dependent upon reflex neurosis caused by nasal pressure.

Case I.—Mary C——, aged twenty years, music teacher, consulted me December 12, 1898, for an eruption over the left side of the face which had been persistent for four years and had been variously diagnosed as eczema, erysipelas, and poisoning by rhus toxicodendron. When I first saw the case, it presented an appearance not unlike inflammatory erythema. The patient had always noticed that an attack of coryza exaggerated the symptoms, swelling the face, especially around the left eye. In the left side of the septum, well back, I found a small, sharp spur which pressed into the middle turbinate. This I removed with a saw and ordered rose ointment for the face. The disease rapidly faded away, until at the end of one week it had entirely disappeared, and at the present writing there has been no return of the trouble.

Case II.—F. C——, aged twenty years, teacher, consulted me March 21, 1898, for a dermatitis extending over the right side of the face. This eruption resembled in many particulars that described in Case I., except that there were periods when she was comparatively free from the trouble. She gave a history of mouth breathing and nasal and postnasal catarrh, and also had noticed, as in Case I., that when suffering from coryza her face was worse. When she consulted me the trouble had been persistent for several weeks. In the right nostril I found a deflected septum, the apex of which pressed against the centre of the middle turbinate. I removed the apex, thus relieving the pressure, and the face promptly cleared. At the present writing she has had no return.

Case III.—Mary B——, cashier, consulted me January 12, 1899, for a papular eruption of the face, which had been persistent for over four years and covered the entire face. She was a very healthy girl with no neurotic tendencies. Her complexion presented a muddy appearance and her skin was friable. At the posterior third of the septum on the right side, high up, I found a spur which pressed into the opposite middle turbinate. This I removed with difficulty by reason of its location and ordered a mild ointment. The eruption gradually disappeared, first on the side opposite to the spur, and at the end of four weeks the patient was well. There has been no return.

Case IV.—J. F——, schoolboy, aged seventeen years, consulted me September 22, 1898, for an acnoid eruption of the face, generally distributed, but much worse on the left side. An examination of the nose revealed a spur on the left septum posteriorly, which pressed against the inferior turbinate. This I removed, and at the end of ten days the eruption had disappeared. He is at present free from it.

Case V.—Mrs. L——, aged thirty-two years, consulted me January 9, 1898, for a papular eruption of the face, worse at the angle of the jaw, resembling acne necrotica. It had been persistent for several years. Her complexion was rather dark and muddy, and her skin was friable. In the posterior third of the left nostril I found a spur which impinged upon the lower turbinate. Upon removing this with the saw, at the end of three weeks the papules ceased to appear and since then there has been no return.

Case VI.—Miss A. M——, aged twenty-one years, was referred to me by her family physician in May, 1898, for catarrhal treatment. She was of a neurotic temperament, but generally healthy. On her forehead I noticed acne varioliformis from which she had suffered several months prior to her visit, and it had been under treatment for some weeks without much success. In the left side of the nose I found a large spur projecting from the middle and posterior third and pressing on the middle turbinate, which I removed with a saw, ordering a mild ointment for the skin. The eruption gradually faded; in two weeks it was gone, and she has had no return.

Case VII.—C. W. B——, carriage builder, consulted me January 2, 1899, for an eruption on the nose and sides of the face of nine months' standing. My first impression was that the trouble was a syphilide, but I could obtain no history to that effect. Over the bridge of the nose the patches had enlarged peripherally and coalesced and were covered with scales coarser than those found in psoriasis. In this case I found a spur projecting from the posterior third of the septum upon the opposite turbinates. I removed this with a saw, and, without instituting energetic treatment for the eruption, I waited to watch the effect of the operation. To my surprise the face gradually cleared, and at the present writing he is entirely well. This case was

conspicuous for the deformity produced by the disease and for the fact that it was worse on the side corresponding to the pressure.

In the following cases, VIII. and IX., it will be noticed that the pressure was due not to spurs as heretofore, but to thickening of the soft parts by reason of polypi and hypertrophied tissue, and that the eruption was cured, although the catarrhal trouble, less the pressure, still remained.

CASE VIII.—Maggie C——, aged twenty-one years, domestic, consulted me July 22, 1894, for an eruption of the face of an eczematous variety which appeared in large patches extending around the eyes and over the face and ears. At times it was so bad that she was obliged to keep to her room; it was then intensely itchy and often painful, and on account of the œdema of the tissue about the eyes the contour of the face would be destroyed. I put her on a restricted diet and used ordinary remedies for such a condition, but after eight weeks' trial I obtained no result. Thinking perhaps that this might be due to some nasal trouble, I made a careful examination of the nose and noticed that the anterior end of each middle turbinate was enlarged and degenerated; and that between the middle and inferior turbinates was a mass of polypi. The post-nasal cavity showed well-marked atrophic rhinitis. I thereupon instituted nasal treatment. With my little finger I was able to gouge away the degenerated ends that formed the mass of the middle turbinate. The polypi I removed and curetted well up to the ethmoidal cells, which also were diseased. The middle turbinate was wedged between the septum and the lower turbinate, causing pressure on either side, and I removed the portion encroached upon. To my surprise and delight the face began to improve, and in two weeks it was clear for the first time in twelve years. Six months later she called, and the trouble had returned. I again removed from the nose a mass of polypi which had grown in the same position and also anterior to it, and as before the face promptly cleared. I then concluded that without doubt the mechanical pressure alone caused the skin eruption.

CASE IX.—Miss Mac——, aged twenty years, consulted me January 8, 1898, for an eruption which extended over the lower part of the face and chin. In its earlier stage it was papular, then the papules disappeared, leaving red macules, which remained a long time, finally leaving slightly pigmented spots. It had been present for five years and was treated more or less during that time without success. She was anæmic and below the average in health. In her nose the frontal sinus was diseased, and several polypi were wedged in between the septum and a tumorous middle turbinate. I removed the anterior portion of the middle turbinate and curetted several polypi leading up as far as the ethmoidal sinuses. Externally I applied Lassar paste, and within three weeks the face had entirely cleared up. After the eruption had disappeared from the chin the surface was studded with red macules which slowly disappeared. It should be noticed in this case that while the trouble in the frontal sinus was left uncured, the eruption disappeared with the removal of the pressure caused by the polypi and middle turbinate.

In the following cases, X. and XI., I describe an eruption which to my knowledge has not as yet appeared in the books and which may probably be regarded as typical. Their lesions are identical, and they are the only two cases of the kind I have seen in four years.

CASE X.—Mary F——, school-teacher, aged twenty-six years, consulted me in June, 1894, for an eruption of the face which made its appearance at the age of fifteen. In the first stage the lesions were papular and were painful to the touch; in the course of a few days they became vesicular, and then the vesicles discharged their contents, leaving an eroded spot about four millimetres in diameter, slightly depressed in the centre and scarlet red, which persisted for three or four weeks and finally disappeared, leaving a scar. Her skin was muddy and friable, but in every other particular she was a healthy woman. She had been treated off and on for years without success; and, indeed, this was my experience at first. Chancing to look in her nose for some cause of irritation that I had not already discovered, I found a deflection of the septum which pressed tightly against the opposite turbinate. I attempted to remedy this condition but failed, and as I then had not traced the possible relationship between the nose and skin, I did not urge a second operation. In December, 1898, four years later, I sent for her, operated successfully, and relieved an eruption which had persisted for eleven years.

CASE XI.—Mrs. C. T. B—— consulted me October 7, 1898, for an eruption of the face, worse on the left side. This was identical with the one just described, except that it had been present for only two years. The patient was a mouth-breather, nervous, anæmic, and had a muddy complexion. She had been under constant treatment without success. In the left nostril, well back, was a spur on the septum which pressed into the left middle turbinate. This I removed with a saw and prescribed rose ointment for the spots. In four days the side opposite to the spur was cleared, and in two weeks the whole face was entirely well.

There are a few points which I wish to bring out in connection with these cases.

First, that the eruption may be caused by pressure from soft or hard parts.

Second, that in the cases in which there were spurs the eruptions did not appear before puberty, probably for the reason that spurs do not occur before that time.

Third, that the muddy complexion and friable skin noted in some of the cases I have observed to be a peculiar characteristic of nasal obstruction.

Fourth, the promptness with which these eruptions disappeared after operation.

Fifth, that the eruptions appeared first and were always worse on the side corresponding to the pressure. The probable explanation of this is that the part of the nose upon which the deformity pressed was the first to suffer from irritation, and because of its soft, yielding nature and abundant supply of nerves and blood-vessels was the side most affected.

Sixth, that the eruption cleared first on the side opposite to the pressure. My explanation of this is that not until the apex of the spur pressed against the bone of the part pressed was the septal side affected, and when the spur was removed there was no origin of irritation.

Seventh, that the variety of pressure points noted in these cases would seem to substantiate Lennox Browne's theory as to sensitive areas in the nose.

In conclusion I wish to make a plea for the careful search for some irritation in the nose in the treatment of all skin diseases of the face when the origin is uncertain.

Injections of Serum from the Renal Vein in Uræmia.—Dr. de Lignerolles (*Lyon Médicale*, January 8, 1899) announces, as a result of his work on this subject, that in uræmia injections of the serum of the renal vein alleviate headache, diminish the severity of nervous troubles, suppress vomiting and dyspnœa, and lessen albuminuria. These facts lead us to conclude that serum of the renal vein, antiseptically collected, may be employed with success in uræmic troubles and contribute to their amelioration. They furnish the internal secretion which is wanting and enable the kidney to resume its normal function of excretion and its antitoxic rôle.

NOTES ON COCAINE.

By WALTER P JENNEY, Ph.D.,
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I. The Action of Cocaine Hydrochlorate upon the Skin.—When an aqueous solution of cocaine is applied to the skin, a portion of the drug is absorbed, a peculiar sensation of coolness pervades the part, and if the action is long continued over a considerable surface the amount absorbed may become so great as to cause in some cases physiological symptoms resembling those described as produced by chewing the leaves of the coca plant. Although the quantity of cocaine so applied to the skin may be many times the maximum dose which may be given internally or hypodermically with safety, no toxic action takes place. The local anæsthetic effects peculiar to cocaine are somewhat modified; sensation continues in the surface treated with the solution, even after the lapse of from twenty to thirty minutes. In the treatment of bruises resulting from a blow or similar cause, the action is most strongly marked; the discoloration and congestion of the tissues are rapidly reduced to the normal color of the skin, evidently by the constriction of the blood-vessels; inflammation and pain subside more gradually, and the pain seldom returns after the anæsthetic effect of the drug has ceased. If the locus of the pain is near the surface, relief is usually speedy, not infrequently all pain subsiding permanently in three or four minutes; where more deep seated, the action is retarded and less often permanent in its effects. It is then necessary to keep the surface of the body directly over the seat of the pain, wet with successive applications of the solution until ten or more grains of cocaine hydrochlorate have been used. In such cases, relief from pain comes very gradually, and may probably be due to the physiological action of the alkaloid through the circulation, rather than to cocaine anæsthesia by direct absorption. This view is confirmed by a few instances in which the amount of the drug applied to the skin was from fifteen to twenty grains, the patient displaying a high state of nervous excitement much resembling the effect produced by an excessive amount of green tea. Respiration was increased and the pupils dilated, without the manifestation of any of the distinctly toxic symptoms of cocaine. It is noteworthy that these physiological symptoms, with the absence of toxic action, are those recorded as resulting from chewing the leaves of the erythroxylon coca.

The strength of the solution, while somewhat influencing the rate of absorption of the alkaloid by the skin, does not appear to be an important factor. A solution of two to four per cent., or from ten to twenty grains of cocaine hydrochlorate per ounce of water, has been found to give good results. It is best that the solution should be freshly prepared, as it undergoes decomposition in a few days.

The solution may be applied by painting the surface of the skin with a camel's-hair brush, or a cloth or thin sheet of absorbent cotton wet with the solution may be placed in direct contact with the skin over the part affected. All absorption ceases if the surface becomes dry, so that it is necessary repeatedly to paint the spot with fresh solution or to wet the cloth with water to replace loss by evaporation due to the heat of the body.

The action varies in some degree with samples of cocaine hydrochlorate of different manufacture; the crystallized drug, put up in sealed bottles, is more rapidly absorbed by the skin than the preparations (which I have tested) that are sold in bulk.

The therapeutic action of cocaine upon the human skin appears to have escaped the attention of investigators. Most of the standard works on the subject either omit any mention, or state that the drug is not absorbed.[1]

Cocaine solution may be employed as above indicated in the treatment of bruises, sprains, and many local inflammations of like character. As a "pain paint" in the quick reduction of bruises, it is doubtful if it has any equal. It may also be used as a preliminary application to reduce inflammation in surgical treatment of dislocations and fractures.

In neuralgia, when the nerve affected is situated near the skin, the local application of a sheet of absorbent cotton saturated with cocaine solution will in some cases give almost immediate relief.

It is also worthy of trial in pleurisy, pneumonia, and peritonitis; a gradual palliative action has been observed to take place with the prolonged application of a six-per-cent. solution, notwithstanding the deep-seated locus of the inflammation; the action, in part at least, being probably due to the absorption of the alkaloid into the circulation. In like manner the dull, persistent pain in the lungs in tuberculosis is in some instances alleviated by the repeated application of cocaine to the chest. Small and painful wounds, where the skin is practically unbroken, may be treated directly with cocaine without danger of too rapid absorption of the drug. In a wound in the foot caused by stepping on a rusty nail, wetting the bandage with cocaine solution reduced the inflammation and quieted the pain, the wound healing with comparatively little suffering to the patient.

Painting with cocaine the marks due to the hypodermic syringe causes them to disappear quickly, from the constringeing of the blood-vessels.

Caution should be exercised in the external application of cocaine in cases in which the surface of the skin is not intact, to open wounds or highly inflamed surfaces, lest absorption of the toxic alkaloids should occur.

The rapid absorption into the circulation of the toxic alkaloids when cocaine is administered internally affords an explanation of the danger incident to the employment of more than the smallest doses administered through the mouth, rectum, or urethra; to the introduction beneath the skin by the hypodermic needle; or to the application of a solution of the drug to any mucous surface.

II. Cocaine Not a Simple Alkaloid.—There are some evidences in the action of a solution of cocaine hydrochlorate when applied to the human skin which indicate that the drug, as supplied to the trade, may not consist of a simple substance, but of a mixture of at least two alkaloids—one, rapidly absorbed by the skin, is non-poisonous and possesses valuable properties in the reduction of local inflammation and pain; the other, to which is probably due the toxic action, is not absorbed and is left as a residuum on the surface of the skin. In short, it seems that when wet with a dilute solution of cocaine hydrochlorate, the human skin apparently dialyzes the mixed alkaloids, permitting the harmless alkaloid to be absorbed, separating it from the toxic principles. In an experiment, a thin sheet of absorbent cotton, three inches square, was saturated with a six-per-cent. solution of cocaine and applied to the skin of the patient for half an hour; the cotton being kept moistened with water to replace that lost by evaporation. When there was no longer any sensation noticeable from the absorption of the drug, the cotton was washed with water and the washings were evaporated in a watch-glass by steam heat. The residuum was a white, solid substance, having an intensely bitter taste and producing an almost instanta-

[1] In an exhaustive article on cocaine the author states: "The skin will not allow it to pass, while the conjunctival and nasal mucous membrane are very permeable." "Therapeutics," by H. C. Wood, eighth edition. 1891, p. 255.

neous sensation of numbness when a small particle was applied to the tongue.

The variable action of cocaine noted by investigators, and the erratic poisonous action, in certain recorded cases, of even the smallest doses when administered internally, may be explained by the irregular composition of different samples of the drug; some containing a larger proportion of the highly toxic alkaloids, while other preparations have a greater percentage of the non-poisonous alkaloids.

Should the suggestions here put forth respecting the composition of cocaine be confirmed by chemical research, it is not improbable that other animal membranes will be found on experiment to act like the human skin in separating by dialysis the valuable alkaloid from the toxic principle.

There is thus hope that cocaine may be in the future prepared free from all poisonous principles; should this hope be realized, I would suggest that cocaine be retained as the name of the valuable alkaloid, and that lethane be the designation of the toxic element.

February 15, 1899.

THE QUESTION OF INFLATING THE BLADDER WITH AIR PRELIMINARY TO THE BOTTINI OPERATION.

By BRANSFORD LEWIS, M.D.,

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In a discussion of the Bottini operation for senile hypertrophied prostate, held at a meeting of the New York Deutsche medicinische Gesellschaft, May 2, 1898,[1] Dr. Freudenberg called attention to a feature of the operation that might prove dangerous in certain cases; indeed, that had proved disastrous in one of his own—that is, when the bladder is empty, with its mucous membrane lying in folds, there is liability of the heated platinum blade catching in one of the folds and burning through it, or even through the bladder wall, with peritonitis and death as a result. To obviate this, Dr. Freudenberg recommended that the bladder be at least partially filled with boric-acid solution, in order to smooth out the membrane and its folds.

In carrying out this suggestion in a subsequent operation on a patient on whom I had already operated with his bladder empty, I found that the pain was enormously increased—was, indeed, unbearable, whereas in the previous operation on the same patient it had been of small moment. I therefore substituted air as a distending medium, with the effect of reducing the pain to practically nothing. Cocaine anæsthesia was used in each instance.

It appeared to me probable that the superheated boric solution in the neighborhood of the red-hot blade had caused a scalding effect, with the production of the exaggerated pain. From the result of an experiment I was made doubtful of the expediency of this method, even aside from the question of the amount of pain which it might induce. On placing the blade in a cup of water and turning on the electric current, the water would be made to boil, but the blade could not be brought to a red heat, no matter how strong a current was used.

Dr. Freudenberg believes that by causing the incisor closely to hug the prostate, the solution may be excluded from coming in contact with the blade. This, to me, is very doubtful, as the probability is, that when the blade is drawn from its niche an opening is made for the ingress of the solution, interfering with the working of the instrument, as well as producing an unnecessary scalding effect.

My use of air inflation in connection with this operation was mentioned in the MEDICAL RECORD, page 718, November 12, 1898,[2] and the Philadelphia *Medical Journal*, December 10, 1898.[3] In an able and gratifying report of his cases[3] Dr. W. Meyer, of New York, on the subject of inflation, writes as follows: "Lewis, of St. Louis, recently recommended the advisability of filling the bladder with air. One of his patients, on whom he had to operate for a second time, maintained that there was no pain whatever after air had been injected into the bladder, while when it had been filled with water previous to the first operation the pain was considerable. I should not, however, indorse vesical inflation with air. The experiments of Lewin and Goldschmidt[4] have shown that, owing to some unforeseen gaping of the ureteral openings, the air may ascend from the bladder into the pelvis of the kidney and then pass, by way of the renal vein, into the general circulation. Death from an aerial embolism into the pulmonary artery may set in."

On looking up the reports of the experiments of Lewin and Goldschmidt, I found them to be, in effect, as follows (the conclusions of the authors):

"Air, being injected into the bladder [of a dog], in case it ascends into the ureter produces the following effects: The kidney enlarges and turns somewhat on its axis. With a fine, peculiar noise air-bubbles pass from the direction of the kidney-hilus into the renal vein. There is noticed a slight vibration; in a short time the blood is forced out and the vessel resembles a round empty tube of frosted ["milch"] glass.

"The bubbles pass into the vena cava, fill it, replacing the blood, and, after a few spasmodic motions of the extremities, the animal dies. On opening the chest, one can see how the heart still works for a time with spasmodic efforts; through its thin anterior walls one can further observe how, by the activity of that muscle, the blood is churned into foam, intermixed with air as it is. We have clearly established, therefore, a transportation of air from the urinary channels into the blood-vascular system."

I must say that, on reading so graphic a description of this remarkable and acrobatic performance, I was staggered. So imminent a peril as this to beset the lives of patients being operated almost daily by Dr. Howard Kelly and his disciples, in the cystoscopy of women; so many undergoing its dangers at the hands of the followers of Dr. Bristow, who advocated[5] the employment of air for vesical distention in ordinary epicystotomy, and whose advice has been accepted in the practice of many prominent surgeons of this country is difficult to contemplate!

I was reassured to some degree, however, by remembering the results of experiments conducted by Dr. H. A. Hare in 1889,[6] in which the old idea of the extreme harmfulness of air in the circulation had apparently been exploded. In these experiments upward of seventy dogs had been subjected to air injections; one instance is detailed as follows:

"Dog; weight, forty-five pounds; setter; full grown. (No ether.)

"11:05 A.M.: Injected twenty cubic centimetres of air into left jugular vein in less than a second with a syringe.

"11:15: No change in any way noticed, save that breathing may have been quickened for about one minute after injection. Is moving around the room, perfectly happy and frisking about.

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[1] New Yorker Medic. Monatsschrift, July, 1898.

[2] "Bottini's Operation for Enlarged Prostate."

[3] "The Radical Treatment of Hypertrophied Prostate by Electro-Incision."

[3] "Personal Experience with Bottini's Operation in the Radical Treatment of Hypertrophy of the Prostate," MEDICAL RECORD, January 14, 1899, p. 41.

[4] Deutsche medic. Woch., 1897, Nos. 38 and 52.

[5] Annals of Surgery, August, 1897, pp. 226.

[6] "The Effect of the Entrance of Air into the Circulation," Therapeutic Gazette, September 16, 1889.

"Next day: In perfect health.

"Seventh day: In perfect health."

From this series of experiments the author deduced the conclusion that "death never occurs from the entrance of air into the ordinary veins of the body unless the quantity be enormous—from one to several pints, a quantity which cannot enter unless deliberately sent in by the surgeon."

However, desirous of arriving at an unbiassed and correct conclusion regarding the vesical-inflation question, I carried out the following experimental steps on a dog. They were done with the assistance of Dr. H. L. Nietert, superintendent of the City Hospital; Dr. R. Amyx, assistant superintendent, and Dr. Greiner, all of whom watched critically the various stages of the procedure, and agreed that no opportunity was overlooked for getting a confirmation of the results of Lewin and Goldschmidt; but, as will be seen, not a particle of evidence in confirmation of them was obtained.

The dog was a half-grown mongrel, weighing about nine pounds. Under chloroform anæsthesia the abdomen was opened from symphysis to ensiform cartilage, and the intestines were drawn aside, giving a perfect view of the field of observation. With a rubber bulb syringe the bladder was completely distended with air, after withdrawal of its urinary contents. The penis was ligated, preventing the escape in that direction of the injected air. With the left ureter, kidney, and renal vein plainly exposed to view, firm compression was made on the distended bladder, and continued for fifteen minutes. No distention of kidney pelvis or of ureter ensued. The position of the bladder was changed in various directions, to afford the best opportunity possible for the escape of the air into the ureters, but with the same negative result. Each of the onlookers tried various manipulations of the bladder, but without succeeding in getting the air up into the ureters (both ureters were watched in the manœuvres); and finally sufficient compression was used to rupture the bladder-wall, without overcoming the integrity of the vesico-ureteral valves.

Next, a hypodermic needle was introduced through an ureteral wall, and a syringeful of air was sent toward the kidney pelvis. This latter was distended to a certain degree, which condition was maintained for five minutes or more by compression of the ureter below it. The renal vein was closely observed. Not a bubble appeared in it, nor did it undergo a single change suggestive of inflowing air. The kidney position was changed in several ways, to facilitate the "filtration" of the air through it, but still without result.

In order to make this feature of the experiment satisfying to even the most skeptical, a slit was made in the wall of the ureter, a cannula was introduced through it, and the bulb syringe (Politzer air bag) attached to the outer extremity of this latter, enabled us to make forced air pressure into ureter and hilus, sufficient almost to burst them. This pressure was likewise maintained for ten or more minutes; yet no bubble appeared in the renal veins and no "milk-glass" appearance was assumed by it. In fact, there was no transportation of air from urinary channels to renal or other vascular system. And meanwhile the dog slept serenely.

Next, in order to see what effect would follow if the air should be transferred into the venous system, I injected three hypodermic syringefuls in rapid succession into a mesenteric vein. We could plainly see the air shoot along toward the centre, indicated by the displaced blood. The dog showed no disturbance in breathing as a consequence, but slept placidly and continuously for a half-hour thereafter; and was awakening when we killed him with a double dose of chloroform.

From the above, there seems little probability that any noxious effect would ensue, in a Bottini operation with air inflation, even if there should be "some unforeseen gaping of the ureteral openings." The kidney makes an impermeable barrier against the entrance of air into the circulation from that source. And even if it did not, the injurious effects of such transportation are problematic, to say the least. As Dr. Hare says, whereas there have been numerous cases reported in which sudden death occurred during operations in which veins were opened, in the majority of them the cause of death has been guessed at and not proved as being due to the entrance of air. He asserts that not a single instance has been proved to be due to that cause.[1]

In a recent private communication to me on the subject under discussion, Dr. Hare writes: "Even if by reason of disease the ureteral valvular protection were removed, it seems incredible that, should the air pass up the pelvis to the kidney, it could enter the renal vein and so get into the general circulation."

But, to pass from speculation and experiment to the evidence furnished by the clinic. I wish to present the testimony of operators in this field. With a view to obtaining this, the following note was recently addressed to several surgeons: "Will you kindly inform me: (1) If you have made use of air inflation of the bladder in connection with epicystotomy or other operative procedure. (2) If you have ever met with any injurious or disastrous effect therefrom. (3) If you have ever heard of any such in the practice of other surgeons (names unnecessary)."

Responses were had from Drs. W. W. Keen, Philadelphia; J. B. Murphy, Chicago; Howard A. Kelly, Baltimore; John H. Brinton, Philadelphia; William T. Belfield, Chicago; J. William White, Philadelphia; John P. Bryson, St. Louis; and Maurice H. Richardson, Boston.

There is such unanimity of sentiment in these expressions that it is not necessary to quote them separately. In response to the first question there are affirmative answers from five of the gentlemen: "Yes, many times," from Drs. Kelly, Belfield, and Bryson, and simply "Yes" from Drs. Keen and Brinton. The other three gentlemen have not used air inflation. In response to the second and third questions, "No" is the unanimous answer. I may say that in the several instances in which I have used air inflation I have seen no indication of trouble of any kind from it; nor have I ever heard of any in the practice of any surgeon.

It seems altogether probable that if vesical inflation had ever given rise to the disastrous consequences feared, it would have come to the knowledge of some of the operators mentioned above, even if it had not occurred in their practice.

From the evidence adduced it would seem unjust, I believe, to rest an objection to vesical inflation on the ground of possible danger.

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Acquired Inguinal Hernia in Infants should not be operated upon, if its control be possible by means of the truss, for the reason that the natural growth of the infant and consequent expansion of the pelvis converts the mesenteric to parietal peritoneum and shortens the range of movement of the intestine, and such growth also places the abdominal ring in a more protected situation, and removes it from the excessive pressure of the intestine; thus the child outgrows hernia. These observations on hernia have no reference whatever to those forms of congenital hernia which depend upon errors of development of the inguinal canal or of its contents.—Thomas Charles Martin.

1 "The Effect of the Entrance of Air into the Circulation," Therapeutic Gazette, September 16, 1889.

Progress of Medical Science.

Electric Treatment of Neurasthenia and Hysteria.—Drs. Apostoli and Planet (*Allgemeine med. Central-Zeitung*, February 1st) are credited with the following conclusions: (1) Some hysterical patients react so poorly at the beginning to the application of statical electricity (franklinization) that we must consider it contraindicated in their cases. (2) This beginning intolerance is observed in many hystero-neurasthenics of the Jewish faith. (3) The intolerance in most instances is only temporary; it gradually disappears and in its place a more or less complete tolerance occurs. (4) This result is obtained by beginning with short sittings which last from two to five minutes daily, and increasing gradually in proportion to the tolerance of the individual. (5) Thanks to this method, we are enabled to combat with good results many neurasthenic and hysterical symptoms.

Antitoxin Late in Diphtheria.—As an illustration of the therapeutic utility of the antitoxin of diphtheria, even at a late stage of the disease, Daldy (*British Medical Journal*, February 11, 1899, p. 338) reports the case of an infant, seven months old, with a history of "croup" of seven days' duration. The respirations were 36, the pulse was 154, the temperature 99.2° F. Croupy cough was present, together with great sucking in of the ribs and of the triangles of the neck. The fauces were normal, except for slight congestion of the ridges of the tonsils. Emetics and hot applications not bringing relief, and the dyspnœa increasing, tracheotomy was performed, and fifteen hundred units of antitoxin were injected. The dyspnœa was relieved, and on the following day a second injection of fifteen hundred units was made. Improvement was uninterrupted, and the child progressed to eventual recovery, the tracheotomy tube being removed on the seventh day. Some doubt as to the nature of the case was at first felt, but examination of the tracheal mucus disclosed the presence of diphtheria bacilli. It is pointed out that in pre-antitoxin days diphtheric croup in a child of seven months was almost invariably fatal.

Ulcus Rotundum.—Dr. Panow (*Wratch*, No. 4, 1899) concludes as follows: (1) The stoppage of the circulation in the end arteries of the stomach wall leads to an ulceration in the course of the affected arterial branch. (2) This ulceration of the gastric mucous membrane, which occurs as the result of circulatory disturbance, shows a tendency to enlarge in the presence of increased gastric secretion. (3) Hypersecretion of the gastric mucous membrane *per se*, without a preceding disturbance of the circulation, is capable of giving rise to hemorrhage and desquamation of the mucous membrane of the stomach, and in some instances may even cause perforating ulcers. (4) In those instances in which the ulcer of the stomach is due to increased secretion, the chemical effect of the gastric juice appears to produce an alteration in the blood-vessels along their course in the mucous membrane of the stomach.

Treatment of Perforating Duodenal Ulcers.—K. G. Lennander, as a result of an extensive experience, makes the following statements: The diagnosis of a perforating gastric or duodenal ulcer is based, in those cases which are observed at a very early date, upon a history of the symptoms of ulceration, upon the occurrence of severe epigastric pain with or without symptoms of shock, with vomiting, and upon rigidity of the abdominal wall as well as local tenderness on pressure. In those cases which come under observation in the advanced stages with the existence of peritonitis, the diagnosis depends in a great measure upon the manner in which the peritonitis spreads. Statistics show that from one-fourth to one-third of the cases of perforating gastric or duodenal ulcers which were operated upon were saved. The main indication, then, is to operate early and not to lose time by ordering anodynes and narcotics until a diffuse peritonitis occurs. Most of the fatal cases depend upon diffuse peritonitis, subphrenic abscess, and pelvic abscess, mentioned in the order of their frequency. If for some reason or other operation is impossible, then nourishment per os is to be discontinued for at least one week.—*Wiener medizinische Blätter*, February 2d.

Effects of Cod-Liver Oil upon the Gastric Secretion.—Dr. Wirschillo (*Wratch*, No. 3, 1899) draws the following conclusions: (1) Cod-liver oil diminishes the amount of hydrochloric acid as well as the pepsin; at the beginning the secretion of pepsin suffers most, and only in the later stages does the diminution of hydrochloric acid and pepsin become uniform. (2) The inhibitory action of cod-liver oil upon the gastric secretion is most marked at the beginning; during the further course of the function of the gastric mucous membrane the effect of the cod-liver oil is less. (3) The secretory activity of the glands of the stomach is rendered weaker under the influence of cod-liver oil, but lasts for a longer time. (4) Upon these grounds, Wirschillo states that we give, without good foundation, too high a therapeutic place to cod-liver oil to the exclusion of other fats. It would be more justifiable to assume that the good which the patient derives from cod-liver oil as a fat is outbalanced by the harm it does, inasmuch as with the use of cod-liver oil there is a diminution in the digestion of proteids.

Treatment of Prostatorrhœa and Chronic Prostatitis with Prostatic Substance.—Dr. Heinrich Oppenheimer (*Deutsche Medizinal-Zeitung*, February 20th) concludes as follows: (1) The prostate reacts to the internal administration of prostatic substance. (2) In prostatorrhœa free from gonococci the internal administration of prostatic substance produces a rapid and lasting cure. (3) If in non-complicated cases of chronic prostatitis the discharge contains gonococci, then the internal administration of prostatic substance is contraindicated. (4) If during the course of adminstration of the prostatic substance gonococci appear in a discharge which was believed to be free from the bacterium, the medication is to be discontinued at once. (5) In those instances in which the prostatic affection is complicated with a posterior urethritis, the internal administration of the prostatic substance may be tried with the simultaneous local treatment. This must be discontinued if within one week the specific prostatic symptoms are not very materially benefited.

Clinical Significance of the Diazo Reaction.—Michaelis (*Klinische therapeutische Wochenschrift*, February 19th) disputes the inroads which Petri and Penzoldt have made against the value of this reaction, and attributes to it a very important clinical significance. With sugar or peptone in the urine, the reaction also occurs. The reaction appears only under certain pathological conditions which have been studied since 1891. It occurs from the fifth to the eighth day of typhoid fever, and then disappears; in other instances it remains for a longer time, even until death. Its persistence indicates a severe degree of infection, and the reaction increases with the intensity of the symptoms. Three to five days before the fever has reached its highest point the reaction disappears, so that it has a prognostic significance. Nevertheless

it occurs again in the relapses. Michaelis distinguishes four groups of diseases: (1) Chronic, without the diazo reaction; for the most part only when secondary infection takes place does the reaction occur. (2) Typhoid fever and morbilli. In these diseases the reaction appears from the beginning. Here the reaction indicates that general infection exists. If it does not soon disappear, then the pathological process has not run its course or complications threaten. According to Zinn, eighty per cent. of typhoid cases show the diazo reaction. (3) The third group embraces diseases in which the diazo reaction occurs every now and then; for example, erysipelas, pneumonia, diphtheria. Its presence gives a poorer prognosis. (4) This includes phthisical cases. The appearance of the reaction in these instances renders the prognosis *mala*. If it is found many times in succession, then the case is a fatal one. In acute caseous pneumonia, A. Fränkel considers the reaction part of the diagnosis. What the reaction depends upon is unknown; it is independent of fever, and in erysipelas it is a sign that suppuration exists. The substance has been demonstrated in the blood serum obtained by puncture. The data of Ehrlich must be thoroughly observed in carrying out the test. Modifications by Penzoldt and others are of no value. It may prove of service in differentiating measles from German measles, inasmuch as the reaction does not occur in the latter.

Carbolic Poisoning.—Vinegar, suggested as a remedy by Carleton three years ago, was used with good results by Steavenson (*Indian Medical Record*) in a girl of eighteen. The stomach was washed out with equal parts of vinegar and water.

Pathology of Gonorrhœa.—Leleneff found that the gonococci had a very destructive effect upon the cell protoplasm, degenerating and liquefying the same, and that they left but one weakly stained nucleus with numerous vacuoles. Inasmuch as the same changes are found in cells with as well as without gonococci, we must attribute this destructive process to a poison produced by the action of the gonococci. The gonococci enter principally the epithelial cells and leucocytes. The occurrence of gonococci in the white blood cells can be partly explained by phagocytosis; this condition, however, is not the only explanation for this phenomenon, inasmuch as the gonococci may multiply in the protoplasm of the leucocytes and destroy it. Formerly it was thought that the gonococci penetrate only the flat epithelium and never enter deeper than the submucosa. It has been firmly established, however, that they penetrate other epithelial cells, as well as connective tissue and even pass in between muscular fibres. The gonococci are found in the urethræ of both sexes, in the vaginal and cervical secretion, in the body of the uterus, in the pus of pyosalpinx, in the bladder and kidney, in the mouth and nasal cavities, in the ear, the joints, in the endocardial vegetations, and in the blood. Gonorrhœa is a general infectious disease and gives rise to definite symptoms: rise of temperature and increase in the number of leucocytes in the blood during the acute stage and a diminution in the number of red blood cells during the chronic stage. One instance with loss of body-weight has been observed. Apart from the general symptoms, every organ of the body may be drawn into sympathetic involvement. Swelling of the lymphatic glands, particularly in the region of joints, occurs, and in many instances the spleen is enlarged. When the gonococci enter the blood, they may give rise to organic heart disease, such as pericarditis, myocarditis, and endocarditis, or to functional disturbances, such as tachycardia, palpitation, and angina pectoris. Inflammation of the aorta and the veins, infarcts of the spleen, peliosis rheumatica, and epistaxis are disturbances frequently observed. At times the respiratory apparatus is involved, and we then find a pleurodynia or often a pleurisy with an exudate containing gonococci. In the gastro-intestinal tract we meet with stomatitis, loss of appetite, all sorts of gastro-intestinal disturbances, accompanied by fever and jaundice, and occasionally reminding one of typhoid fever. Albuminuria, gonorrhœal pyelitis, and gonorrhœal nephritis are met with, but their pathology is not yet definitely settled. The nervous system is in time involved, and the following affections have been noted: (1) Changes in the sensory nerves, giving rise to anæsthesia, hyperæsthesia, paræsthesia, and pain in the nerves of the skin, joints, muscles, and internal organs. (2) Changes in the vasomotor nerves, causing hyperæmia, anæmia, paralysis of the blood-vessels and dermographism. (3) Changes in the secretory nerves, producing increase or diminution in sweat, local sweating, increase of the urethral discharge. (4) Changes in the trophic nerves, which give rise to certain forms of skin disease, atrophy of the testicle and muscles. (5) Changes in the motor nerves with paresis, paralysis, and contractions. (6) Changes in the skin and tendon reflexes. Gonorrhœal affections of the central nervous system cause a variety of symptoms, such as asthenic neuropsychoses, neurasthenia, hemiplegia, etc. Finally, the skin of gonorrhœal subjects is frequently the seat of erythema multiforme, dermatitis, purpura hæmorrhagica, urticaria, local ichthyosis, steatosis of the plantar region, alopecia areata, and chloasma.—*Wiener medizinische Blätter*, February 9th.

The Tongue in the Most Important Diseases.—Dr. M. Coffinas (*Deutsche Medizinal-Zeitung*, February 20th) is credited with the following statements:

(1) Typhoid: At the beginning soft, moist, somewhat sticky, covered with a thin coating. The latter has generally the form of a V, with the apex directed backward. If the tongue retains these characters during the course of the disease, the prognosis is very favorable. In addition, we find at the beginning a redness of the point and edges and red scattered spots over the entire surface. In the second stage the redness increases and dryness is added; finally, the tongue appears brown or black, and is small and fissured. Toward the end of the disease the crusts, which consist of dried food and blood, fall off, the tongue is red and dry, the epithelium is lost. Finally it assumes its moist, whitish appearance.

(2) Measles: In mild cases redness at the point and edges, and white coating of the base. Dryness only in severe cases; in the prodromal stage we find, on the buccal mucous membrane and also on the tongue, small, bluish-white efflorescences, with a congested circumference.

(3) Scarlatina: Intensely reddened on account of total desquamation; papillæ very prominent (strawberry tongue).

(4) Pertussis: In many cases ulceration at the frænulum.

(5) Pneumonia: Similar to typhoid fever.

(6) Cholera: Only of interest in the algid stage. Pale, livid, cold (corresponding to the temperature of the extremities, lower than that of the axilla).

(7) Phthisis: Even with a temperature of normal character, moist. Lesègue says: "Whosoever has a good moist tongue, eats with an appetite, and has some pyrexia at night, is a phthisical subject." Of course this applies only to the mild cases.

(8) Diabetes mellitus: Dry, brown-red, fissured, clinging to the hard palate. Papillæ hypertrophied. Hairy tongue (due to leptothrix).

(9) Morbus Addisonii: Black spots on the tongue occasionally occur.

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NEW VIEWS IN PNEUMONIA.

THE researches of bacteriologists have thrown so bright a light upon the etiology of pneumonia, that, as in the case of many other diseases, our opinions as to its cause have undergone a complete revolution. The importance of the rôle played in the disease by micro-organisms is now generally acknowledged. It is, therefore, remarkable that a subject to which both students and writers have paid such earnest attention should have remained so long in obscurity in regard to its essential nature and its proper nosological position. It is still more a matter for surprise that the relation of well-known facts to each other and the inevitable deductions to be drawn from them should not ere now have attracted observation. Dr. Andrew H. Smith, in his article on "Croupous Pneumonia," in the forthcoming volume of the "Twentieth Century Practice of Medicine," has done much to elucidate these moot points and to remove the difficulties in the way of a more intelligent understanding of the causation of the disease. He takes the ground that pneumonia is not an inflammation of the lung, but holds that it is simply a process of germ culture going on in the air cells, the culture medium being supplied from the functional vessels, while the nutrition of the parenchyma remains undisturbed. Dr. Smith is of the opinion that the key to the whole problem is in the double circulation in the lungs, a thing known to every one, but the bearing of which upon the pathology of pneumonia has been hitherto overlooked. Attention is drawn to the fact that in no other organ of the body but the lung could structural health and diseased action go on side by side, for it is the only one—although a somewhat analogous condition is met with in the heart—in which the blood supply for nutrition and function are separately provided for. Taking this view of the cause, the author thinks that the natural sequence of events in an attack of pneumonia would seem to be as follows:

(1) The occurrence of some cause of depression, either local or general, which favors the germination of pneumococci, already present in some one of the smaller tubes.

(2) The formation of a colony until it reaches the group of air vesicles that are terminal to the tube in question.

(3) The setting up of an irritation in these vesicles, causing a fibrinous exudation, an emigration of leucocytes, and a diapedesis of red cells from the functional capillaries.

(4) The formation of a colony of pneumococci in the medium afforded by this exudate.

(5) Arrest of the blood stream in the functional capillaries, followed by accumulation of free pneumic acid in the parenchyma of the affected area.

(6) Overflow of exudate into neighboring lobules, starting the process in them also.

(7) Arrest of germ growth by exhaustion of the medium and the accumulation of free acid in the tissue of the lung. Up to this time there has been a constant formation and absorption of toxin.

(8) Retrogressive changes in the exudate, preparatory to its removal by absorption.

(9) Probably, in this latter process, formation of an antitoxic principle.

(10) Entire removal of the exudate and restoration of the vesicle to its normal condition.

(11) Resumption of the functional capillary circulation.

In discussing the phenomena of crisis, two interesting points are brought out—the exhaustion of the medium in which the culture process is going on and the consequent failure of the supply of toxin, and the accumulation of free pneumic acid in the pulmonary parenchyma when the functional circulation is suspended.

As might be expected, so radical a change of view as to the pathology of the disease carries in its train numerous new views in respect to treatment. More than one-third of the article is devoted to a consideration of this branch of the subject, in marked contrast to the usual custom of writers. We have seen that Dr. Smith asserts that pneumonia is not an inflammation of the lung, for the reason that in his opinion it does not affect the nutrition of the organ, but is a process of germ culture in which the pneumococcus grows in a culture medium supplied by the functional capillaries of the lung. Hence his argument runs as follows, that therapeutic efforts should be directed toward the arrest or inhibition of this germ culture. Inasmuch as this culture medium is derived from the blood, any substance added to the latter will be also found in the former, and if that substance is inimical to the growth of the coccus, it will in so far act in the direction sought. Fortunately the pneumococcus is the most vulnerable of all the germs and possessed of the least vitality. We have therefore, according to Professor Smith, *a priori* a probability that its career in the lung can be modified by drugs. The one from which the most satisfactory results in this direction have been obtained is the salicylate of sodium. Creosote is also valuable, as are likewise large doses of quinine, which have been credited with an abortive effect long before the existence of any kind of micro-organism was recognized. Professor Smith thinks that the treatment of pneumonia should embrace the following points:

An attack upon the pneumococcus through the medium of the blood, the object being that the exudate, when it escapes into the air cell, shall be impregnated with a substance that will unfit it to serve as a culture

medium. Stimulation of the emunctories to throw off the poison as it forms, sustaining the vital powers, and particularly the heart—cardiac stimulants. Relieving the pulmonary circulation—vasodilators. Compensation for loss of respiratory surface—inhalations of oxygen. Reduction of excessive temperature—cold to surface, antipyretics (?). Relief of incidental symptoms.

In regard to the treatment of pneumonia by means of antitoxin, Professor Smith believes with most scientific men that, while there may and probably will be a great future for orrhotherapy, at present the results have been too indecisive to be relied upon as curative or remedial in this disease. However, the news has recently come from Berlin that Professor Wassermann, of that city, a pupil of Professor Koch, hopes that he has discovered a serum cure for pneumonia.

In that part of Professor Smith's monograph treating of clinical types of pneumonia, a suggestion is made in respect to classification. The proposal referred to is that, instead of—as is the custom of some writers—classifying pneumonia according to the condition from which it appears to arise, it will be sufficiently definite to recognize three types of cases of pneumonia—sthenic, asthenic, and obstructive.

There are many more features of interest in Professor Smith's work which we should like to notice, but it would be impossible within the limits of an article to do more than give the chief points. However, this much may be said, that the "new views on pneumonia" are likely to prove a most valuable addition to medical knowledge.

TYPHOID FEVER IN PHILADELPHIA.

THE drinking-water supplied to the city of Philadelphia has long been the subject of criticism, and visitors from other cities have wondered how such a nuisance could be tolerated. In many respects a most healthful city, Philadelphia has for a number of years borne a burden of disease and death from typhoid fever not commensurate with its dignity and its position in the ranks of intelligent and progressive communities.

The whole world knows that typhoid fever is a preventable disease, that it is almost invariably transmitted by drinking-water, and that by preventing contamination of the water supply, or by its purification, the prevalence and the mortality of the disease can be immensely reduced. It has been well said that the freedom of a community from typhoid fever is an index of its degree of civilization and of its intelligence. It cannot be said that Philadelphia is wanting in either of these attributes, and the explanation must be sought in other causes.

Philadelphia appreciates the foul condition of its water supply; it has been taught, time and again, the relation between this and the typhoid fever in its midst; but why are its people supine in the midst of a grave and serious epidemic? For years there has been a group of capitalists who have wished to lease the Philadelphia water-works for profit; for years practically no money has been appropriated for the repair, for the improvement, for the extension of the present works; for years the water supply has been inadequate and unprotected from contamination; and for years Philadelphia has had a morbidity rate and a mortality rate from typhoid fever far above that of other well-governed communities of its class. The water is derived from the Schuylkill and Delaware rivers, and, if collected in reservoirs and permitted to settle, is just tolerable for consumption; but with growing needs and inadequate machinery the polluted waters are pumped almost directly into the conduits for consumers, and thus the pestilence is spread.

The remedy is so simple, so obtrusive, that it must be concluded that only knaves or fools could fail to appreciate and at once apply it. The filtration of the water would remove the greatest and the most dangerous impurities, and this should be instituted with the least possible delay. Contamination of the source of supply should be prevented as largely as possible by judicious yet rigid legislation and its enforcement by adequate punishment. The machinery should be extended and increased in order that sedimentation, aeration, and a degree of self-purification may be permitted, and any emergency arising from drought, breakage in machinery, and what not, may be averted. If for any reason the present sources of supply are considered undesirable or inadequate for present or future needs, gradual progress should be made toward seeking and acquiring other sources. The city must retain possession and control of its water works unless it is willing to confess its incompetency for self-government, and unless it wishes to subject itself to the serious difficulties in which the city of London has only recently found itself plunged from a like experience.

The need, however, of the hour is purification of the present supply, and the best and the most available means consists in filtration. In the present stage of science typhoid fever is a crime, and every death from the disease is murder. Philadelphia has an awful responsibility to face, that we hope will be discharged with a promptitude and a positiveness worthy of a city known throughout the world for its patriotism, its intelligence, its sterling character, and its progressiveness.

INFECTION FROM THE HANDS IN PHTHISIS.

TAKING into account the paramount interest that every point relating to tuberculosis excites at the present time, it appears somewhat strange that the possibility of infection being conveyed by the hands has been almost wholly overlooked. Perhaps, however, the danger from this source of infection has been so overshadowed by the surpassing importance of inhalation that it has scarcely been regarded as worthy of notice. Nevertheless, the subject is not without a certain amount of interest. Of course it should be understood that reference is made to phthisical cases when alluding to the hands as possible carriers of the disease. In the early stages the expectoration is too slight to be seriously considered. Dr. E. R. Baldwin, of Saranac Lake, N. Y., has recently been experimenting at

the Adirondack Sanitarium, "not so much with the expectation of determining the degree of danger from the hands as to note the differences in respect to the presence of bacilli between otherwise cleanly persons using handkerchiefs and those depositing their sputum on cloths or in cuspidors." The investigations were carefully carried out; the subjects of the experiment being eighteen patients in Adirondack Cottage Sanitarium and ten private patients. One-half of the private patients used cuspidors and occasionally their handkerchiefs. The rest used either cuspidors only or cloths. The sanitarium patients used no handkerchiefs. The following technic was used: Carefully cleansed, sterilized, plain glass finger-bowls with glass covers were used to catch five to ten cubic centimetres sterilized 0.1-per-cent. Na_2CO_3 solution which was poured between the palmar surfaces of the fingers while the patient rubbed them together in the bowl. Two small guinea-pigs were then used for inoculation with the washings of each private, and five of the sanitarium, patients. One pig in each experiment was inoculated with 0.5 c.c. in the peritoneum, together with an equal quantity in the right groin, while the other received 0.5 c.c. in each groin. In eight out of ten private patients, one or both pigs became tuberculous. In two out of five sanitarium patients, one pig each was found to have tuberculosis of very chronic type. The only two negative results that occurred among private patients were from ladies who were scrupulously careful by the use of cloths and cuspidors and frequent washing to keep their hands perfectly clean. On the other hand, the two who used handkerchiefs only were readily found to furnish infection. Dr. Baldwin draws the following deductions from these experiments:

(1) That living tubercle bacilli are not infrequently present on the hands of patients who are not careful in the use of handkerchiefs, cloths, and even cuspidors, when the expectoration is abundant.

(2) No precaution against contamination of the hands can avail better than the use of cuspidors, combined with frequent ablutions with soap and water.

(3) In the present usages of society people are not likely to use pocket-cuspidors, except in institutions. Consequently handkerchiefs will be used in public, especially since anti-spitting laws are forcing people to use them. There is, therefore, urgent need for a cheap, comparatively impervious, and soft handkerchief that can be burned. This could be specifically recommended by physicians and boards of health for all diseases with expectoration. A rubber-cloth pocket lining which could be washed would also be a desirable addition to suits made for invalids.

Dr. Baldwin also suggests that the popular idea of the danger from tuberculous cattle is exaggerated, and thinks it not unlikely that some instances of the disease attributed to cow's milk may not exclude the much more common human source. Be this as it may, there can be little doubt that extreme personal cleanliness in phthisical patients is to be strongly recommended, and that the more careful a person suffering from tuberculous trouble is in this respect the less fear there must necessarily be of spreading infection.

MODERATE DRINKERS AND SANE WORKERS.

In an intemperate editorial article in a temperance journal some months ago the assertion was made that "no moderate use of spirits is compatible with health or mental soundness, and moderate drinkers may be called in many cases veritable inebriates." Of course such a wildly absurd statement refutes itself, yet there are doubtless some mentally weak persons and fanatical antis of one sort and another to whom such a claim appears sound. Such will probably be pained to read the figures recently presented by Dr. Henry P. Bowditch to the education committee of the Massachusetts legislature. The occasion was a hearing on a bill providing for scientific temperance instruction in the public schools. Dr. Bowditch, according to the account published in the *Evening Post*, presented the result of some inquiries by the so-called committee of fifty upon the matter of temperance in the use of liquor. The committee sent inquiries to leading men all over the country asking whether they were total abstainers or took alcoholic drink occasionally or regularly. A pledge was given that no names would be published. Less than one-fifth were total abstainers. Very nearly two-thirds of the whole eight hundred and ninety-two who replied wrote that they were occasional drinkers, and just about one-sixth wrote that they were regular moderate drinkers. Those men included judges of the supreme court and prominent men in all professions. Of the whole number, one hundred and fifty-two were clergymen, and this proportion affected the statistical result much, for over half of these men were total abstainers, and only two per cent. wrote that they were regular drinkers. If the clergymen were omitted, the percentage of our leading men who may be called moderate drinkers, in the sense used by the writer in the *Quarterly Journal of Inebriety*, above referred to, would be over sixteen. Therefore one of every six or seven of the leading men in our country is, according to that writer, of unsound mind and body. Which is either bad for the country or bad for the intemperate temperance writer's argument.

MEDICAL EXPERT TESTIMONY.

How to procure reliable expert testimony has long been a stumbling-block to layman and medical man. This is especially so with the medical expert witness, who is regarded sometimes as a joke, but, alas, more often as a fraud. At all events it may be safely asserted that more frequently than otherwise his evidence carries very little weight with the jury. In saying this we are only stating a simple truth—it is but another proof of the old adage, "Give a dog a bad name," etc. There are medical witnesses and medical witnesses, and the good have to suffer for the sins of the wicked. It is, however, consoling in a degree to know that this is not the only country in the world in which medical expert testimony is discredited. In France the other day, according to the New York daily *Tribune*, a woman was found guilty of poisoning her husband with atropine. This verdict is characterized by French jurists as a scandalous proceeding, and all faith in the testimony of medical experts is de-

stroyed in the public mind by the conflicting evidence on purely scientific points of Drs. Gilles de la Tourette and Jean Charcot, on the one hand, who both affirmed that death was not due to poison, while Dr. Brouardel, dean of the faculty of medicine, Dr. Ogler, and Dr. Vibert, all three, on the other hand, were equally positive that death was due to atropine.

The highest legal authorities in France admit that a reform in the method of legal expert evidence is necessary, and urge the adoption of the German system in cases of conflicting testimony, where a decision is made by a committee of scientists called in for the purpose. Here, as in France, it is the method and not the man who is in fault. An address was delivered by Mr. Henry Wollman, of the Kansas City bar, before the Academy of Medicine of that city, suggesting certain reforms in the present laws in regard to medical testimony. Mr. Wollman first discussed adversely the law proposed to the International Medico-Legal Congress in New York, which provided that, if considered necessary, skilled experts should be called in to make reasonable personal examinations and tests, such experts to be examined as a witness by either party or the court. Mr. Wollman's opinion is that the remedy is in the hands of the medical societies. His suggestion is as follows: "That each medical society appoint five or six members who shall act as experts—say for a term of six months—and none of them shall ever see anybody with a view to becoming an expert witness except when he is acting as a member of your committee, and then, say, that three members of the committee shall go together to make the examination. Require the party who wishes the expert testimony to deposit a reasonable sum with your treasurer, and let that money be the sole compensation of the committee for making the examination, except what the law allows them as ordinary witness fees, and then let every other member of your societies refuse positively and unequivocally to do anything with a view to becoming an expert witness. The parties will then be driven, if they want eminent experts whose worth will be recognized, to get them through your societies. The party who applies to you for the services of your experts must be exceedingly sure of his case, for your committee, being absolutely fair and impartial, will not have any reason or motive for favoring, and will not do so. The man pays just as much for an unfavorable as for a favorable decision. The committee will have nothing to gain by going on the stand. Their pride and honor can be relied upon not to turn a man down just to get out of going on the witness stand. A man will always be sure he can get the best quality of expert testimony in a straight case. In a crooked case he will be unable to buy it from a physician of recognized standing." This is an ingenious plan, and if workable would probably have the desired effect. The method always recommended by the MEDICAL RECORD, of creating a commission of independent and impartial experts, would, we think, meet the difficulties of the case.

The Health Department has declared in favor of the antitoxin treatment of diphtheria as against that by chorine.

News of the Week.

Dr. Charles F. Collins has been appointed by Mayor Van Wyck a school inspector in the fourteenth district, to succeed Dr. Robert F. Weir, resigned.

The Plague in Hong-Kong.—A recrudescence of the bubonic plague is feared in Hong-Kong. During the two weeks ending March 11th there were ten deaths from the disease reported in that city.

Typhoid Fever is prevailing extensively in Newark, N. J. From March 1st to the 18th there were 125 cases reported with 8 deaths. The number of new cases is from 15 to 20 a day.

Dr. Alexander J. C. Skene has resigned from the presidency of the Long Island College Hospital, with which institution he has been officially connected ever since obtaining his medical degree there in 1863.

Improvements at Bellevue Hospital.—An effort is to be made to beautify the grounds at Bellevue by improving the lawns, setting out flower-beds, and making cement walks and gravel paths. A new entrance will be opened on Twenty-eighth Street, the wall will be removed, and a macadamized drive will be extended along the water-front.

Unhygienic Bakeshops.—The board of health announces its intention of enforcing the sanitary code in respect to the bakeshops of this city located in cellars and constructed in filthy surroundings. The first tour of inspection resulted in the arrest of one baker on the charge of violation of one of the sections of the sanitary code. He was fined $200.

Typhoid Fever in Philadelphia.—For the week ended March 18th there were reported to the Philadelphia board of health 477 cases of typhoid fever—58 more than during the preceding week and 420 more than during the corresponding week of last year; with 44 deaths—5 more than during the preceding week and 32 more than during the corresponding week of last year. For the eleven weeks of the current year there have been 4,126 cases of typhoid fever and 424 deaths.

A State School of Public Health.—A bill is now before the legislature of New York providing for the establishment of a State school of public health, in which there shall be carried on scientific and laboratory investigations into the character of infectious and contagious diseases, and analyses of water, milk, and other food supplies. The bill also provides that free instruction in sanitation and the prevention of disease shall be given to all members of local health boards who may apply for such instruction. An appropriation of $25,000 is made for fitting up the building of the New York University in East Twenty-sixth Street near First Avenue, as such a State school of public health, and $25,000 additional is appropriated for the purchase of supplies and apparatus for the proposed school. Dr. Henry, who is the father of the bill, has succeeded in securing a favorable report on it by the

ways and means committee whereby it is brought before the assembly for consideration. Some active opposition to the bill may be looked for.

A Heavy Charge of Electricity.—An electrician who was superintending the installation of an electric-lighting plant in a village near Rochester, N. Y., accidentally brought his arm in contact with a live wire in the power house and received a charge of fifteen hundred volts through his body. He was rendered unconscious, but was revived in about half an hour. The current used to execute criminals in that State is one of eighteen hundred volts, only three hundred more than the amount received in this case.

Fatal Hazing.—A student of the Chicago College of Dental Surgery has died recently from injuries said to have been received while being "passed" over the heads of the other students up to the top tier of the amphitheatre and then down again, being dropped heavily to the floor at the end. He was taken to the hospital, and on Saturday had apparently recovered sufficiently to justify the hospital authorities in allowing him to go to his home in Indiana. On the way home he became suddenly ill on the train and died before he reached his destination.

The Sanitation of Cuba.—According to reports made to the surgeon-general of the Marine Hospital service there were no deaths from smallpox or yellow fever in Havana during the week ending March 10th. The sanitary inspector at Santiago reports: "Thirty-nine deaths have been recorded for this week, being fifteen less than last week. Of these none was from contagious or infectious diseases. No cases of yellow fever or smallpox have been reported either in the city or vicinity. In fact, none has been known to exist for the last three or four months. Malarial fevers prevail very extensively, especially the bilious remittent form. Dysentery has almost disappeared, but diarrhœa among children is quite frequent. Colds, bronchitis, and some cases of pneumonia are met with daily."

Smallpox Riot at Laredo.—The smallpox epidemic at Laredo, Texas, has got beyond local control, and the authorities have sent the State health officer, Dr. W. F. Blunt, to take charge. He at once established a pest house and attempted to remove to it all those sick of the disease, estimated to be two hundred or more in number, but his efforts were met by the opposition of the Mexicans, among the lowest class of whom the disease for the most part prevails. A mob collected and refused to allow the patients to be removed to the pest house or to permit the enforcement of any quarantine regulations whatever or the vaccination of those who had been exposed. Some rioting has already occurred, and the situation is so serious that the State Rangers have been ordered to Laredo, and a detail of United States troops was sent to preserve order until they arrived.

Dr. Gallinger and Dr. Hammond.—The report of the committee on military affairs of the Senate concerning the bill to give the pay of a surgeon-general retired to Dr. William A. Hammond, which was brought before the Senate on February 28th, contained a curious eulogy of the beneficiary. It was said that his medical colleagues were ever ready to do him honor, and with all of his fellow-citizens were proud of one whom they regarded as the first of American scientists, humanitarians, and gentlemen. The medical member of the Senate, Dr. Gallinger of Vermont, protested against this flattering estimate, saying that "the man who has been at the head of a company that has been imposing upon the people of this country the trash that Dr. Hammond has been imposing upon them, under the name of science, does not deserve, in any report made to Congress, a tribute as to his professional standing." He said that he would not object to the passage of this bill, if the members of the Senate and the committee on military affairs thought Dr. Hammond should, at this late day, have restored to him the emoluments of an office that he once held, but he desired to put on record his protest "against the fulsome tribute that is contained in this report in regard to his present professional standing and his relation to the medical profession at the present time."

Cerebrospinal Meningitis has prevailed widely in the Southwest during the past winter. Southern Illinois, southeastern Missouri, Arkansas, and northern Texas have suffered especially from the epidemic. Upward of sixty deaths from the disease were reported in St. Louis during the month of February.

Female Physicians in Russia.—After a long and patient struggle the women physicians in Russia have secured a decree placing them upon an equality, both socially and politically, with the male physicians in the empire. All official positions will be open to them equally with men, and they will be entitled to pensions after the required length of service, and this whether or not they are married.

Suit against the New York University.—The Medical College Laboratory of the City of New York, otherwise the former medical faculty of the university, has brought suit against the university for the medical school property. According to the complaint, the medical school property was conveyed to the university in February, 1897, on an agreement that the control of the medical school should be lodged in the medical faculty. Because of alleged violation of the agreement on which the university obtained the property from the school, in that the university assumed control of the school and the appointment of its professors and tutors, the re-conveyance is asked. The value of the property involved is said to be about $200,000.

Jubilee of a Russian Editor.—On January 10th (O. S.) Dr. Vasilii Felixovitch Sprimon, of Moscow, celebrated the twenty-fifth anniversary of the foundation by him of the *Meditsinskoïe Obozrenie* (*Medical Review*). A jubilee number of the journal was issued under the editorial supervision of Dr. N. F. Filatov. The University of Moscow granted the honorary degree of M.D. to Dr. Sprimon; he was made an honor-

ary member of six medical societies in various parts of the Empire, and a scholarship at the Moscow University was founded in his honor. He was also the recipient of innumerable telegrams and letters of congratulation.

The Automobile in Surgery.—In taking *x*-ray pictures at the patient's house it is no longer necessary in large cities to transport large electric batteries from the office. New York physicians call up an automobile over the 'phone, and, as it stands at the door, attach to its storage battery wires leading to the sick-room, and the skiagraph is taken without further trouble.

How They do It.—Some of the abstracting from "foreign journals" which graces the pages of the new Quaker City journal is taken bodily from the MEDICAL RECORD without credit. A case in point is a long abstract on page 605 of the March 18th issue, taken from the MEDICAL RECORD of February 4th. The truth is, the MEDICAL RECORD has the earliest and best extracts, and since the journal does not pay for its work of this kind, the young men are losing their enthusiasm and find it easier to go to a trustworthy rather than to the more difficult original source.

The Medical Association of Georgia.—The semi-centennial celebration of this association will be held at Macon on April 19th, 20th, and 21st. Papers will be read by invitation by Dr. N. Senn, of Chicago, on "Emergency Surgery"; H. A. Hare, of Philadelphia, on "Typhoid Fever," and Joseph Price, of Philadelphia, on "Appendicitis." The programme contains a long list of attractive titles of papers promised by members of the society, and there will also be a symposium on "Ether Anæsthesia," in honor of the memory of Dr. Crawford W. Long, one of the early members of the society and for whom is claimed the honor of the discovery of the value of ether anæsthesia in surgery.

Antitoxin in Chicago.—In a review of the work done in diphtheria by the Chicago health department Dr. W. M. Jacques (*Chicago Medical Recorder*, February) finds that while there is as much and as malignant diphtheria in that city as before, it is now more successfully treated, as shown by a decrease of one hundred deaths for the year. Patients who do not receive proper treatment die in the same proportion as hitherto, while, according to the table presented, of those who received antitoxin on the first and second days of their illness all recovered. Of fifty-three patients injected on the third day there was but one death; of fifty injected on the fourth, there were three, and of thirty-three given antitoxin after the fourth day five proved fatal.

Vital Statistics of Philadelphia.—For the week ended March 18th, there were reported to the Philadelphia board of health 520 deaths, an increase of 36 over those of the corresponding week of last year. Of this number 127 occurred in children under the age of five years. The principal causes of death were: pulmonary tuberculosis, 71; pneumonia, 58 (and congestion of the lungs, 7); typhoid fever, 44; heart disease, 33 (and inflammation of the heart, 9, and fatty degeneration of the heart, 2), old age, 24; nephritis, 22 (and uræmia, 8); inflammation of the brain, 17 (and congestion of the brain, 5, and softening of the brain, 4); bronchitis, 17; apoplexy, 15 (and paralysis, 7); convulsions, 15. There were reported to the board 477 cases of typhoid fever, 59 of diphtheria, and 35 of scarlet fever.

The Kentucky State Medical Society will hold its next annual meeting at Louisville on May 17th, 18th, and 19th. Members who desire to read papers are requested to forward the titles at the earliest possible moment to Dr. Steele Bailey, Stanford, Ky.

Now We can All Go to the Play.—Many of the New York theatre play-bills contain the following notice: "Physicians who have patients to whom they may be called suddenly, and who have heretofore remained away from the theatre for fear of being out of call in such cases, can now leave their seat numbers in the box office and be called as quickly as in their office. Ushers will deliver messages to them promptly upon receipt of same over the telephone."—*Maryland Medical Journal.*

The German Congress of Internal Medicine.—The seventeenth congress of internal medicine will be held at Carlsbad, from April 11th to 14th, under the presidency of Professor Quincke, of Kiel. The following are among the subjects proposed for discussion: Insufficiency of the heart muscle, to be introduced by L. von Schrötter, of Vienna, and Martius, of Rostock; leukæmia and leucocytosis, to be introduced by Löwit, of Innsbruck, and Minkowski, of Strassburg. Communications are also promised by Drs. Theodor Schott, of Nauheim; von Noorden, of Frankfort; Nothnagel, of Vienna; Escherich, of Graz; von Jaksch, of Prague; Stokvis, of Amsterdam; and others.

A Classical Contemporary.—We note with pleasure that an esteemed semi-local contemporary is developing quite a taste for Latin expressions, and "shpakes it," as Pat said, "loike a native." In a recent issue, speaking of Kipling's illness, the editor wishes the sufferer *ad multos annos;* he refers to the blunder of a London correspondent as a *felix culpa;* he encourages the Johns Hopkins University with a *macte virtute*, counsels other American institutions of learning, *si vis examplar* (sic!) *circumspice*, and hopes that future foundations and endowments will redound *ad majoram scientiæ gloriam.* These are very nice as a starter and as an earnest of something better to come. But we would impress upon our esteemed contemporary the necessity of careful proof-reading when using strange tongues, for *bene facta male locata male facta.*

The New Cornell Medical School.—The plans for the Cornell Medical School, prepared by McKim, Mead & White, have been filed with the Building Department. The entire frontage on First Avenue, between Twenty-seventh and Twenty-eighth streets, is to be occupied by the building. It will be of steel skele-

ton construction, and will have a façade of ornamental limestone, with two large entrances on the avenue, surmounted with Corinthian columns. The main lecture-room is to be located on the first floor, and directly above it will be the amphitheatres for the use of the classes in anatomy and physiology. The demonstration-room will be located on the top floor, which will also contain the main dissecting-room.

Improved Health Conditions in Havana.—General Ludlow has reported to the War Department that the deaths in Havana for February, 1899, are fifty-one per cent. less than for the corresponding period in 1898.

To Prevent the Spread of Tuberculosis.—A herd of nine Alderney cows suffering from tuberculosis were shot at a dairy in Bethlehem, Pa., by order of the State veterinary board.

The Lancaster (Pa.) City and County Medical Society held its annual banquet at Lancaster on March 16th, with an attendance of one hundred and fifty members. Dr. S. T. Davis was toastmaster, and toasts were responded to by Dr. J. H. Redsecker, Lebanon; Dr. S. T. Davis, Dr. G. W. Berntheisel, Columbia; Dr. M. L. Herr, Lancaster; Dr. Alexander Craig, Columbia; Dr. J. P. Roebuck, Lititz.

The Army Winter Hospital at Savannah, consisting of forty-seven pavilions, with accommodations for one thousand patients, was opened on March 8th. Not all of the buildings have been completed, but the Government has determined to begin the occupancy at once. The first shipment of invalid soldiers from Cuba was received by the hospital ship *Missouri*. One hundred nurses and hospital attendants have been transferred to Savannah from Fort McPherson and Huntsville.

The Right to Foul a Water Supply.—Chancellor McGill, of New Jersey, has granted a temporary injunction restraining the city of Paterson from doing anything to increase the pollution of the Passaic River by emptying more sewage than the present amount into it. That there is enough contamination without the addition of more sewage may be seen from the following statement by the chancellor, who says: "As I calculate from the data before me, the volume of the pure water in the Passaic River below tide water is upon the ratio of one hundred millions of gallons to between sixty and seventy million gallons of filth. The proof appears to indicate that both above and below the Dundee dam the potability of the water without the use of some means of purification is destroyed, and also that noxious smells arise from the polluted water which, though perhaps not yet unhealthy, produced general discomfort to the inhabitants along the river, and that, with the ever-increasing sewage of the defendant, must come a corresponding increase of discomfort and presently disease. In this situation it appears to be plainly my duty to take cognizance of the case and now restrain the defendant from doing anything that will increase the quantity of its sewage pending final hearing herein." The application for this injunction was made some time ago by the Passaic Valley Anti-Pollution Society, and the authorities of Paterson filed a demurrer. The chancellor overruled the demurrer. This is the first judicial declaration in the State against the pollution of large streams by cities located on the banks of such streams.

Pennsylvania State Board of Health and Vital Statistics.—Dr. Charles E. Harvey, of Philadelphia, and Dr. P. A. Boyer, of Selin's Grove, have been appointed by the governor members of the Pennsylvania State board of health, vice Drs. George G. Groff and Pemberton Dudley.

In Favor of Vaccination.—The board of public education of Philadelphia has adopted a resolution earnestly protesting against the passage of the anti-vaccination bill now pending in the Pennsylvania legislature, and requesting its defeat. It is a matter of much satisfaction to know that the proposed bill will meet with an unfavorable recommendation from the committee on public schools, in whose hands it was.

The Operative Treatment of Typhoid Perforation of the Intestine.—Platt (*Lancet*, February 25, 1899, p. 505) adds three cases to those reported, in which cœliotomy and enterorrhaphy were undertaken for the relief of perforation of the bowel in the course of typhoid fever, in one with recovery and in two with a fatal result. Platt prefers the right lateral incision into the abdomen, and considers the best method of closing the perforation to consist in turning inward the edges and uniting the peritoneal coats by interrupted Lembert or Halsted mattress-sutures, a single row of which is sufficient in most cases. The earlier after perforation that operation is performed, the better the prognosis, although hope of a successful result is justified at any stage of the disease.

Philadelphia Pediatric Society.—At a stated meeting, held March 14th, Dr. C. S. Potts exhibited a case of Friedreich's ataxia in a girl, fifteen years old, with nystagmus, defective speech, motor inco-ordination, absence of knee jerks, and equino-varus. Dr. C. W. Le Fevre reported a case of acute dilatation of the heart, occurring in a child, five years old, following attacks of pneumonia and measles, which greatly improved under treatment with digitalis in physiological doses, as much as twenty drops being given thrice daily for some time. Dr. J. H. Jopson exhibited an infant presenting prolapse of Meckel's diverticulum, the remains of the omphalo-mesenteric duct, with slight extravasation of fæces. Dr. T. S. Westcott exhibited a graduated glass jar intended for measuring sugar of milk for addition to milk mixtures. Dr. F. Savary Pearce reported a case of traumatic neuritis resulting from a crush in revolving machinery, with complete paralysis of the right forearm, in which operation was performed. It was not deemed advisable to undertake nerve suture, but marked improvement followed protracted massage and the use of galvanism. Dr. L. J. Hammond read a paper entitled "Five Cases of Cerebellar Abscess, with Remarks on the Diagnosis." Dr. J. P. Crozer Griffith read reports of cases as follows: (1) "Acute Yellow Atrophy of the

Liver in a Child of Seven Years"; (2) Angioneurotic Œdema in an Infant"; (3) "Thigh-friction (Masturbation) in Infancy; Two Cases"; (4) "Peritonitic Pneumonia"; (5) "Meningitic Typhoid Fever"; (6) "Nervous Incontinence of Fæces." Dr. George Woodward reported a case of streptococcus milk infection. Dr. J. H. McKee read a paper on "The Developmental Influence of Play."

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 18, 1899. March 14th.—Assistant Surgeon W. H. Bell detached from the naval hospital, Washington, D. C., and ordered to the *Vixen*. Assistant Surgeon H. D. Averill detached from the *Iowa* and ordered home. March 16th.—Assistant Surgeon W. H. Ulsh detached from the naval hospital, Philadelphia, and ordered to the *Glacier* April 6th. Assistant Surgeon R. K. McClanahan detached from the *Richmond* and ordered to the naval hospital, Philadelphia. Medical Director D. Kindleberger, retired, granted leave abroad from April 15th.

Otology in Vienna.—The two chairs in otology at the University of Vienna, formerly held by Professors Gruber and Politzer, have now been united into one, Professor Gruber having retired.

The International Association of Railway Surgeons.—The next meeting of this association will be held at Richmond, Va., on May 31 and June 1 and 2, 1899. The president of the association is Dr. Bruce L. Riordan, of Toronto, Ont., and the secretary Dr. Hugh M. Taylor, of Richmond, Va.

Dr. John Guiteras, formerly president of the United Cuban Clubs of Philadelphia, and Philadelphia delegate to the Cuban Junta in New York, will, on retiring from the chair of pathology in the University of Pennsylvania at the end of the present collegiate session, go abroad for a year and make a special study of tropical diseases; after which he will settle in Havana and engage in the practice of medicine.

Arsenic in Wall Paper.—This much-discussed question has come up once more. Dr. Chamot, of the Cornell laboratory, after several months' work, says that almost all wall paper examined contains the drug, at times in very large quantities. The popular opinion that the green is the most dangerous colored paper seems to be without foundation.

The American Medical Supply Company is the name of an organization that recently filed articles of incorporation in the clerk's office of Camden County, N. J. The objects of the corporation are to provide for the services of physicians upon the subscriber producing a certificate of membership. The capital stock of the company is $100,000, of which $1,000 is paid in.

Precautions against Yellow Fever.—Orders have been issued by the surgeon-general of the Marine Hospital service at Washington to the effect that all troop and other ships from Havana and Cienfuegos arriving at southern ports after March 4th shall be fumigated before being permitted to pass the quarantine lines. On and after March 15th the same regulation will apply to all ships from any point whatsoever in Cuba.

In Memory of the Late Dr. William Pepper.—A committee to whom was entrusted the duty of deciding upon a suitable memorial to be erected by the citizens of Philadelphia in honor of the late Dr. Pepper, in recognition of his many services to the community, has recommended the erection, at a cost of $10,000, of a statue, which it is proposed shall be placed upon the plaza of city hall.

The Late Dr. Frank A. Bottome.—At a recent meeting of the Harlem Medical Association it was unanimously

"*Resolved*, That the members of this association deeply deplore the sudden and untimely death of their fellow-member and co-worker, Dr. Frank Archer Bottome.

"*Resolved*, That we, his associates, express deep regret at the loss of our esteemed colleague and genial friend.

"*Resolved*, That we tender our heartfelt condolences to his family; and be it further

"*Resolved*, That we cause this expression to be sent to the medical journals of this city.

"JOSEPH E. LUMBARD, M.D., *Chairman;* A. R. CARMAN, M.D.; MALCOLM MCLEAN, M.D., *Committee.*"

The Death of Dr. William W. Van Arsdale.—At a special meeting of the medical board of Mt. Sinai Hospital, held March 18th, the following resolutions were adopted:

"The medical board of Mt. Sinai Hospital has learned with sorrow of the death of Dr. William W. Van Arsdale, which occurred at Atlantic City on March 17, 1899. Dr. Van Arsdale had endeared himself to all the members of the medical staff by the lovable traits of his character, and earned their respect by his eminent professional attainments and efficiency.

"*Resolved*, That in the death of Dr. Van Arsdale the medical board of Mt. Sinai Hospital has lost one of its most valuable and respected members, the institution a skilful surgeon and an able scientific worker; that the sympathy of the members of the medical board be extended to his family in their sad loss; and finally, that these resolutions be spread on the minutes and published in the MEDICAL RECORD, *Medical Journal*, and *Medical News*.

"*Resolved*, That a copy of these minutes be sent to his family.

"ARPAD G. GERSTER, M.D., WILLIAM F. FLUHRER, M.D., *Committee.*"

Obituary Notes.—DR. MARTIN UNRUH died at Philadelphia on March 16th, at the age of forty years, as the result of injuries received in a quarrel on January 19th. He was graduated from the College of Physicians and Surgeons of Baltimore in 1880, and he had practised his profession in different New Jersey and Pennsylvania towns.—DR. JAMES B. HERMAN, the oldest physician in Allegheny County, Pa., died on March 17th at the age of seventy-six years. He has been engaged in the practice of medicine for forty-five years.

Society Reports.

THE PRACTITIONERS' SOCIETY.

One Hundred and Forty-Fifth Regular Meeting, Held on Friday, February 3, 1899.

W. GILMAN THOMPSON, PRESIDENT, IN THE CHAIR.

A Case of Carcinoma of the Breast, Twelve Years after Operation.—This case was presented by DR. WILLIAM T. BULL. The patient was a woman who was operated on by Dr. Bull for carcinoma of the left mamma on March 19, 1887, about twelve years ago. The malignant disease was limited to the gland itself, the glands in the axilla showing no microscopic evidence of involvement; they were removed, however, but the more elaborate Halsted operation, as now done, was not resorted to, the pectoral muscles being left intact. The patient thus far had remained entirely free from any recurrence; she enjoyed perfect health and had free use of the arm on the affected side.

Dr. Bull said that four years ago he reported sixteen cases of cancer of the breast, with or without involvement of the glands in the axilla, in which no recurrence had taken place for three years after operation. Out of that number, two have since relapsed, the remaining fourteen having remained free from a recurrence up to the present time. In every case the axilla was thoroughly cleared out.

A Case of Tuberculous Peritonitis: Operation.—This was presented by DR. ROBERT ABBE. The patient was a child, two and one-half years old, who had suffered from a very grave form of tuberculous peritonitis. In June, 1898, when she first came under Dr. Abbe's observation, she was practically in a moribund condition, with hectic and marked ascites. The abdominal cavity was opened in the median line, allowing a large quantity of turbid fluid to escape. The abdominal wall was one and one-half inches thick, while the peritoneum was half an inch thick, being œdematous and infiltrated with caseous masses and studded with tubercles. The cavity of the peritoneum was lined everywhere with tubercle, and in the lower half with fungating tuberculous masses. The diagnosis of tuberculous peritonitis was proved by the microscope. The abdominal cavity was washed out several times with decinormal saline solution and treated everywhere (after the method of Rendu) by applying a mixture formed by fusing one part of camphor with two of naphthol, this being sponged in very freely; the wound was then closed. The day following the operation the child had a temperature of 106° F., which, however, rapidly fell to normal, and the patient has remained perfectly well since the operation was done, six months ago. At the present time there was no fluid in the abdominal cavity, and the child had grown fat, rosy, and vigorous.

Tuberculous Peritonitis—Extremely Grave Form—Recovery after Laparotomy under Cocaine Anæsthesia with Peritoneal Saline Irrigation—Absolute Disappearance of Tubercle Proved at Laparotomy after Two and a Half Years.—Dr. Abbe said he wished to report another case, which was even more remarkable. The patient was a woman who came to him about two and one-half years ago. She was suffering from tuberculous peritonitis with marked ascites, and from a pleurisy with effusion, on the left side, presumably tuberculous. There was hectic, and dyspnœa was so pronounced that aspiration of the left pleural cavity was at once resorted to. The patient gradually grew weaker, and a radical operation was decided upon to relieve abdominal distention. On account of the dyspnœa, a general anæsthetic could not be employed. A median laparotomy was therefore done under cocaine, and more than a gallon of turbid fluid was evacuated from the abdominal cavity.

Both the visceral and parietal layers of the peritoneum were everywhere thickly studded with tubercles. Pieces of the parietal layer which were cut away and afterward examined proved to be tuberculous. The patient made a good recovery and returned to her home out of town. Subsequently a small laparotomy hernia developed, for the cure of which the woman came back to New York about two months ago. The scar tissue was dissected out and the wound sutured afresh. During this second operation it was observed that the peritoneal cavity had healed perfectly, no tubercles or adhesions being found. A thorough inspection of the peritoneal cavity failed to reveal any tubercles, while two and one-half years before the entire cavity, from the liver to the pelvis, had literally been studded with them. Since the first operation the patient had lived in the country; she was the picture of health and had gained thirty pounds in weight.

This case, Dr. Abbe said, served as a practical illustration of how the tubercle bacilli were destroyed by the efforts of nature alone, nothing having been done to the patient excepting to open the peritoneal cavity and wash it out. The pleural cavity was never washed out; it was simply emptied. During the second operation a small mass, about the size of a man's thumb, was found connected with the omentum, and fearing that it might give rise to trouble in the future, it was tied off and removed. It was examined by Drs. Prudden and Wood and found to be composed of a fibroid sac containing tuberculous tissue but no tubercles, showing that nature had encapsuled this part, which it had not been able entirely to obliterate.

DR. PEABODY inquired whether any theory had been promulgated as to how simply washing out the peritoneal cavity, with perhaps the addition of some mild antiseptic, as in Dr. Abbe's first case, cured such a widespread tuberculous infection.

DR. ABBE replied that no theory had thus far been advanced which would apply to all cases. In cases in which recovery had followed simple flushing of the peritoneal cavity with saline solution the theory had been advanced that it produced acute engorgement of the tuberculous nodules, followed by a rapid envelopment of the bacilli with a fibrous investment, thus destroying the vitality of the tubercles and engendering a retrograde metamorphosis of the neoplastic tissue. This seemed to Dr. Abbe to be by far the most reasonable explanation of these remarkable cures.

DR. WEIR said the engorgement of the tuberculous nodules and their subsequent disappearance was also, at least partly, attributed to the damage done to the peritoneal surface by opening the belly. This was the common factor in all the relief procedures, whether incision or injection was resorted to.

DR. ABBE said the claim made by some that the cure was effected by the entrance of light or air into the peritoneal cavity did not hold good, because some of the best cures had been reported after simple aspiration, followed by the injection of camphor-naphthol through a cannula (method of Rendu). In such a case neither light nor air was admitted, and little or no damage was done to the peritoneal surface.

DR. PEABODY said the local application of antiseptic remedies could hardly be regarded as an essential part of the treatment, because countless tubercles doubtless escaped the effects of such applications. The alteration of the pressure effects by removal of the fluid might perhaps be regarded as an important element in effecting a cure.

DR. ABBE said that simple aspiration alone did not cure these patients.

A Case of Tendon Grafting for Drop-Foot, with Contracture of the Tendo Achillis.—Dr. V. P. Gibney presented this case. The patient was a girl fourteen years old, who, on her admission to the Hospital for the Ruptured and Crippled on November 8, 1898, had marked drop-foot, with loss of power in the common extensor group of muscles. There was a fair degree of power in the anterior tibials, but this was overcome by a shortened tendo Achillis. On the date of the patient's admission the tendons on the anterior aspect of the ankle and foot were exposed, the tendon of the tibialis anticus was split about three inches, and the outer half sutured to the tendon of the common extensors. The tendo Achillis was split nearly three inches and its inner portion passed under the skin and sutured to the remainder of the tibialis anticus. The remainder of the tendo Achillis was cut obliquely and the tendon lengthened to the extent of about one and one-half inches. The sutured end of the tibialis anticus and the tendo Achillis was drawn over toward the common extensor, and all were sutured together with kangaroo tendon. After closure of the wounds, the foot was put up in plaster of Paris. On the third or fourth day there was a slight rise of temperature; this continued, and at the end of a week the wound was exposed, when it was found that superficial sloughing had occurred. The parts were dressed from day to day until healing took place. At present the girl's foot appears to be normal; she can flex and extend it with a fair amount of force, and the prognosis is good—that is, she will probably be able to dispense with all apparatus and have a very useful foot. The interest in the case, Dr. Gibney said, centres about the good result in spite of the sloughing.

Dr. A. H. Smith asked whether in a case of this kind, in which a flexor tendon was transplanted to act as an extensor, it was necessary to educate the patient in the new use of the tendon.

Dr. Gibney replied that it was necessary. After the wound was thoroughly healed, the patient was sent to a Swedish masseur, who would teach her how to use the muscles properly. "Muscle pedagogy," it was called.

A Case of Dangle-Foot.—Dr. Gibney presented this case. In this case relief was attempted by sewing together all the tendons on the anterior aspect of the ankle with kangaroo gut. The patient was a girl eight years old. She was operated on January 17th of the present year for dangle-foot, dependent upon an anterior poliomyelitis. The tendo Achillis was rather long, and there was little or no power in the anterior leg muscles. The incision was made for the purpose of tendon transplantation, but on account of the loss of power in the muscles the tendons were sewed together with kangaroo tendon as an experiment, in the hope that, conjointly, they might act as flexors. The result of the experiment appeared encouraging, although there was only slight power in the dorso-flexors at present. The wound healed primarily.

Three Cases Illustrating the Diagnosis of Coxa Vara.—These cases were presented by Dr. Gibney. The first patient was a girl, ten years old, who had been admitted to the Hospital for the Ruptured and Crippled a few days previously, this having been the third time she had been an inmate since January, 1897. When she was first seen, the case was regarded as one of hip disease, but that diagnosis had recently been questioned because of her prompt recovery after a brief course of treatment, when she was able to leave the hospital without apparatus, with a fair range of motion, and without any acute symptoms. Recently she had received a sprain of the hip, and on her last admission her symptoms were rather acute, although the shortening had not increased. There were no signs of abscess, and the only deformity was rotation of the leg outward, what seemed to be the head of the bone could be felt on the anterior border of the acetabulum, near the anterior superior spinous process. Under traction in bed with weight and pulley these acute symptoms subsided in a great measure, and although the functions of the joint were not yet restored as they were on former occasions, her case was now regarded as one of coxa vara, in which the neck of the femur was depressed and the head of the bone had partially slipped out of the acetabulum; in other words, it might be regarded as a subluxation of the head of the femur. The girl now wore an apparatus which was intended to afford a limited amount of protection. With this she was able to walk.

The second case of coxa vara was that of a girl thirteen years of age, who began to have pain in her knee a year ago. She walked lame, and six months later she had a fall, followed by a moderately sharp exacerbation. She had been under treatment in the out-patient department, and on December 29, 1898, was admitted to the hospital. Her general condition was very good. She walked with a marked limp, swinging the limb as though there was some loss of power in the muscles about the hip. The position of the limb was that of slight flexion with outward rotation over very nearly a quadrant. Just below the anterior superior spinous process, near the shaft, could be felt a hard, roundish mass, which was strongly suggestive of the anterior portion of the head of the femur. Nélaton's line came below the tip of the trochanter by about half an inch. There was a fair range of extension (to 170°) and flexion (to 120°). She was put to bed, with traction by weight and pulley, and at the end of two weeks all the acute symptoms had subsided. She was now wearing a jointed splint with pelvic band and perineal straps for protection.

The third patient shown was a boy, thirteen years old, who three years ago complained of pain in his knee and had a slight limp. This continued, with intermissions, until he came to the hospital in November, 1898. During this period he had had no special treatment. At the time of his admission he had no local pains or tenderness excepting when extreme flexion was attempted. A roundish, globular mass could be felt close to Scarpa's space. There was three-quarters of an inch shortening and marked rotation of the limb outward, with eversion of the foot, such as occurred in fracture of the neck of the femur. The tip of the trochanter was above Nélaton's line by nearly three-quarters of an inch. The case was not at first recognized as one of coxa vara, although that diagnosis had been suggested. An incision was made over the globular mass referred to, and this exposed the head of the femur. The neck of the bone was found to be depressed, and the head was almost completely luxated forward. The wound was promptly closed, healing occurred without accident, and during the patient's rest in bed all his acute symptoms subsided. He left the hospital about two weeks ago, walking very well, with the diagnosis fully confirmed.

Dr. Gibney said the three cases reported above represented one phase of bending of the neck of the femur, or coxa vara, as it had been termed by Hofmeister. These cases were of much interest from a diagnostic standpoint. Many cases of so-called hip disease in adolescents seen in former years might have been simply cases of coxa vara. The disease embraced other variations in the position of the limb, dependent, of course, upon the direction in which the neck bent.

In reply to a question by Dr. Kinnicutt, Dr. Gibney said that numerous *x*-ray photographs of this class of cases had been taken by Dr. Royal Whitman, and these showed the abnormal position of the head and neck of the femur.

Dr. Weir said that Dr. Whitman regarded this condition of coxa vara as due to a form of late rachitis

which was apt to affect only one or two bones in the body. Some cases were recently shown in Germany, in which a fracture or diastasis of the neck of the femur occurred, producing the same result as in the cases shown by Dr. Gibney.

Dr. Gibney, in reply to a question regarding the differential diagnosis between this condition and tuberculous hip-joint disease, said that in the latter we did not get such extreme outward rotation as in coxa vara. In true hip-joint trouble the disease was progressive, tending to ankylosis and deformity, and was frequently accompanied by the formation of abscesses; in coxa vara abscesses never occurred. There was usually slight shortening, perhaps half an inch, while in tuberculous hip-joint disease we might have from one to three inches shortening.

A Case of Excision of the Proximal End of the Fifth Metatarsal Bone for Club Foot.—Dr. Gibney also showed this case. The patient was a girl, fourteen years old, who had been an inmate of the hospital since last summer for the relief of a relapsing club foot. The deformity had been corrected by manual force during three or four sittings, the force being applied while the patient was under an anæsthetic. When the foot was finally in a position of right angle with the leg, and all varus and equinus had been overcome, there remained a projecting mass in the sole of the foot, about the middle of the outer border. This proved to be the luxated head of the fifth metatarsal bone. On the 10th of January, 1899, an incision was made along the outer border of the foot, over the shaft of the bone, including the head; the periosteum was separated, and about an inch and a half of the proximal end of the bone was removed. All sharp edges were cut away; the periosteum was sutured, then the skin, and the wound was dressed. It healed promptly, and the girl was now free from any deformity and would be spared the annoyance of corns and callosities, which so frequently accompany the incomplete cure of club foot.

Some Clinical Aspects of Peptic Ulcer, Gastric and Duodenal.—Dr. Kinnicutt read the paper of the evening, on this subject. The difficulties in a differentiation between gastric and duodenal ulcer were discussed, and the statement was made that the general consensus of clinical opinion at present was to the effect that only very exceptionally could the site of the ulcer be located. Statistics of the general mortality of peptic ulcer, of the frequency of a fatal result from hemorrhage, perforation peritonitis, and sepsis uncomplicated by perforation or peritonitis, were given; and finally the indications for operative interference were considered.

Dr. Andrew H. Smith referred to a case bearing on this subject, which had been under his observation at the Presbyterian Hospital six or seven years ago. The symptoms of the patient were of a very obscure character, but were evidently connected with the stomach. Subsequently a pericarditis was diagnosticated, in addition to the gastric disorder, and about two weeks later sudden evidences of peritonitis appeared, which proved fatal. The autopsy showed a perforation of the superior wall of the stomach, near the pylorus; the ulceration had then perforated the diaphragm and the pericardium, and had given rise to a pericarditis. Besides this, there was an opening into the general peritoneal cavity, which had caused peritonitis and death.

Dr. Beverley Robinson said he fully agreed with what had been said regarding the difficulty of recognizing a case of duodenal ulcer. Among the symptoms which are of value in establishing the diagnosis are the localized pain, the development of a tumor, more particularly on the right side, the character of the stools, and the vomiting.

Dr. Peabody said that in the average case of this kind it would be absolutely impossible to say whether the lesion was located in the stomach or duodenum. If, however—as in a case which Dr. Weir and the speaker had under their observation at the present time—there were repeated hemorrhages from the bowels, without any vomiting of blood, and if the tenderness was located rather low down in the epigastrium, it was fair to infer that the lesion was in the duodenum, especially if the pain following the ingestion of food did not come on immediately, but an hour or two later. The speaker said that, in the case he had in mind, sepsis was well marked. The patient had had repeated chills—in fact, the case had been sent to him as being one of malaria. As regards the indications for operative interference in these patients, Dr. Peabody said that occasionally we met with a case with evidences of a lesion of great depth, which had involved the peritoneum by extension, setting up a localized peritonitis, with the presence of crepitant râles over the tender area. In such a case we could say with almost absolute certainty that the lesion was a deep one, threatening perforation at any moment, and an operation was indicated. The speaker said he now had such a case under his observation, but the patient, a woman, refused operation. She had improved under local antiphlogistic treatment, but was still in great danger. An operation in these cases was justifiable, even if undertaken only for diagnostic purposes. The character of the blood passed per rectum, *i.e.*, whether pure blood or melæna with tarry appearance, might aid somewhat in determining the site of the lesion.

Dr. Robert F. Weir said that during the past six weeks he had been engaged in ferreting out from the literature of this subject cases of duodenal ulcer in which the diagnosis was verified by operation or au topsy, in the hope of thus gathering a set of symptoms which would warrant surgical intervention. The diagnosis of this condition was extremely difficult, and after perforation had occurred, allowing egress of the duodenal contents, which run in a variety of directions, more particularly toward the right flank, it was not to be wondered at that these cases, even at the time of operation, were often mistaken for appendical and other difficulties. If we could get evidences of a localized peritonitis on the right side above the umbilicus, or a tumor in that location, we would probably be able to trace it either to the gall bladder or to the duodenum; if on the left side, to the stomach. If such a set of symptoms showed themselves above the umbilicus, and particularly if the patient was a man —as the lesion occurred oftener in men than in women —we were justified in making an exploratory incision. If the symptoms pointed to an impending perforation, a gastro-enterostomy was justified, the purpose of the operation being not to hunt for the ulcer but to place the organ at rest, as had been done by Hartmann and several others. Dr. Weir said that in no case reported up to the present time had a case of duodenal ulcer been correctly diagnosticated before the operation; in every instance some other condition was suspected. The only case on record cured by operation was that of Corvilla, who did a gastro-enterostomy, the ulcer being a non-perforating one. Of eighteen cases in which laparotomy was done and which proved to be duodenal ulcers, in not one was a correct diagnosis made; eleven were diagnosticated as appendicitis; in only seven of the cases was the true nature of the trouble made out at the time of operation; three of these recovered. All the others were correctly diagnosed at the autopsy. In speaking of the advantage of doing a gastro-enterostomy in cases of non-perforating ulcers of the stomach or duodenum, Dr. Weir said that the mortality of the operation was only ten per

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A Case of Dangle-Foot.—Dr. Gibney presented this case. In this case relief was attempted by sewing together all the tendons on the anterior aspect of the ankle with kangaroo gut. The patient was a girl eight years old. She was operated on January 17th of the present year for dangle-foot, dependent upon an anterior poliomyelitis. The tendo Achillis was rather long, and there was little or no power in the anterior leg muscles. The incision was made for the purpose of tendon transplantation, but on account of the loss of power in the muscles the tendons were sewed together with kangaroo tendon as an experiment, in the hope that, conjointly, they might act as flexors. The result of the experiment appeared encouraging, although there was only slight power in the dorso-flexors at present. The wound healed primarily.

Three Cases Illustrating the Diagnosis of Coxa Vara.—These cases were presented by Dr. Gibney. The first patient was a girl, ten years old, who had been admitted to the Hospital for the Ruptured and Crippled a few days previously, this having been the third time she had been an inmate since January, 1897. When she was first seen, the case was regarded as one of hip disease, but that diagnosis had recently been questioned because of her prompt recovery after a brief course of treatment, when she was able to leave the hospital without apparatus, with a fair range of motion, and without any acute symptoms. Recently she had received a sprain of the hip, and on her last admission her symptoms were rather acute, although the shortening had not increased. There were no signs of abscess, and the only deformity was rotation of the leg outward, what seemed to be the head of the bone could be felt on the anterior border of the acetabulum, near the anterior superior spinous process. Under traction in bed with weight and pulley these acute symptoms subsided in a great measure, and although the functions of the joint were not yet restored as they were on former occasions, her case was now regarded as one of coxa vara, in which the neck of the femur was depressed and the head of the bone had partially slipped out of the acetabulum; in other words, it might be regarded as a subluxation of the head of the femur. The girl now wore an apparatus which was intended to afford a limited amount of protection. With this she was able to walk.

The second case of coxa vara was that of a girl thirteen years of age, who began to have pain in her knee a year ago. She walked lame, and six months later she had a fall, followed by a moderately sharp exacerbation. She had been under treatment in the out-patient department, and on December 29, 1898, was admitted to the hospital. Her general condition was very good. She walked with a marked limp, swinging the limb as though there was some loss of power in the muscles about the hip. The position of the limb was that of slight flexion with outward rotation over very nearly a quadrant. Just below the anterior superior spinous process, near the shaft, could be felt a hard, roundish mass, which was strongly suggestive of the anterior portion of the head of the femur. Nélaton's line came below the tip of the trochanter by about half an inch. There was a fair range of extension (to 170°) and flexion (to 120°). She was put to bed, with traction by weight and pulley, and at the end of two weeks all the acute symptoms had subsided. She was now wearing a jointed splint with pelvic band and perineal straps for protection.

The third patient shown was a boy, thirteen years old, who three years ago complained of pain in his knee and had a slight limp. This continued, with intermissions, until he came to the hospital in November, 1898. During this period he had had no special treatment. At the time of his admission he had no local pains or tenderness excepting when extreme flexion was attempted. A roundish, globular mass could be felt close to Scarpa's space. There was three-quarters of an inch shortening and marked rotation of the limb outward, with eversion of the foot, such as occurred in fracture of the neck of the femur. The tip of the trochanter was above Nélaton's line by nearly three-quarters of an inch. The case was not at first recognized as one of coxa vara, although that diagnosis had been suggested. An incision was made over the globular mass referred to, and this exposed the head of the femur. The neck of the bone was found to be depressed, and the head was almost completely luxated forward. The wound was promptly closed, healing occurred without accident, and during the patient's rest in bed all his acute symptoms subsided. He left the hospital about two weeks ago, walking very well, with the diagnosis fully confirmed.

Dr. Gibney said the three cases reported above represented one phase of bending of the neck of the femur, or coxa vara, as it had been termed by Hofmeister. These cases were of much interest from a diagnostic standpoint. Many cases of so-called hip disease in adolescents seen in former years might have been simply cases of coxa vara. The disease embraced other variations in the position of the limb, dependent, of course, upon the direction in which the neck bent.

In reply to a question by Dr. Kinnicutt, Dr. Gibney said that numerous *x*-ray photographs of this class of cases had been taken by Dr. Royal Whitman, and these showed the abnormal position of the head and neck of the femur.

Dr. Weir said that Dr. Whitman regarded this condition of coxa vara as due to a form of late rachitis

which was apt to affect only one or two bones in the body. Some cases were recently shown in Germany, in which a fracture or diastasis of the neck of the femur occurred, producing the same result as in the cases shown by Dr. Gibney.

Dr. Gibney, in reply to a question regarding the differential diagnosis between this condition and tuberculous hip-joint disease, said that in the latter we did not get such extreme outward rotation as in coxa vara. In true hip-joint trouble the disease was progressive, tending to ankylosis and deformity, and was frequently accompanied by the formation of abscesses; in coxa vara abscesses never occurred. There was usually slight shortening, perhaps half an inch, while in tuberculous hip-joint disease we might have from one to three inches shortening.

A Case of Excision of the Proximal End of the Fifth Metatarsal Bone for Club Foot.—Dr. Gibney also showed this case. The patient was a girl, fourteen years old, who had been an inmate of the hospital since last summer for the relief of a relapsing club foot. The deformity had been corrected by manual force during three or four sittings, the force being applied while the patient was under an anæsthetic. When the foot was finally in a position of right angle with the leg, and all varus and equinus had been overcome, there remained a projecting mass in the sole of the foot, about the middle of the outer border. This proved to be the luxated head of the fifth metatarsal bone. On the 10th of January, 1899, an incision was made along the outer border of the foot, over the shaft of the bone, including the head; the periosteum was separated, and about an inch and a half of the proximal end of the bone was removed. All sharp edges were cut away; the periosteum was sutured, then the skin, and the wound was dressed. It healed promptly, and the girl was now free from any deformity and would be spared the annoyance of corns and callosities, which so frequently accompany the incomplete cure of club foot.

Some Clinical Aspects of Peptic Ulcer, Gastric and Duodenal.—Dr. Kinnicutt read the paper of the evening, on this subject. The difficulties in a differentiation between gastric and duodenal ulcer were discussed, and the statement was made that the general consensus of clinical opinion at present was to the effect that only very exceptionally could the site of the ulcer be located. Statistics of the general mortality of peptic ulcer, of the frequency of a fatal result from hemorrhage, perforation peritonitis, and sepsis uncomplicated by perforation or peritonitis, were given; and finally the indications for operative interference were considered.

Dr. Andrew H. Smith referred to a case bearing on this subject, which had been under his observation at the Presbyterian Hospital six or seven years ago. The symptoms of the patient were of a very obscure character, but were evidently connected with the stomach. Subsequently a pericarditis was diagnosticated, in addition to the gastric disorder, and about two weeks later sudden evidences of peritonitis appeared, which proved fatal. The autopsy showed a perforation of the superior wall of the stomach, near the pylorus; the ulceration had then perforated the diaphragm and the pericardium, and had given rise to a pericarditis. Besides this, there was an opening into the general peritoneal cavity, which had caused peritonitis and death.

Dr. Beverley Robinson said he fully agreed with what had been said regarding the difficulty of recognizing a case of duodenal ulcer. Among the symptoms which are of value in establishing the diagnosis are the localized pain, the development of a tumor, more particularly on the right side, the character of the stools, and the vomiting.

Dr. Peabody said that in the average case of this kind it would be absolutely impossible to say whether the lesion was located in the stomach or duodenum. If, however—as in a case which Dr. Weir and the speaker had under their observation at the present time—there were repeated hemorrhages from the bowels, without any vomiting of blood, and if the tenderness was located rather low down in the epigastrium, it was fair to infer that the lesion was in the duodenum, especially if the pain following the ingestion of food did not come on immediately, but an hour or two later. The speaker said that, in the case he had in mind, sepsis was well marked. The patient had had repeated chills—in fact, the case had been sent to him as being one of malaria. As regards the indications for operative interference in these patients, Dr. Peabody said that occasionally we met with a case with evidences of a lesion of great depth, which had involved the peritoneum by extension, setting up a localized peritonitis, with the presence of crepitant râles over the tender area. In such a case we could say with almost absolute certainty that the lesion was a deep one, threatening perforation at any moment, and an operation was indicated. The speaker said he now had such a case under his observation, but the patient, a woman, refused operation. She had improved under local antiphlogistic treatment, but was still in great danger. An operation in these cases was justifiable, even if undertaken only for diagnostic purposes. The character of the blood passed per rectum, *i.e.*, whether pure blood or melæna with tarry appearance, might aid somewhat in determining the site of the lesion.

Dr. Robert F. Weir said that during the past six weeks he had been engaged in ferreting out from the literature of this subject cases of duodenal ulcer in which the diagnosis was verified by operation or au topsy, in the hope of thus gathering a set of symptoms which would warrant surgical intervention. The diagnosis of this condition was extremely difficult, and after perforation had occurred, allowing egress of the duodenal contents, which run in a variety of directions, more particularly toward the right flank, it was not to be wondered at that these cases, even at the time of operation, were often mistaken for appendical and other difficulties. If we could get evidences of a localized peritonitis on the right side above the umbilicus, or a tumor in that location, we would probably be able to trace it either to the gall bladder or to the duodenum; if on the left side, to the stomach. If such a set of symptoms showed themselves above the umbilicus, and particularly if the patient was a man —as the lesion occurred oftener in men than in women —we were justified in making an exploratory incision. If the symptoms pointed to an impending perforation, a gastro-enterostomy was justified, the purpose of the operation being not to hunt for the ulcer but to place the organ at rest, as had been done by Hartmann and several others. Dr. Weir said that in no case reported up to the present time had a case of duodenal ulcer been correctly diagnosticated before the operation; in every instance some other condition was suspected. The only case on record cured by operation was that of Corvilla, who did a gastro-enterostomy, the ulcer being a non-perforating one. Of eighteen cases in which laparotomy was done and which proved to be duodenal ulcers, in not one was a correct diagnosis made; eleven were diagnosticated as appendicitis; in only seven of the cases was the true nature of the trouble made out at the time of operation; three of these recovered. All the others were correctly diagnosed at the autopsy. In speaking of the advantage of doing a gastro-enterostomy in cases of non-perforating ulcers of the stomach or duodenum, Dr. Weir said that the mortality of the operation was only ten per

cent., while that of the condition itself was from fifteen to twenty per cent.

Dr. J. W. Brannan reported the following case, which he thought might have some bearing on the subject under discussion: Last autumn a soldier, one of the Rough Riders, was brought to Bellevue Hospital in a state of collapse. After free stimulation he recovered consciousness, and stated that he had suffered from malaria and diarrhœa. An examination of the blood showed an anæmic condition, but no plasmodium. Several hours after his admission to the hospital he passed a large amount of clotted blood per rectum. He was treated on general principles, and left the hospital in three or four weeks, apparently perfectly well. About three or four days later he was brought in again, with a history of having vomited a large quantity of blood; after his arrival at the hospital he again passed blood per rectum. There was no history of vomiting or any gastric disturbance, no abdominal pain or tenderness. The house physician suggested that the case might be one of gastric ulcer, and referred to a similar case which he had recently seen reported by Dr. Max Einhorn. Acting upon that suggestion, the patient was fed by enemata and poultices were applied over the abdomen. The case progressed favorably and after four weeks' rest in bed the patient left the hospital with no further symptoms of any kind.

Dr. Brannan asked whether it was possible to have a case of gastric or duodenal ulcer, with absolutely no pain or tenderness or gastric symptoms. Osler spoke of pain as the most constant symptom of ulcer, whereas hemorrhage occurred only in about one-half the cases. The speaker said that in the case above described he had first suspected one of the congestive forms of malaria or cirrhosis of the liver. The patient was not a drinking man, and the liver was apparently of normal size.

The president, Dr. Thompson, said that many cases of duodenal ulcer did not give rise to definite symptoms until the time of perforation. This fact was illustrated in a case which had recently come under his observation. The patient, a coal-heaver, had been able to continue at his work until within thirty-six hours of the time of his death. At the autopsy, a perforating duodenal ulcer was found. When he was brought to the hospital he was perfectly conscious, and gave an intelligent account of himself. There was no previous history of any symptoms that were in any way referable to a gastric or duodenal ulcer. His symptoms suggested an active peritonitis, and the diagnosis of intestinal perforation which was made was based largely on their intense and sudden development. The pain and tympanites were very general, and the most striking symptom was a gasping dyspnœa, such as occurred in cases of fatal hemorrhage. The man was pulseless and cyanotic, and complained of intense thirst. He was beyond any operative measures. At the autopsy, in addition to a perforating ulcer found close to the pylorus, the patient showed a peritonitis of the plastic type, which had evidently existed for several days.

Dr. Thompson said he agreed with Dr. Kinnicutt that one of the indications for operative interference in cases of peptic ulcer was continued hemorrhage, although such an operation did not always avail. In one such case which came under the speaker's observation about two years ago the hæmatemesis was prolonged and quite profuse, the patient at times vomiting half a pint of blood; no blood was passed per rectum. There were much emaciation and anæmia. The case was diagnosticated as one of gastric ulcer, and regarded as a suitable one for operation. The stomach was incised by the surgeon and thoroughly explored with an electric light, but no trace of either an ulcer or a cicatrix could be found. The patient recovered from the operation, but a few days later had another gastric hemorrhage and died. At the autopsy, all the organs were found to be in normal condition; there was neither a gastric nor a duodenal ulcer. The liver was apparently normal. Such cases as this are certainly not reassuring from the standpoint of early diagnosis with a view to operation.

Dr. Kinnicutt, in reply to a question, said he thought that continuous bleeding, even if slight, from a gastric or duodenal ulcer was a much stronger indication for operative interference than a single hemorrhage, even though profuse. This view harmonized with Leube's, recently expressed. The speaker said that at the Presbyterian Hospital, about two years ago, he saw a case similar to the one narrated by Dr. Brannan. The patient was a man who was supposed to be suffering from cirrhosis of the liver; he had two very severe hemorrhages from the bowels, which resulted fatally. At the autopsy a perforation of the duodenum was found, although there had been no symptoms pointing to such a lesion—no pain, no tenderness, no gastric symptoms. Cases like the one reported by Dr. Thompson, where there was hæmatemesis without any discoverable lesion, were not so very rare, and these formed a great stumbling-block in the way of diagnosticating true cases of gastric or duodenal ulcer. In a case which came under his observation last year, the patient, a woman, had several profuse hemorrhages from the stomach, losing on three occasions extending over a period of a week about sixty ounces of blood. She refused operation, and at the autopsy no lesions of the stomach, intestines, or liver could be found. The woman had had dyspepsia for years, and entered the hospital on account of the hemorrhages.

Dr. Peabody said that these cases of severe hæmatemesis without a discoverable lesion had been recognized for years. Murchison, in his work on diseases of the liver, made the statement that severe and even fatal hemorrhage may occur as an initial symptom of cirrhosis of the liver. In such cases a microscopical examination of the liver tissue would show certain pathological changes, even though the case might not have advanced far enough to show any gross lesion whatever. Such a case had occurred to him many years ago, in which death resulted from profuse gastric hemorrhage. At the autopsy there was no lesion of the stomach or duodenum, and the liver appeared to the naked eye normal in size and structure; but a microscopical examination revealed the young-cell infiltration in the periphery of the lobules which occurred early in cirrhosis. The usual etiological factor had been noted in the history, but the hemorrhage was the earliest and only symptom of cirrhosis.

Dr. Kinnicutt said he had no doubt that the explanation advanced by Dr. Peabody was the correct one in many instances, and that it had been borne out by clinical observation. The speaker said he had under his care at present a man who, about three years ago, had several hemorrhages from the stomach which nearly proved fatal, and for the occurrence of which no reason could be assigned, as there were no other symptoms. Hepatic cirrhosis was suspected, and recently the suspicion had been confirmed in a decrease in the size of the liver and the development of ascites. In reply to a question by Dr. Weir, Dr. Kinnicutt said that no enlargement of the liver had been made out at the time the hemorrhages had occurred.

Dr. Peabody said that enlargement of the liver or spleen was sometimes rather vague and difficult to make out.

Dr. Weir said that, according to Talma, these hemorrhages did not occur without enlargement of the organ.

A Case of Localized Arterio-Sclerosis of One Middle Cerebral Artery: with Specimen. — This case

was reported by Dr. Peabody. The patient was a jockey by occupation, an Irishman by birth, sixty years of age. He came under observation in September, 1898. He gave a history of syphilis of old date, without recent manifestations, and had been accustomed to drink whiskey freely. He had considered himself in good health. On the afternoon of his admission to the hospital he was exposed to great heat in the sunlight, suddenly became dizzy, and had a convulsion. He was unconscious when first observed, and had immediately in quick succession several general convulsions of tonic character, which were, however, followed and interrupted occasionally by convulsive seizures of clonic character, which were limited to the right side of the face and the right arm. The breathing was stertorous; the pulse was rapid, irregular, and of abnormally high tension, and his radial arteries were thickened. Temperature, 99.4° F.; respiration, 36; pulse, 122. The pupils were equal, slightly contracted, and responsive. Examination of the thorax revealed nothing abnormal, except that the second aortic sound was distinctly accentuated, as evidence of the increment in arterial tension. Palpation and percussion of the abdomen revealed nothing abnormal.

During the twelve hours following his admission the convulsions were frequently repeated, and were only temporarily subdued by the use of chloroform. On account of his arterial tension he received nitroglycerin and symptomatic treatment in general. His urine contained one-half gram of albumin to the litre, and a few granular casts. The specific gravity was 1.018, and there was no sugar. His condition was supposed to be uræmic, and he was treated accordingly. His urine was abundant, and an examination the next day showed that the albumin was reduced to a trace and the casts had disappeared.

He remained under observation several weeks, during which casts were occasionally present in his urine, but all evidence of disease ultimately disappeared permanently and he was allowed to go out of town.

His temperature had been irregularly elevated during the week following the convulsions, fluctuating between 99° and 102° and 103° F., but during the succeeding three weeks it was normal.

While in the country he seemed to feel well, and he remained in fair condition for three weeks, when he suddenly had another general convulsion of clonic character, this time followed by paralysis of the right arm. The following day he returned to town, and again presented himself for treatment. His condition was substantially as it had been when he formerly left the hospital, except that there was a slight amount of œdema of the lower extremities and quite obvious loss of power in the right hand. His intellect seemed somewhat clouded, and he had in general a badly nourished appearance, and his arterial tension was high.

He remained under observation nearly a month. During this time his urine was very frequently examined and was always normal in every respect, including quantity, specific gravity, absence of albumin, sugar, and casts. He was up and about all day, and seemed to feel well, but there continued always to be a distinct impairment of power in his right hand. Under treatment by nitroglycerin and chloral hydrate the tension of the pulse became normal. He was considered to be suffering from arterio-sclerosis, and was presented to the students as an illustration of that condition.

Death occurred suddenly, from cessation of the heart's action, without warning, about six weeks after the first convulsive seizure.

The chief interest in the autopsy was centred in the brain. The arteries in the circle of Willis appeared to be normal. In fact, no vessel seemed to have appreciable lesion, except the left middle cerebral. This could easily be traced as a very tortuous, thickened vessel, at times dipping deeply into the Sylvian fissure and again projecting above the cerebral surface. It was of fairly uniform diameter, and could readily be traced backward to the anterior portion of the occipital lobe, where it was seen terminating in a coil of completely calcified vessels, which formed a nodule about one centimetre in diameter, which was embedded in the brain tissue. The tissue in its periphery was in the condition of old yellow softening. The brain otherwise appeared to be normal. The heart showed moderate hypertrophy of the left ventricle, the surfaces of the kidneys were slightly granular, and the pulmonary arteries were both partly occluded by recently formed thrombi. The aorta showed extensive chronic changes, illustrating several of the stages of arterio-sclerosis.

The interest of the case depended upon the localized and very definite character of the lesion. While it was not claimed that the kidneys were free from disease, it would be obvious from the symptoms, as it was from the autopsy, that they were not specially concerned in the patient's illness or death. The brain, one kidney, the aorta, and a piece of the pulmonary artery were shown by Dr. Peabody.

A New Actual Cautery.—This was exhibited by Dr. Weir. The instrument shown by Dr. Weir was the Dechéry automatic cautery, made by Messrs. John Weiss & Sons, of London. This was unlike the usual Paquelin cautery, in that it did away with the benzin bottle and the rubber bulbs and substituted instead ordinary sulphuric ether, which worked doubly, *i.e.*, not only as the necessary hydrocarbon vapor to act on the spongy platinum in the production of the incandescent point, but as a self-propeller. To accomplish this the handle was hollow, to contain about two ounces of ether, and was very strongly made to resist an outward pressure of twenty atmospheres. It was started by holding the mid-shank a few minutes in an alcohol flame, and once ignited it would remain so for over half an hour. Its cost was $25. Dr. Weir reported that he had used it several times with a satisfactory result.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 16, 1899.

William H. Thomson, M.D., President.

Some Surgical Aspects of Syphilis.—This paper, by Dr. Frank Hartley, was read by Dr. John Huddleston. The paper was limited to a description of the manifestations of syphilis occurring in the muscles, sheaths and tendons, bursæ, bones, joints, lymphatic glands, and rectum.

The Muscles.—The tongue was the favorite seat for the gummata of syphilis. If the gumma was circumscribed and existed deeply with the mucous membrane intact, there was no reliable objective symptom by which it was possible to differentiate between some abscesses, sarcoma, fibroma, and primary tuberculosis and actinomycosis. Syphilis of the tongue was a frequent precursor to the presence of cancer, and in several instances the gumma and cancer had apparently appeared at the same time. Lesions involving the muscles generally occurred in the late varieties of syphilis, and appeared either as a circumscribed mass or as a diffuse connective-tissue induration with or without disseminated gummatous foci. It was usually situated at the junction of the muscle and the tendon. The growth was attended with more or less contracture of the muscle. The syphiloma selected most fre-

quently the sterno-mastoid. Though a single circumscribed lesion was rare, it represented, according to Esmarch's experience, one-half of all so-called tumors of muscles.

The Lymphatic Glands. — The lymphomata occurred as unusual lesions in the acquired and hereditary variety. Clinically these glands might be hard (sclerosis) or soft (gummatous). In both varieties a differential diagnosis must be made between the lymphomata of syphilis and those of tuberculosis, of pseudo-leukæmia, of lympho-sarcomatosis, and those of carcinoma. The deeper glands habitually suffered in hereditary syphilis. Such glands are the lumbar, iliac, femoral, and mesenteric. They never suppurated. Blood examination was the only reliable differential diagnosis between leukæmic lymphomata and the enlarged spleen and lymphatic glands of hereditary syphilis. In tuberculous lymphomata the course was slow compared with syphilis. The tonsil as the seat of the primary lesion was not rare. It was of the greatest importance that true neoplasms should be distinguished from syphiloma.

The Breast.—The early manifestations of syphilis of the skin over the breast were not infrequently seen. The gumma existing within the breast had only lately been conspicuously brought forward. Lancereaux and Langenbeck described the involvement of this organ in two distinct forms—(1) the simple syphilitic mastitis, and (2) the gummatous syphilitic mastitis. In the first variety the disease was apparently an interstitial process, becoming chronic and attended with the formation of a new connective tissue which might undergo contraction. The second variety might exist without softening, or it might break down and form an ulcer which was characteristically syphilitic. This might be confounded with tuberculosis, which was a rare disease here. There were at present about forty-seven observations of this character. In twenty-three the tubercle bacilli were found. In one-half of the cases the axillary glands were involved in the earlier stages. So long as a swelling alone in the breast is felt, a distinction between syphiloma and a new growth was difficult. Actinomycosis resembled tuberculosis and syphilis, in that it consisted of a circumscribed indurated area which broke down and left a granuloma.

The Joints.—The joint inflammations following the exanthemata, multiple epiphyseal osteo-myelitis, gonorrhœa, and large intra-articular hæmatomata, were not infrequently confounded with syphilis, and *vice versa*. The subacute or chronic serous synovitides occurring during the later stages of the acquired variety must be distinguished from the tuberculous hydrops, monoarticular arthritis deformans, and monoarticular chronic rheumatic arthritis. The main striking point was the rapid response to antisyphilitic treatment. In children many syphilitic joints were considered to be tuberculous. Thirty-seven per cent. of children having keratitis, in hereditary syphilis, had joint disease; eighty-eight per cent. occurred in the knee-joint, and fifty-nine per cent. of them were double. Sero-synovitis, with or without cartilage defects, was generally double and in the knee-joints. These subacute cases were generally suspected, even though no manifestation of syphilis was present. Pre-articular gummata might be mistaken for white swelling. Bilateral involvement of the knee, elbow, and ankle joints were suspicious.

In Bones.—It was not in the more frequent varieties of bone syphilis that the surgeon had difficulty, but with the hyperostosis and the osteophytes, especially in inherited syphilis, since their pressure upon the muscles, nerves, and organs might lead to severe symptoms. Particularly interesting were the three cases of exostosis occurring during intra-uterine life reported by Labre. Rapidly developing gummata of the long bones were not infrequently confounded with tuberculosis or sarcoma. One should remember that the osteomyelitis of syphilis was usually gummatous, that the periostitis was usually a sclerosing process, and that in the acquired disease the diaphysis was involved. Syphilis of bone was characterized by its painfulness and its exquisitely chronic course.

In the Rectum.—Syphilis was frequently located in the rectum, and not infrequently ulcers had been removed, being mistaken for cancer. Carcinoma, which exhibited an irregular, hard, and nodular growth with deep, gaping ulcerations upon the hard and indurated rectal wall, could be easily mistaken for chronic inflammation and ulcers, and these two for syphilitic stricture and ulcers or an ano-rectal syphiloma.

Syphilitic Insanities and Pseudo-Insanities, with Some Remarks on Prognosis and Treatment, and the Prognosis and Treatment of Syphilis of the Nervous System in General.—Dr. C. K. Mills, of Philadelphia, read this paper. One should bear in mind three classes of disease processes: First, the true syphilitic or specific lesions, due to the continued action of the syphilitic virus; second, secondary softenings and degenerations; third, para-syphilitic and meta-syphilitic affections. Para-syphilitic diseases were the issue of syphilis, the products of its action. Although proceeding from syphilis, they were not of a true syphilitic nature. In syphilitic non-degenerative lesions the prognosis was good, but the specific medication must be actively employed. In a large percentage of cases the lesions were the result of secondary degenerations, and here it was equally true that the specific lesion could be much influenced by treatment.

Important forms of syphilitic insanity were: (1) syphilitic insanity from disorders due to the circulation in the blood of the syphilines; (2) true dementia paralytica, para-syphilitic disease; (3) syphilitic pseudo-paralyses. While true dementia paralytica was a degenerative disease, it was developed sometimes consecutive to true specific lesions; this made it possible to have many subtypes. The mixed treatment was most applicable in these cases, carried out by inunctions and increasing doses of sodium or lithium iodides.

He held the view that tabes and paralytic dementia were practically the same disease; that syphilitic pseudo-tabes and syphilitic paralysis were affections strikingly comparable. True uncomplicated tabes he considered para- and meta-syphilitic disease. His conviction was increasing that tabetic diseases were, in the vast majority of cases, syphilitic in origin. The diagnosis once clearly made, there was no hope of absolute cure, and none should find a place in the physician's mind. The patient should be kept from falling into the hands of quacks. Syphilitic pseudo-paresis was a disease far more common than pseudo-tabes. When vessels, nerves, and cortex became implicated, due to syphilis, often the symptoms of general paralysis were present, and the term syphilitic pseudo-paresis was applied. Syphilitic pseudo-paresis was a disease of good prognosis or bad prognosis, according to the stage in which it fell into the hands of the therapeutist. If recognized early, it might yield brilliant results; if the disease had advanced, the prognosis was less favorable. Syphilitic spinal paralysis (Erb's) he had never seen cured; yet he had never seen a case which was not benefited at some stage of its progress.

The speaker gave some conclusions regarding the prognosis of syphilis of the nervous system, and especially syphilitic insanity and pseudo-insanity. The prognosis and treatment of syphilis of the nervous system were based upon a thorough study of the differential diagnosis. The treatment required investigations

of the forms and the individual case, the latter including the past history, the study and treatment of any idiosyncrasies. It was of first importance to differentiate clearly between syphilitic lesions and para- and meta-syphilitic affections. The first were curable, but the latter were not. The forms most improved and curable were recent syphilitic lesions, such as recent meningitis, encephalitic or myelitic infiltrations, etc., all these being lesions which did not implicate the true nerve elements, and so the prognosis would be more favorable. In the discussion of the prognosis and treatment, practical good resulted from the study of the method of onset; cases of subacute development were relatively more hopeful. Cases slowly developing could often be helped, but not cured, by antisyphilitic or other treatment. Syphilitic lesions of the nerves occurring within a year after infection were rapidly fatal or destructive. True syphilitic tabes was met with but rarely. This disease, in the absence of treatment, presented the features of true tabes. The speaker made the following classification of insanities and pseudo-insanities: (1) the incurable classes; (2) paralytic dementia; (3) the more or less remedial pseudo-paralyses, essentially the same as tabes. In differentiation, the application of the therapeutic test was an unscientific method. One should be able to make a diagnosis and prognosis without therapeutation. The therapeutic test might lead to delusive inferences.

Regarding the dosage and the administration of antisyphilitic measures, he expressed a few aphorisms. Both mercury and the iodides were valuable in true syphilitic lesions. In para-syphilitic lesions no other drugs were able to effect a cure, although they might assist in maintaining the general health. Usually they should not be tried for more than six weeks at a time. Without the use of these two drugs, tabetics might maintain fair general health; these patients did as well under other drugs as other patients did. No case of true tabes could be cured by any treatment. Mercury and the iodides were needed for pseudo-paresis, but good results depended upon (1) the subtype of the disease, (2) the general health of the patient, and (3) the skill and care with which these drugs were used. In regard to all these affections, we should rid ourselves of delusive hopes and beliefs. Mercury was not of value in para-syphilitic disease. A somewhat larger percentage of cases were benefited by the iodides than by mercury. Large doses should not be used; many cases in which such treatment had failed had not been reported. Injurious effects were often the result of the heroic dosage of iodides in paralyses, scleroses, degenerations, disseminated scleroses, paralysis agitans, etc. It was an unscientific procedure to saturate patients with potassium or sodium iodides. He did not, on the other hand, place such great confidence in small doses as did the British. It was better to give gr. xxx. to lx. thrice daily than three or four times that amount at similar intervals. He could not give any explanation why, in some cases, mercury did good when the iodides failed to do so or when their benefit had ceased.

The General Diagnosis of Brain and Spinal Cord Syphilis.—Dr. B. Sachs read a paper on this subject. He stated that from fifteen to twenty-five of each thousand persons afflicted with syphilis developed some disease of the central nervous system. The majority of syphilographers thought that syphilis was on the increase, no doubt due to questions involved in the social problem, and to the influences of alcohol, tobacco, and other narcotics. Syphilitic nervous affections were simply manifestations of the constitutional disease. He hesitated to say whether it was a consequence of soft chancre, but it might be stated that these affections of the nervous system occurred in patients who gave a clear history of soft chancre. The brain and spinal cord were more often affected than the peripheral nerves. The lesions of the nervous system were not unlike those affecting different organs. Gummata occurred upon the convexity and base of the brain, but less often in the spinal cord. Granulation tissue was found, and the whole mass was more or less vascular. Granulation in a syphilitic new growth was unproductive. The limitation of the syphilitic neoplasm was of the utmost importance. Gummata might be associated with a diffuse infiltration of the meninges. Syphilitic disease of the blood-vessels was manifested by changes in the intima, but all coats of the blood-vessel might participate in the process. Occlusion of the blood-vessels might follow, with softening of the areas supplied by them. Morbid lesions *per se* were not unlike the other lesions of syphilis. In syphilis of the nerves there were a multiplicity of symptoms and a tendency to retrograde metamorphoses. Syphilitic disease of the central nervous system led to a great variety of symptoms, but the general symptoms indicated the character of the morbid process. If the disease affected the convexity of the brain, there was headache or even coma; if the speech centres were attacked, there was aphasia, motor aphasia being the more common. There were few diseases which gave rise to such a multiplicity of lesions of the nervous system as syphilis. Tuberculous and sarcomatous diseases were much more malignant and ran a much more rapid course, but the differential diagnosis was easily established. It was not so easy to establish a diagnosis between syphilis and multiple sclerosis. The multiplicity of lesions did not imply that all the lesions were coexistent. Spastic paralysis in the lower extremities, not following upon injury to the spine, always gave suspicions of syphilis. Of far greater value was the behavior of the pupils. The speaker attached more importance to the behavior of the pupils than to any other part of the body in syphilitic disease. He placed the most reliance in his diagnosis on these features: First, inequality of the pupils; second, unequal response to light in one, but not in the other; third, complete immobility to light and accommodation. The Argyll-Robertson pupil he did not consider a necessary symptom in typical syphilitic disease. Another point was a marked departure from the circular form of pupil when there had been no preceding iritis. He did not wish to underrate Hutchinson's triad of symptoms, *i.e.*, scars about the mouth, changes in the upper incisors, and keratitis. Certain symptom groups might follow invasion of the nervous system. Chronic diffuse headaches, continuing for days, possibly worse at night, depended upon a poison of syphilitic origin. It was not so well known that lithæmic headaches also might be one of the symptoms of early syphilis. He mentioned the case of a physician who travelled the world over to learn the cause of his vertigo. Specific endarteritis was found to be the cause, and antisyphilitic treatment cured him. These brain symptoms might be attributed to chronic leptomeningitis and meningitis of specific origin.

Spastic paralysis with slight anæsthesia was very characteristic of syphilitic spinal paralysis, according to Erb. This was a form of syphilitic spinal disease, but it was not the only form. Pseudo-tabes was a syphilitic disease which affected one leg before it did the other. Toxic symptoms were slow to develop. There was an absolutely immovable pupil, in contradistinction to the Argyll-Robertson pupil; this was important. The speaker believed that tabes dorsalis could be differentiated from pseudo-tabes.

Ophthalmological Aspects of Syphilis.—Dr. C. S. Bull read a paper with this title. Superficial lesions were recognizable by the naked eye. In the eyelids were found the chancre, the tubercular syphilide, the

rapidly ulcerating form, and gummata. The chancre may occur on the edge of the eyelid, involving both the skin and conjunctiva, and it probably originated in the mouths of the excretory ducts. The base was indurated, and the lid and neighboring skin were much swollen. The mode of contagion was probably through unclean fingers. Differentiation must be made between syphilitic conditions and sty, chalazion, and lupus. In chancre, the lid was indurated and did not respond so readily to treatment, and local treatment produced little or no effect. Eruptions on the eyelid may occur at any age, and might be confined to the skin only or involve the entire thickness of the lid. Papules might be of rapid growth, but did not extend deeply. Tubercular syphilides extended deeply. Microscopically the two conditions were the same. Constitutional treatment of the tubercular syphilide distinguished it from epithelioma. Primary syphilitic lesions in the conjunctiva were not common. Papules or pustules might appear singly or in numbers. Mucous patches closely resembled other patches, and they responded readily to treatment. True gumma of the conjunctiva was one of the rarest affections of the eye. Dacryo-cystitis was accompanied by the discharge of mucus and pus from the puncta. Formation of a fistula should be prevented by an early incision. Chronic dacryo-cystitis was not of infrequent occurrence in inherited syphilis.

Corneal lesions required classification as follows: (1) Diffuse parenchymatous form, accompanied by iritis; (2) true keratitis punctata; (3) the later stage of the preceding, in which there appeared a cloudy condition of the cornea. All these varieties of keratitis might appear in inherited syphilis. Chronic interstitial keratitis began with a haziness of the cornea. In the punctate form dots were noted. In the course of a few weeks the whole cornea had an appearance best described by the term "ground glass." Vision was never entirely regained. This interstitial keratitis and the presence of Hutchinson's teeth he considered pathognomonic of inherited syphilis.

Iritis existed in three forms—viz., (1) plastic; (2) serous; (3) gummatous. Iritis was the most common affection of the eye in syphilis. The treatment consisted in the local use of atropine, hot applications, and dark glasses. The patient should be brought under the influence of mercury as soon as possible. Iodide of potassium in large doses, rapidly increased, should be given. It might be necessary to do an iridectomy if adhesions took place between the posterior surface of the iris and the capsule of the lens.

He had never been able to make a diagnosis of syphilis from the symptoms Dr. Sachs gave, *i.e.*, irregular action of the pupil, the unequal response to light, etc. The uveal tract may be affected in children in inherited syphilis. Syphilis of the crystalline lens was unknown. Inflammation of the retina alone was rare unless associated with keratitis, and then it was quite common. The troubles with the disc may be divided into (1) papillitis; (2) choked disc; (3) atrophy of the disc. The prognosis of papillitis was fairly good. There were three forms of atrophy of the disc, viz., the inflammatory, the cerebral, and the spinal. Syphilis of the ocular muscles and motor nerves was usually a late manifestation of the disease. Syphilis of the bony wall of the orbit was not uncommon. Here we might have a periostitis, a gumma, caries, and necrosis—all late manifestations of syphilis.

SECTION ON SURGERY.

Stated Meeting, March 13, 1899.

CHARLES N. DOWD, M.D., CHAIRMAN.

Resection of the Elbow for Old Fracture.—DR. C. L. GIBSON presented a man, about sixty years of age, who about one year and a half ago had fallen, striking heavily on the left elbow. On coming under observation, three or four months later, there was a fracture of the elbow-joint with practically no flexion and extension. The elbow-joint was opened by a posterior incision, and the fragment, consisting of the condyles of the humerus, was easily pried out, as there was no bony union. A slice of the humerus had then been taken off higher up. The head of the radius was intact. At the present time extension was nearly normal, and flexion, although somewhat limited, was quite useful. The case was shown to urge the possibility of improving the condition in these cases of neglected fracture in which the social condition of the patient demanded such interference.

DR. T. H. MANLEY said that his experience had been that, in cases of T-shaped fractures about the elbow in the adult, there was almost always some disability, and often a great deal, regardless of the method of treatment employed.

A Modification of Bassini's Operation.—DR. CARL BECK said that the results from Bassini's operation were so good that it seemed almost presumptuous to suggest modifications, but as Bassini himself had admitted a certain percentage of failures, there must be some room still for improvement. Dr. Beck said that his own modification of the operation consisted in making an incision on the outer border of the rectus muscle, exposing its lower third and the shelving portion of Poupart's ligament. After the aponeurosis had been divided and dissected backward, an oblique incision was made across one-third of the width of the rectus muscle, and the fibres were pulled downward so that there would be no tension when they were approximated. In this way a muscular flap was formed upon which the cord could rest. The divided aponeurosis was then approximated above the cord. One theoretical objection to this procedure might be the gap between the muscles, yet it amounted to but little in practice. In smaller hernias the cutting off of the sac might be rendered unnecessary. The case was presented as an experiment; the future must determine its true value. Last year he had done a Bassini operation on this same patient, and the hernia had recurred.

Cholecystotomy in Transposition of the Viscera.—Dr. Beck also presented a woman, thirty-nine years of age, upon whom he had operated for cholelithiasis. As in this case there was also a transposition of the viscera, so that the gall bladder was on the left side, the case presented certain interesting features. The woman had been well up to ten years ago, when she had begun to have occasional attacks of abdominal pain. Years ago her attending physician had noted the transposition of the heart and of the liver. Last November Dr. Beck had operated upon her, performing nephropexy for the relief of symptoms due to a movable kidney. After this operation the abdominal pain had persisted. Examination under an anæsthetic had shown a slight resistance at the outer border of the rectus muscle. An exploratory laparotomy had revealed, about one inch from the margin of the liver, an enlarged gall bladder containing four gall stones. There was no reaction following the operation, and the patient had left the hospital about eight weeks ago. One week ago there had been some pain in the wound, and at present it was again discharging, thus giving ocular proof of the transposition of the gall bladder to the left side. The exploratory laparotomy had afforded an opportunity for proving by inspection that the stomach and other organs were also transposed.

DR. W. B. COLEY said that he would take issue with Dr. Beck regarding the unsatisfactory results from the Bassini operation, as it had seemed to him to be far more satisfactory than one would be led to believe

from Bassini's first report of cases. His original results had shown that the operation was practically universally successful. Dr. Coley said that he had employed the Bassini operation in his own practice, except that he had substituted kangaroo tendon for silk. Many of his cases had been followed for from four to seven years. Dr. Beck's modification seemed to him hardly necessary except in the rare cases of direct inguinal hernia. From an examination of the old scar of the Bassini operation in the patient just presented, it seemed to him probable that the relapse had been due to the fact that the incision had not been carried high enough, and therefore the transplantation of the cord had not been sufficient to secure a permanent result. Halsted brought together the two layers of the aponeurosis of the internal oblique and Poupart's ligament with one row of sutures, but it seemed to him better to bring the rectus muscle over separately to Poupart's ligament by separate deep sutures. When the conjoined tendon was obliterated the edge of the rectus would practically be the only tissue remaining to be sutured.

Dr. Brockway said that in an extensive experience in the dissecting-room, covering the examination of about one thousand bodies, he had never met with transposition of the viscera.

Dr. Thomas H. Manley spoke of the necessity for operating surgeons bearing such an anomaly in mind.

Dr. Beck, in closing, said that Bassini, in a recent report on his operation, had admitted three per cent. of recurrences; hence some modification seemed justifiable. His modification had been suggested chiefly for large hernias.

Report of Five Cases of Gastro-Enterostomy Performed by the Method of Braun and Gallet.—Dr. R. F. Weir said that last March he had presented a case on which he had performed a gastro-enterostomy, done on the posterior wall of the stomach, and supplemented by an opening between the ascending and descending portions of the jejunum, about four to six inches from its attachment to the stomach. This was the suggestion of Braun. In four of the cases mentioned in the present report an enteric anastomosis had been added to the other surgical procedure, and all patients had recovered without the slightest gastric disturbance. The buttons in all but one instance had been discharged from the tenth to the fourteenth day after operation, and in each case his modified button with the enlarged intestinal end had been used. In the case excepted, the button had not been discharged, and an examination with the *x*-rays had revealed the button in the stomach. Two of the four cases had benign pyloric stenosis without external evidence of a tumor. The other two had carcinoma of the stomach, one stenosing the pylorus and the other involving mainly the greater curvature near the pylorus. In the case with adhesions the posterior gastro-enterostomy had been very difficult. In the malignant case the patient had gained a great deal in weight shortly after the operation, but had finally succumbed to a recurrence of the growth. In the last case upon which he had operated by the method of Braun he had changed the technique in some respects. This was the case in which the button had been lost. Gallet, of Brussels, had made the suggestion that as soon as the opening had been made in the loop of jejunum in the initial step of the gastro-enterostomy, one-half of the button should be carried down through one leg of the opening with a catch-forceps, then the other half introduced in the same way, and the septum of intestinal wall divided by crushing. This procedure, the speaker said, he had found easy of performance. He had also adopted in this case the plan of making a very small opening in the stomach and then introducing the button with forceps. The manœuvre had worked well in that instance, but in view of the fact that the button had subsequently dropped into the stomach he felt loath to try it again. As this operation had been followed by a sharp febrile reaction, he now believed that sloughing had occurred as a result of the laceration produced during the introduction of the button, and that this, by enlarging the opening, had led to the dropping of the button into the stomach. Three patients, all men, were presented. The first one had had a large pyloric stenosis upon which Dr. Weir had done the posterior gastro-enterostomy last spring. There had been enlargement of the stomach, which reached two inches and a half below the umbilicus. The man had been perfectly relieved, and was now in excellent health. The second case was one in which there had been a large mass, at first supposed to be a carcinoma. He had been operated upon last November by the double method of Braun and Gallet. In this case there had not been dilatation of the stomach. The patient had gained thirty-eight pounds, and his condition was now so satisfactory that the speaker said he had begun to doubt the correctness of the diagnosis. The third patient was a man upon whom the operation had been done according to Gallet's method, and in whom the button had been retained. In this case there had been extreme dilatation of the stomach, and a firm and marked contraction of the pylorus. He had gained thirty-five pounds since the operation, which had been done last December. There was still another case, now in the hospital, which had been operated upon ten days ago by Gallet's method. This patient had had atonic dilatation of the stomach without stenosis of the pylorus, as proved by the operation. It was the first case of the kind in his experience.

Dr. W. B. Coley said that improvement in the future must lie either in the direction of enteric anastomosis or in the implantation method of Roux (?). The latter, he was inclined to think, would prove to be the ideal method. Its advantage seemed to be chiefly in the stronger union, no mechanical appliance of any kind being used. The implantation was made by three rows of silk sutures. Three or four hours after the patient's recovery from the anæsthesia, Roux gave some kind of fluid diet, and to this he ascribed much of his success. This operator had done thirty-one operations, with only three deaths. He had also had twenty-four cases of non-malignant stenosis without a single death. Dr. Coley said that he had had one experience with the Murphy button falling back into the stomach. It had been subsequently removed by a surgeon in the West.

Dr. George E. Brewer said that some months ago he had had an opportunity of operating upon an aggravated case of pyloric stenosis. At the first washing of the stomach this organ had been so dilated that a little less than three quarts of fermenting food had been removed, although the patient was fasting. Dr. Lockwood had made the diagnosis of cicatricial contraction of the pylorus from an old ulcer, and the operation had confirmed this view. He had done the posterior enterostomy with the button, and also the entero-enterostomy, and had found it saved a great deal of time over any method of suturing. He had been able to feed the patient on the third day. The first button had been passed on the tenth day, but the second one had not been discharged. The patient had gained in weight, and was now in a very satisfactory condition.

Dr. J. B. Walker remarked that he had assisted in a case similar to the one reported by Dr. Brewer. In that instance one button had been passed in twelve days, and the other had fallen back into the stomach.

Dr. Weir, in closing, said that he had operated upon six cases in this way, with one death—a sharp contrast with his results by the anterior method. Any method which carried out the principle of having a conduit for the passage downward of the bile and pan-

creatic fluid was likely to be more successful than the older plan. A number of cases had now been reported in which the patients had experienced little or no discomfort from the retention of the button. It could not be denied that there was a saving in time by the use of buttons as compared with suture of the intestine, but he was not one of those who believed that a matter of ten or fifteen minutes was ordinarily of much consequence if the surgical technique was what it should be.

The Use of Streptococcus Serum, with Some Reports of Cases.—Dr. William H. Park presented in this paper some of his personal experience with this serum in an experimental way. The plan followed had been to inject simultaneously a high-grade serum and the culture into rabbits, using from one hundred to one thousand times the fatal dose. Every one of these rabbits had lived. Three control rabbits had been given one-tenth of the dose of streptococcus, but no serum, and all three had died in periods varying from twenty-four hours to four days. This was absolute proof that in this particular instance the animals were saved from the results of streptococcus poisoning by injecting the anti-streptococcus serum. Dr. Anna W. Williams had tested the serum against three different varieties of streptococci showing enormous differences in virulence, and derived from different forms of infection. One streptococcus came from France, one from England, and one from America. All of the animals so inoculated had been equally well protected.

Streptococcus Serum.—The serum was usually prepared by injecting a horse with very virulent cultures of the streptococcus, but the speaker was not at all sure that it was necessary to use such virulent cultures. These so-called virulent cultures, it should be noted, were virulent to rabbits, but it did not follow that these same cultures were especially virulent to horses.

Its Stability and Potency.—Usually after three or four weeks the streptococcus serum would lose its bactericidal properties, and hence no serum should be used that had not been freshly prepared or freshly tested. The value of the serum was determined by the amount required to protect against a multiple of a fatal dose—usually one thousand times the average fatal dose. It should be remembered that it was only by the enormous reproduction of the streptococci introduced into the animal that the latter was killed; it was not by the streptococci which were injected.

Therapeutic Value.—Experiment had shown that until the streptococci had begun to appear in the blood it was possible to protect the animal by the injection of the serum; after this it appeared to be futile to attempt to confer such immunity. In a case of gangrenous appendicitis and localized peritonitis at the J. Hood Wright Memorial Hospital erysipelas had developed on the right arm two days after the operation. Two days later the patient was doing fairly well, but after three days more the erysipelas had begun to spread. Then 10 c.c. of the streptococcus serum had been given, and the next day 10 c.c. more, after which the erysipelas had subsided, and three days later had almost ceased. After an interval of two days, or on April 29th, the erysipelas had again begun to spread rapidly. On May 6th, the erysipelas being quite extensive, 12 c.c. of the serum had been administered, 12 c.c. on the next day, and 20 c.c. more on the third day. Again the erysipelas had ceased. For the next three days 20 c.c. had been given daily. After this there had been no return of the erysipelas. Altogether 175 c.c. had been given in this case. On the other hand, in another case, one of puerperal sepsis, which had been admitted to hospital with a temperature of 105° F., and the patient in very bad condition, there was streptococcus infection and probably other infection. The serum had been given for two days, in this case, in doses of 20 c.c., without any effect on the temperature, and the patient had then died. Another patient had entered hospital on the fifth day in a state of profound septicæmia and beginning pyæmia, yet the pulse and temperature had remained below 100 and 101° F., respectively. The case was one of mixed infection with the streptococcus and staphylococcus. Unfortunately in only about fifteen cases, Dr. Park said, had he been able to get cultures from the cases on which the streptococcus serum had been tried. In two-thirds of all the cases in which the streptococcus serum had been given no definite effect had been observed; in one-third the surgeons thought the serum had acted beneficially.

Kind of Infection.—The speaker said that pure streptococcus infections were not so frequent as many surgeons seemed to suppose. Nearly all the severe infections spreading in the limbs had been found to be examples of infection with streptococcus or staphylococcus. Of ten cases of infection of the uterus, reported to him by a friend, only two had pure streptococcus infection, and in only three others did the streptococcus predominate. Most cases of infection of the uterus were probably mixed infections, most commonly with the colon bacillus or staphylococcus. In the human subject, it should be remembered that the infection was almost always a very extensive one, which was in marked contrast with the conditions which obtained in laboratory experiments on rabbits. He thought in suitable cases one was warranted in trying the serum, but should not expect very striking results. The board of health would gladly make all the necessary cultures if members of the medical profession would send the material to the laboratory.

Dr. Weir said that he had tried the serum of Marmorek and also that from the Pasteur Institute of Chicago, in about twenty cases, but with indifferent results. Subsequent investigation had apparently shown that the serum he had used had been unreliable. For this reason it was important to secure streptococcus serum only from health-board laboratories, and not to trust to the uncertain productions found in the shops. Watson Cheyne had told him that, in cases in which there was great reason to expect wound infection, it was his custom not to wait for such infection, but to inject the streptococcus serum at once, and he thought his results justified this practice.

Dr. C. N. Dowd remarked that the surgeon did not usually think of resorting to the use of streptococcus serum until the case had advanced so far that he would not delay for a culture to be made before beginning the administration of the serum.

Dr. Brewer asked Dr. Park if the introduction of the serum had had any effect on the local infection.

Dr. Park replied that in animals there had been no evidence of local infection after the injection of the streptococcus culture. The site of the injection did not seem to have much influence upon the result, except that when the serum was injected near the infected wound it exerted a little extra influence by reason of its greater concentration. Of four different vials of Marmorek's serum which he had tested—and this was about the best for sale in the open market—he had found only one of much value. It had been found that if virulent streptococci were introduced into the peritoneal cavity of a guinea-pig there would be no leucocytosis; if the serum was introduced into the peritoneal cavity or into the circulation, there was a leucocytosis, and the cells took up the streptococcus just as they would take up a non-virulent streptococcus.

Too Prosperous.—Dr. A.: "You must be getting rich if practice is as good as you say." Dr. B.: "Yes, I'm so busy I can't find time to go down and swear off my taxes."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

A LEAGUE OF MERCY AND A NEW ORDER—PSEUDO-TUBERCULOSIS—THE MEDICO-CHIRURGICAL SOCIETY—FOTHERGILLIAN MEDAL—CARBOLIC POISONING; A. K. H. B.—SIR S. WILKS—DEATH OF PROFESSOR STRUTHERS.

LONDON, March 3, 1899.

THE Prince of Wales has made another effort on behalf of the hospitals. On Wednesday a large meeting was held at Marlborough House to which he announced the establishment of a League of Mercy, with the object of assisting his hospital fund. In pursuance of this London and the home counties are to be divided into a number of districts, to each of which a president will be appointed who will subdivide his district into thirty smaller areas, with a vice-president to each. Then each vice-president will select twenty members, each of whom will find twenty subscribers of one shilling a year or more.

So far the League appears to be a mode of collecting subscriptions for the Prince of Wales' hospital fund, and will probably be successful on account of His Royal Highness' enormous social influence. Presidents have been already appointed for fifty-two out of the one hundred districts or more that will be established, and the names include some of the most prominent noblemen and gentlemen. There are also to be lady presidents of each division. The Prince is himself president of the League, and the Princess lady president.

In connection with this League a new order is to be instituted, called the "Order of Mercy." Of this the Queen is, of course, "the Sovereign." The Order will be conferred by Her Majesty on the presentation of the Prince, and will be restricted to persons who have rendered personal gratuitous services, in connection with the relief of sickness, suffering, poverty, or distress. Founders, benefactors, chairmen of committees of hospitals and other institutions will be eligible, but no paid officials. The fundamental rule is that the services must have been gratuitous. Evidently the physicians and surgeons should have the first position; their services being gratuitous, and without them the work could not be carried on. The badge will be a red cross surmounted by the Prince's crown and feathers, having in the centre a group of figures representing charity, by Sir Joshua Reynolds.

In adopting the term pseudo-tuberculosis for its set debate the Pathological Society must not be taken as approving it. Indeed it is quite on the cards that the disuse of the expression may date from this occasion. Dr. Sims Woodhead, the new Cambridge professor of pathology, opened the discussion by blaming the phrase pseudo-tuberculosis for a good deal of misunderstanding. It is evidently misleading, for a number of dissimilar conditions have been described under the term. It is as well for the protest to have come from Professor Woodhead, as he is to a considerable extent responsible for its use. He employed it during his work for the Royal Commission on Tuberculosis to distinguish cases which might have been mistaken for the disease except for the conditions under which they were found and careful microscopic examination. Dr. Woodhead described some of these conditions in guinea-pigs, the appearances being such as at first sight were mistaken for tuberculosis, but in which neither bacilli nor tuberculous structure could be demonstrated. He then showed that the small glistening, pearly gray nodules produced by the strongylus filariæ, and called "hoos" in Scotland, might be mistaken for tubercle, but was a perfectly distinct process and should not be called pesudo-tuberculosis. Next he mentioned the various forms found in birds, of which Muir referred to six different conditions, and to cases in museums labelled tuberculosis, but which later investigations have shown to be actinomycosis. Thus it seems there are two groups of pseudo cases, bacterial and mycotic. Then Rabinowitch has discovered in milk, cream, and butter a bacillus identical with that of tubercle morphologically and in staining, although in little else.

On the one hand, we have organisms resembling tubercle bacilli which pathologically are separated from it; on the other hand, a series of lesions superficially resembling tubercle, but not caused by its bacillus. Interesting as this is to the pathologist, it is by no means encouraging to the busy practitioner, who will, however, undoubtedly agree with Dr. Woodhead that if the term pseudo-tuberculosis cannot be at once got rid of, such phrases as "pseudo-tuberculous processes" and "pseudo-tuberculous organisms" should be discarded. Many will probably forthwith eliminate the term pseudo-tuberculosis as well as its compounds, and really I see no reason to retain a term which is admitted to be misleading.

Dr. Sidney Martin followed and said his experience covered much the same ground as Dr. Woodhead's, being obtained through observations for the Royal Commission. He had repeatedly met with these cases in guinea-pigs and rabbits and preferred to call them "bacterial necrosis." Specimens in the liver and spleen closely resemble true tuberculosis, but the appearances in other organs and the results of cultivation distinguish them. In man such cases are very rare and are generally due to some aspergillus, but three have recently been recorded which seem to be due to some form of streptothrix.

Dr. Washbourn agreed that the term pseudo-tuberculosis should be discarded as misleading. The bacilli which resemble that of tubercle are important from a clinical point of view, and are not uncommon in the urine, on which account inoculations are necessary for the diagnosis of tuberculosis of the genito-urinary tract. There were many organisms which produced anatomical lesions like those due to the tubercle bacillus, and some of these organisms are not bacteria. Further, lesions produced by tubercle bacillus are not constant. All pathogenic organisms set up a more or less chronic form of inflammation, varying with the virulence of the organism and the susceptibility of the animal. The lesson to be learned from this discussion is the importance of systematic bacteriological examination in the post-mortem room, which is still much neglected in London.

Dr. Galloway referred to two rare skin diseases. One, "xanthoma with giant cells," which had been called by Unna "pseudo-tuberculosis of the skin," is infective and usually appears at first on the lower lid. In the other disease tumors appear over the surface of the body, in which are numerous giant cells. They resemble sarcoma, but after some months disappear as rapidly as they had come. Clearly histological evidence alone could not settle the diagnosis. Inoculations must be made as well.

Dr. Woods Hutchinson had several specimens from the zoological gardens, one due to aspergillus taken from a bird's lung, and he had seen others in ducks and parrots. In a monkey's lung he had found coiled worms in masses, probably strongyli or filariæ.

The discussion was then adjourned.

The annual meeting of the Medico-Chirurgical Society was held on Wednesday, when the president, Mr. Bryant, delivered his address in which he gave obituary notices of Fellows deceased during the year. The

report of the treasurers showed that the society is prosperous. Reports from several committees were presented and various votes of thanks accorded. The Marshall-Hall prize was awarded to Professor Sherrington, who briefly returned thanks. Mr. Bryant was re-elected president for another year.

The Medical Society has awarded the Fothergillian gold medal for 1899 to Dr. Monckton Copeman for his researches on glycerinated vaccine lymph.

A very sad death from carbolic acid has occurred. The Rev. Dr. Boyd, well known to you and us as the gifted writer A. K. H. B., took by mistake a lotion instead of his sleeping-draught, and succumbed in an hour, at the age of seventy-four.

It is reported that Sir Samuel Wilks will not accept the presidency of the College of Physicians for another year. The election comes on the 27th of this month.

Another great Scotch teacher has joined the majority. This time it is anatomy that loses a wonderfully clear, able, and diligent exponent, Sir John Struthers. He was not, indeed, engaged in teaching lately, for he retired from his professorship in 1889, when he began to feel the infirmities of age approaching. He was born in 1823, and took his M.D. Edin. in 1845. In 1853–54 he was appointed deputy professor in Edinburgh University, and in 1863–64 was called to the Aberdeen professorship. Since retiring he resided in Edinburgh and took great interest in hospital management; also in the College of Surgeons, of which he was president. Sir John Struthers was great as an anatomist and a teacher. His pupils all over the world will regret to hear of his death. He was also an ardent advocate of medical reform, especially on the educational side, as witness his efforts to secure the fifth year for clinical work, which has now been made compulsory. His other work on the General Medical Council was earnest and beneficial. He had been ailing for more than a year, and died on the 24th of February, about a week after the graver symptoms set in.

TROPICAL MALARIA.

To the Editor of the Medical Record.

Sir:—Permit me to say a few words concerning malaria and the so-called black-water fever, based upon my experience with these diseases in this their home in West Africa. I never at the present time employ large doses of quinine, but in its place use the following mixture which I have named "anti-malarial tonic," by which name it is known in this Cameroon district. I am compelled to keep a large quantity of it on hand all the time, for the white population have by experience discovered its efficacy:

℞ Quininæ sulph	gr. lxiv.
Tr. ferri chlor	gtt. dcxl.
Liq. arsenicalis	gtt. lxvi.
Strych. sulph	gr. i.
Aquæ	℥ viij.

M. S. One teaspoonful in water. In fevers use every three hours, but as a tonic use only three times daily, after meals. Shake well.

When called to a case of fever I first give one of the coal-tar antipyretics and after the fever has subsided employ the above prescription to combat the malaria. This plan can be followed in nearly every case unless the patient is unconscious, in which case I use quinine hypodermically until he is able to take the above mixture by the mouth, or by the rectum if the stomach is too irritable.

I am inclined to regard the so-called black-water fever as pernicious anæmia, and not simply hæmaturia, because there is present hæmatochezia, and in one case which I saw there was hemorrhage from the mouth, nose, and in the meninges.

Now this hemorrhagic condition existing in pernicious anæmia, and quinine having the power to cause a general hyperæmia in some cases, we can easily see why it is said that quinine causes black-water fever.

I do not assert that quinine causes all cases of black-water fever, but I am quite convinced that it in some cases acts as one factor in hastening the onset of the disease and increasing its severity.

My theory is that black-water fever is the result of anæmia, whatever may be the cause of the anæmia, whether malaria, some organism in the intestine, the lack of food containing iron, or leukæmia.

From the fact that in the so-called black-water fever a brisk purge in time will often suffice to effect a cure, we may perhaps draw the conclusion that the poison was in the intestine and that the purge carried it away.

N. H. D. Cox, M.D.

Batanga, Cameroons, West Africa,
January, 1899.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 18, 1899:

	Cases.	Deaths.
Tuberculosis	131	169
Typhoid fever	14	4
Scarlet fever	162	18
Measles	229	14
Diphtheria	171	30
Laryngeal diphtheria (croup)	8	4
Cerebro-spinal meningitis	0	11
Chicken-pox	35	0
Smallpox	2	1

Indicanuria.—In the differential diagnosis between ileus and coprostasis, a small amount of indican excludes the former condition.—Dr. Charles E. Simon.

Influence of the Mind on the Body.—The state of the mind is capable of producing disease; another state of it may effect a cure.—John Hunter.

Diet in Hyperacidity.—It is not probable that the albuminous diet will be abandoned, but more stress has to be laid upon a milder, less irritating form of administering it.—Dr. Franz A. R. Jung.

A Medical Suggestion.—The sanitary problems connected with our new relations with the islands of Cuba and the acquisition of Puerto Rico are no less important than those relating to commerce, finance, and administration.—President McKinley, in his Message to Congress.

The Subsidence of the City of San Francisco.—According to the newspapers of San Francisco, that city is sinking into the sea. Surveys made by the city authorities are said to have shown that the average rate of subsidence is two inches a year. The engineers explain the phenomenon by the condition of the ground on which the city is built—sand mixed with decayed vegetable matter extending to a depth of at least sixty feet—and believe that the compression or escape of soil this under the heavy load of buildings which have been placed on it is sufficient to account for the subsidence. Whether the spongy soil settles by compression or escapes into the sea remains to be determined.—*The Sanitarian.*

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Original Articles.

SOME POINTS IN THE TREATMENT OF APPENDICITIS WHEN PUS IS PRESENT.[1]

BY GEORGE WOOLSEY, M.D.,

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By confining ourselves to the above class of cases, we may omit the discussion of the much-vexed question of the propriety of or the necessity for operation in the early stage of appendicitis—one of the most difficult problems in surgery. But even if we admit that cases in which pus is present should be subjected to operation, all will not agree as to the presence of pus in any given case. The time since the onset of the attack is no absolute criterion as to the presence of pus. In one case pus or sero-pus will form in twenty-four hours or even less; in another case it may require several days. When after twenty-four, thirty-six, or forty-eight hours, depending upon the acuteness of the attack, the symptoms are not subsiding, but are progressive, we may infer that pus is forming or going to form.

The various symptoms have different values in deciding this question. In general if, after the above interval, the pulse remains rapid or increases in rapidity to 115 or 120; if the local tenderness and muscular rigidity persist or increase, or a distinct tumor develops; if the patient looks sallow and has a general sense of weakness—operation is indicated, and we may expect to find pus within two or three days of the commencement of the attack. Persistent vomiting, high temperature, chills, and other symptoms may or may not be present, and in successive cases the symptoms vary very widely. I have not infrequently seen large appendicular abscesses with practically no rise of temperature, and sometimes without a rapid pulse.

In general, we may say that the cases to which we have restricted ourselves are those that have not done well and are not improving, but progressing.

If pus has formed in an attack of appendicitis, it should be removed at the earliest possible moment. We cannot be sure that it is securely walled off, or, if it is, how long it will remain so. In every operation for appendicitis the first consideration is to save the patient's life; the second, to provide that the means employed to save life entail no permanent ill effects. Of these ill effects which may follow the life-saving operation, ventral hernia is one of the most common.

The frequency of ventral hernia following operations for appendicitis is shown in the report of Coley,[2] that at the Hospital for the Ruptured and Crippled fifty-five cases of such herniæ had been observed from April, 1895, to March, 1897. In these cases "there was evidence that in many instances the wound was improperly closed," and "perhaps in a large majority of the cases there had evidently been suppuration during the healing of the wound."

Post-operative ventral herniæ follow operations performed during an acute attack of appendicitis, when pus is present, far more often than when done in the quiescent state. In fact, post-operative hernia should never follow an operation done for the removal of the appendix in the quiescent state, for we have an almost ideal operation in such cases, whose essential feature is aimed to avoid this accident. I refer to McBurney's intermuscular or muscle-splitting method.

With the same object in view the so-called inch-and-a-half incision was proposed, but it is in my judgment not to be recommended, as it introduces one danger, insufficient access, to obviate another, post-operative hernia. Even with the full length McBurney incision, I lately found considerable difficulty in removing a long appendix closely adherent throughout to the parietal peritoneum and extending down to the bottom of the pelvis.

Vertical incisions of any sort—even the ingenious trap-door incision of Jalaguier and Kammerer, though it is fairly secure against hernia—are objectionable, in my judgment, as they necessarily divide one or more of the nerves supplying the lower part of the abdominal wall, and so weaken it as to predispose it to hernia. Moreover, the oblique McBurney's incision avoids this danger, with its tendency to hernia.

The frequency of ventral hernia following operations for appendicitis when pus is present is recognized by all, and is due to the fact that the wound, left partly or wholly open for drainage, heals partly or wholly by granulation. In operations for the radical cure of hernia we are familiar with the fact that recurrence of the hernia is far more common when the wound suppurates, and does not heal by primary union.

Numerous devices are adopted in operations for appendicitis when pus is present, to obviate the weakening of the scar in the abdominal wall, due to the imperfect method of healing.

In an interesting paper by J. G. Clark, in the Johns Hopkins Hospital Reports,[1] after describing the action and function of the peritoneum, the reasons are described which led Kelly to give up drainage in most operations on pus tubes and other forms of pelvic suppuration.

Clark points out: (1) That drainage of the pelvis is often not effective in removing fluids and infectious matter; (2) that the normal peritoneal currents toward the diaphragm are disturbed or retarded by drainage; (3) that the reactive inflammation about the drain limits the action of the peritoneum, cutting it off from participating in absorption; (4) that capillary drainage of gauze is often delusive, the meshes becoming filled by a coagulated serous or bloody fluid; (5) that observations by Robb and others have shown that infection is often conveyed from without by means of drains; (6) that pus in the pelvis rarely contains living organisms at the time of operation (staphylococci or streptococci in only two to four per cent. of cases); (7) that post-operative hernia is due to drainage in at least eight per cent. of cases in which an extensive drain was used.

In place of drainage he recommends complete closure of the wound and the employment of postural

[1] Read before the New York Clinical Society, January 27, 1899.

[2] Annals of Surgery, August, 1897, p. 226.

[1] Vol. vii., Nos. 1 and 2.

drainage, elevating the pelvis, and favoring the natural peritoneal currents toward the diaphragm.

Although the statistics of cases treated in this way compare more than favorably with those in which drainage was employed, we cannot adopt this ideal method in cases of appendicitis when pus is present, for many of the premises do not hold true.

Gauze drainage of the region of the appendix is far more effective than that of the pelvis, as its depth from the surface is much less. Furthermore, the pus in cases of appendicitis is not sterile, and although the healthy peritoneum is capable of safely disposing of large numbers of pyogenic bacteria, we would be justified in but few if any cases in putting the peritoneum to the test. Also the reactive inflammation about the drain is just what we want to shut off the appendiceal area from the rest of the peritoneal cavity.

But, as Clark says, "a distinct objection to drainage in the appendiceal area is the liability of post-operative hernia occurring in its tract." How, if we cannot avoid, can we minimize this danger?

In cases of appendicitis when pus is present, we need more room and freer access to work with safety. Hence a very short incision is out of the question, and the majority of surgeons at present consider that the McBurney muscle-splitting incision affords too little room for safety in pus cases. Its proposer limited its use to cases operated between attacks, but Stimson employed it in pus cases and now uses it almost exclusively in such cases. Abbe, Briddon, and others have also reported its use satisfactorily in pus cases. If need be, more space may be gained by incising the aponeurosis of the internal oblique and transversalis, at the inner end of the wound, vertically upward along the lateral border of the rectus muscle. By varying the pull on the retractors, a greater area can be exposed than one would imagine. Adequate drainage may be obtained in spite of the natural tendency of the edges of the wound to come together. This method is likely to find more general use in pus cases among those who are thoroughly familiar with it in simple cases. In spite of drainage it will probably give excellent results in preventing post-operative hernia.

The increased safety of a larger exposure by the ordinary oblique incision will continue to commend it to many. How, then, can we lessen the chances of hernia after drainage through this incision?

If we examine the many recent monographs and articles on appendicitis, we find advocated the use of provisional sutures or of secondary sutures. These sutures are to be tied when "septic conditions have passed away and healthy granulations make their appearance," or when no pus is present. These are rather vague directions, and might lead to the formation of an abscess after the sutures were tied, if a granulating cavity exists beneath; though when care is exercised it is an excellent plan. Many seem to leave the wound widely open at first. McBurney says,[1] when an abscess is present, "it is certainly true that the life of the patient is safer when the wound is left open and abundant gauze drainage is made use of, than it is when drainage is limited and the wound too much closed."

For myself, I prefer to close the wound by tier sutures, except for a narrow opening for drainage, which varies in position with the relative position of the abscess. I would go a step further than McBurney when he says,[2] "Close suture of part of the wound is permissible in some cases," and agree with Fowler[2] in his statement that "the primary incision should be closed as much as possible consistent with free drainage and the easy removal of the drains." In this way the greater part of the scar, healing by primary union, is strong, and tends to ensure the patient against subsequent hernia.

The method I have employed for some time past has given such admirable immediate results that we can predict that the remote results, as far as hernia is concerned, are likely to be good.

After thoroughly cleaning the abscess cavity, without irrigation, it is lightly packed with gauze, one end of which is brought out through the small opening mentioned above. When the gauze passes through the narrow opening left in the abdominal wound, it is wrapped around with rubber tissue, which forms a kind of collar. This prevents the gauze from sticking to the edge of the wound, and thus allows it to be removed early, which is done on the second day.

The early removal of the gauze is a most important point, for it allows the walls of the cavity occupied by the gauze to fall together, from the intra-abdominal pressure, before they have become so firm and rigid that a cavity would be left which must fill in by granulation.

The gauze is replaced by a smaller, shorter gauze drain for a day or two longer, or at once by a drain of rubber tissue folded on itself like a fan, which in any case is used after the gauze is eventually removed. This is effective and easily introduced and removed. It, in turn, is removed in a few days when the discharge lessens, and the sinus may then be injected with a sterilized vaseline ointment of five-per-cent. boric acid and dermatol. In the mean time the rest of the wound has invariably healed by primary union, and in a few days, before the three weeks are up during which we keep such patients in bed, the entire wound has healed, leaving a thin, firm scar. Some statistics from nine cases of appendicitis complicated by pus, operated on according to this method by me at Bellevue Hospital in January, February, and March, 1898, are appended. Nothing particularly original is claimed for the method.

Personally I am in favor of removing the appendix when possible, consistent with safety. For apart from the danger of a subsequent attack, which is illustrated by one of the nine cases referred to, the sinus is likely to be much slower in closing if the appendix remains, and the more slowly the sinus closes the less perfect is the scar and the greater the danger of hernia.

My own experience is that when pus is present the appendix lies up behind or outside of the cæcum in a large proportion of cases; so often, in fact, as compared with other cases of appendicitis in which pus does not form and we remove the appendix after the attack, that I have been led to believe that there must be some causative connection between the position of the appendix and the progressive type of the case, ending in the formation of pus.

When the appendix lies behind or outside of the cæcum, its removal, though perhaps technically difficult, is safe as far as making a second opening between the abscess and peritoneal cavities is concerned. In fact, as we remove the appendix only after the abscess cavity is thoroughly cleaned, the danger of rupturing the partition wall between the abscess and the peritoneal cavity seems to me to be exaggerated, as we can readily close it by the packing, and I have seen no ill effects follow.

In removing a very adherent appendix, I have sometimes found it helpful to shell it out from within its thickened peritoneal covering, which is usually easily done, removing the infected and infectious tube and its contents and leaving its peritoneal covering, which avoids the possible danger of another opening between the abscess and the peritoneal cavity. The resulting oozing can generally be checked by pressure. The average age of the nine patients referred to was twenty

[1] Dennis: "System of Surgery," vol. iv. (Appendicitis).
[2] *Ibid.*

eight years, and the age varied between sixteen and forty years. There were eight men and one woman. In four cases it was the first attack, in one the second, in one the third, and in two this point was not noted in the history. The time of admission after the commencement of the attack averaged three and four-fifths days, and varied between two and six days, excluding one case of tuberculous disease of the neighborhood of the appendix, in which the disease had existed thirty days. The operation was done from two to twenty-four hours after admission. All cases presented a tumor in the right iliac fossa at the time of operation.

To determine the efficiency of the method of treatment in guarding against subsequent hernia by securing early closure of the entire wound, a condition as near as possible to primary union when drainage is employed, it is important to note the time of this closure after operation. Omitting the case of tuberculous disease, which took thirty-eight days, and one case in which the appendix was not removed owing to the general condition of the patient, the time required for complete closure averaged fifteen and one-half days and ranged from twelve to twenty-one days. In all these cases the wound, exclusive of the drainage opening, healed by primary union. Two cases required twenty-one days for complete healing of the wound. In one of these two cases only two inches of the appendix was removed; the proximal three-fourths to one inch was left, owing to such firm connection with the cæcum that it could not be removed without endangering the integrity of the cæcal wall. In the other case there was a previous operation for appendical abscess six months before by a surgeon who is a strong advocate of not removing the appendix in appendical abscess. In this case there was also a ventral hernia in the wound. Such cases, which occur not very infrequently, in addition to other reasons given above, strengthen me in the opinion that, when it is possible and consistent with safety, it is wise to remove the appendix. The only patient in whom this was not done, on account of his general condition at the time of operation, left the hospital after several weeks with a sinus still open. The tuberculous case presented a localized tuberculous peritonitis which was apparently cured. It has been already reported. The hospital records for the previous seven years are too scanty to indicate the time occupied in complete healing of the wound in similar cases operated upon. I can only say that the time was decidedly longer. Of course it is realized that the above cases are too few in number to afford a basis for accurate statistics, but are sufficient to indicate only the value of the method.

In conclusion the following facts may be emphasized:

I. In operations for appendicitis when pus is present, the first consideration is the life of the patient, the second the avoidance of disagreeable sequelæ, of which ventral hernia is the most common and hence the most serious.

II. Post-operative ventral hernia may be largely avoided in spite of the necessary use of drainage, (1) by the use of the McBurney muscle-splitting incision; (2) by suturing most of the wound, and (*a*) the use of provisional or secondary sutures in the part left open for drainage, or (*b*) the early removal of the gauze drain, facilitated by the use of a rubber-tissue collar where it passes through the wound, allowing the walls of the cavity and sinus to become approximated, thus avoiding the necessity of filling up by granulations.

III. By the latter method complete and firm wound union has been obtained in fifteen and one-half days on the average, and in all ordinary cases inside of three weeks. To this end the appendix should be removed if possible.

IV. The relative frequency of hernia following pus cases with drainage is another argument for early operation in appendicitis. It is also an answer to the charge that surgeons are too eager to operate for appendicitis, not infrequently expressed by physicians who would defer operation until the chance of success is diminished and the danger of post-operative hernia is increased.

NEPHRITIS COMPLICATING ACUTE OR SUBACUTE GASTRO-ENTERITIS OF INFANTS AND CHILDREN. ITS SYMPTOMATOLOGY, PROGNOSIS, AND TREATMENT.

By HENRY KOPLIK, M.D.,

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THE etiology of the acute and subacute intestinal disorders of infancy and childhood has received much light from the investigations of bacteriologists within recent years. In fact, it may be said that in a general and special way the bacteriological investigations have been far in advance of research in other fields, such as gross pathology. The work of Escherich, Booker, Fischl, Czerny, and Moser has shown very pointedly that intestinal disorders are not a simple entity in infancy. Though these disorders are more frequent in the summer months, the time has passed for grouping all diarrhœas under the heading of summer complaint. We find to-day that the intestinal disorders vary not only in intensity, but in etiology and also in their course, just as do cases of measles or scarlatina. Some forms of intestinal disorders are simple and run a very simple course, and get well with a vast variety of measures. There are other forms which run an entirely different course, which develop lung and kidney complications, distinctly proven to be due to direct infection from the gut. It was only recently that in Escherich's clinic the hope was raised that we could at the bedside pick out in advance these severe or so-called septic cases of intestinal disorder.

In Escherich's clinic two Americans, Hirsch and Libman, described a certain set of diarrhœas of infancy in which the stools contained streptococci of a peculiarly virulent character. In these cases the bacillus coli and lactis aërogenes disappeared almost entirely from the evacuations, and were replaced by streptococci of a certain kind. These investigations tended only to confirm the very important discoveries of Booker, who described a whole set of very virulent and fatal diarrhœas of the summer months occurring in infants in which he found streptococci, and which he also describes as being found in lesions in the mucous membrane of the gut and in the kidney and other organs. I have been for a long time giving much thought to the purely clinical side of this question; that is, whether we could pick out early in the disease these streptococcus cases. I have met the cases described by Booker, Escherich, Hirsch, and Libman, but they form a very small percentage of the whole number of cases of intestinal diarrhœa—as, indeed, Booker in one part of his work says. I mean that the cases of intestinal diarrhœa in which only streptococci are found in the stools, or streptococci of a special class, and in which these exist to the exclusion of the normal fecal bacteria, are few, though certainly a fixed, severe set of cases. I found also that these cases were not always of such severity as one would be led to suppose from the writings of Hirsch and Libman, though these authors come to no positive conclusions. In other words, among the cases in which the Hirsch and Libman streptococci, the flattened streptococcal element as described by these authors, were found, some one or two were exceedingly mild

in their course and got well, and of several severe streptococcal cases I remember only one fatal one. On the other hand, some of the severer septic forms of infantile diarrhœa were those in which I found in the examination of the stools few streptococci. So that, though the examination of the movements may in a special set of select cases give a clew to the character of an intestinal infection, we find no clew in some very severe forms. It must, therefore, be that in some cases of intestinal diarrhœas the absorption of toxins or invasion of the mucous membrane of the gut by bacteria, and thereby the infection of the whole system, may proceed from certain foci of infection, established quite early high in the small gut and kept alive by favorable conditions without the appearance in the stools of immense quantities of one bacterial form, as is seen in the streptococcus movements. In other words, we cannot say that any one set of bacteria in a given movement is the cause of the severe forms of intestinal disorders—that is, the forms complicated by pneumonias of an acute or subacute variety, or by a nephritis. The name gastro-intestinal sepsis has been proposed for these severe forms of diarrhœa in infants in which the prognosis is made much more serious by the above complications. I personally think it is unfortunate that the term sepsis has been adopted and so far found favor. Infection would describe the state much better, reserving the term sepsis in the Koch sense. An infant has a mild or severe form of diarrhœa; this lasts a few days; and added to these frequent movements from the intestines we have signs of pneumonia in one or both lungs, with or without a nephritis of a threatening type. Again, no pneumonia may ever develop, but the infection from the gut spends itself on the kidneys, and early in the disease we find the infant suffering not only from its diarrhœa, but from a complication in the kidneys which adds certain distinct and, as I will show, characteristic symptoms to the picture of the disease. It is to this latter set of cases that I have given particular attention. I have been astonished at the frequency of this complication of intestinal disorder of infancy. I have also in the severe cases of intestinal diarrhœas found that the nephritis gave distinct symptoms, which could be directly attributed to the existence of disturbance of the functions of the kidney. The success of treatment must depend on the recognition of the above facts. The French writers assert that the kidney complication gives no picture of its own in these cases. I will try to show that some symptoms in these intestinal disorders may be fairly labelled as nephritic, and that they have hitherto escaped full recognition. It will be seen from the further presentation of this subject that the presence of nephritis, though talked of in the literature of late, is much more frequent than has been hitherto supposed.

Symptoms.—The symptoms of nephritis complicating gastro-enteritis, acute or subacute, can be grouped into two sets—the first being general, and in a sense inseparable from the primary disease; the second being, I think, directly traceable to the infection of the kidney. In a gastro-enteritis in which the kidney is only slightly involved, we may find nothing except a slight albuminuria. The symptoms which in the severe cases I have so constantly met with are absent. The patient in the severer forms of nephritis is constantly restless, and this restlessness might be directly traced to the disturbance of the function of the kidney —a uræmic restlessness. The intervals of restlessness could be in most cases found to be relieved by the periods of a sort of stupor, the so-called hydrocephaloid of the older authors, which, I think, is also distinctly nephritic as well as toxic.

Constant Vomiting.—Vomiting in the milder forms of gastro-enteritis is most effectually checked by one or at most two irrigations of the stomach. This is not so in the severer forms of infection, and though some authors would be inclined to refer the continuance of vomiting to a general toxæmia, I have often insisted that in these cases the toxæmia had spent itself mostly in a disturbance of the functions of the kidney, and thus the vomiting was a manifestation of uræmia. In these cases of persistent vomiting we must beware of falling into error, lest we find too late that the vomiting is due to other conditions, such as a secondary intussusception of the gut. But assuming that we have carefully ruled out other causes, I have found cases of gastro-enteritis with total or partial suppression of the urine, in which nothing had been taken into the stomach for twenty-four or forty-eight hours but albumin water, and in which irrigation of the stomach afforded little or no relief. The first mark of improvement in these cases dates from the cessation, not of the diarrhœa, but the vomiting. Another symptom which is present in marked nephritic infection is a form of œdema of the skin and subcutaneous structures. In all severe cases of gastro-enteritis there is a steady and marked emaciation, but after this has passed a certain line we find that the structures of the thighs, especially at the inner part, though wrinkled and showing marked emaciation, can be distinctly pitted on pressure. The structures of the anterior part of the leg show this sign also, and at times the structure on the dorsum of the foot will show the same sign, but in a more marked degree. In the latter situation the skin is at times very puffy. And let me say here, I do not refer to any forms of hydræmia or scleroma which may precede death in any severe exhausting disease, but an œdema which disappears as the infant improves. There is, in addition to the above, the impression of a doughy nature to the œdema. In other words, it is not the same œdema to be found in the adult suffering from nephritis. It is not a general anasarca. It is not marked, and we must press hard to elicit pitting in some cases.

Urine.—The signs referable to the urine in the milder cases of gastro-enteritis are very slight. It is only by careful examination that in most cases we find what is called a trace or a marked reaction of albumin. These are the cases which not only need no attention, but which for the vast majority of physicians do not exist.

In the severe cases in which I have described a distinct set of symptoms, we find a more or less complete suppression in the quantity of urine. The mother will, even without previous questioning, first tell the physician that the babe passes little urine. A catheter introduced into the bladder will evacuate a few drops or perhaps a drachm of very concentrated urine. This urine, as soon as it is collected, will deposit urates of ammonium in large, palpable quantities, and examination shows reaction for albumin, casts of all kinds in abundance, also leucocytes and blood and renal epithelium.

A very peculiar condition in the urine is that, though the urine is concentrated and may contain casts of all kinds, hyaline, epithelial, or blood casts, also leucocytes, the amount of albumin, as shown by the ordinary tests of heat and acid, and acetic acid and ferrocyanide of potassium, is not great, nor so great, for example, as is found in suppression in the adult. I am unable to explain this, and leave it for others, unless the reason is that certain substances of a chemical nature in the urine of these patients may prevent full reaction.

I will now briefly record the histories of twenty-six cases of gastro-enteritis and the condition of the kidneys:

Case I.—Female infant, ten months old, suffering for six days from gastro-enteritis, vomiting, and in-

cessant diarrhœa. Condition bad; bottle-fed infant. Enteroclysis was done and stomach was washed out. Elevated temperature and great exhaustion were present. Urine: specific gravity, 1.010; very sparse, and albumin marked; very abundant granular and epithelial casts and ammonium urates present when freshly voided; the casts, being very granular, give the impression of being studded with urates.

Case II.—Female infant, aged six months; gastro-enteritis; one day sick; vomiting and diarrhœa. Condition excellent. Urine: trace of albumin; hyaline and epithelial casts.

Case III.—Female infant, aged six months; bottle fed; sick one day; gastro-enteritis. Condition good. Urine: trace of albumin; hyaline and epithelial casts.

Case IV.—Female child, aged two years; sick four days; pneumonia in lower left lobe of lung; quite ill. Urine: albumin present; hyaline and epithelial casts.

Case V.—Male infant, one year old; bottle fed; sick four days with a green diarrhœa; no vomiting. Condition good. Urine: albumin present, and granular casts.

Case VI.—Male infant, one year old; acute gastro-enteritis, one day's duration. Condition good. Urine, trace of albumin, not enough for casts.

Case VII.—Female infant, six months old, has a simple diarrhœa. Urine shows nothing abnormal.

Case VIII.—Female infant, nine months old, has a severe gastro-enteritis; no œdema. Urine shows nothing abnormal.

Case IX.—Female infant, aged one year and five months; has a mild, simple diarrhœa; no œdema. Urine, nothing abnormal.

Case X.—Infant, one year old; has had gastro-enteritis at various times for a few weeks; now has an exacerbation; no signs of nephritis.

Case XI.—Female infant, aged ten months; has an acute gastro-enteritis of four days' duration. The general condition is good. Urine: albumin present; hyaline and epithelial casts.

Case XII.—Male infant, nine months old; has suffered from recurrent attacks of gastro-enteritis and has lost some weight; œdema present. Urine shows hyaline, granular casts and trace of albumin.

Case XIII.—Female infant, ten months old; sick four days with gastro-enteritis; has a febrile movement and convulsion; œdema of lower extremities. Urine: partial suppression; hyaline and epithelial casts abundant.

Case XIV.—Male infant, aged seven months; has been ill only one day and is in bad condition. There is no œdema. Urine: albumin present; hyaline and epithelial casts.

Case XV.—Female infant, four months old; sick three weeks with recurrent attacks of gastro-enteritis. Urine contains trace of albumin, but no casts.

Case XVI.—Male infant, nine months old; sick twenty-four hours with vomiting and diarrhœa. Urine contains albumin, hyaline, granular, and epithelial casts.

Case XVII.—Female infant, ten months old; has been ill for four days with gastro-enteritis; general state bad; œdema of lower extremities and hands. Urine shows albumin, epithelial, granular, and hyaline casts.

Case XVIII.—Female infant, sixteen months old, has had acute gastro-enteritis for two days; general condition is excellent; no œdema. Urine shows albumin, but no casts.

Case XIX.—Female infant, five months old; breast fed; is ill with a diarrhœa one week; no œdema. Urine contains albumin, hyaline and epithelial casts.

Case XX.—Female infant, seven months old; has gastro-enteritis only one day; some rise of temperature. Urine shows trace of albumin.

Case XXI.—Female infant, seven months old; has acute gastro-enteritis four days; partial suppression of urine; much prostration. Urine contains ammonium urates, hyaline and epithelial casts, and albumin.

Case XXII.—Male infant, eight months old; has been ill with gastro-enteritis eight days; there are pallor and slight œdema; general condition good. Urine shows albumin, but no casts.

Case XXIII.—Female infant, three months old; has atrophic appearance; is ill one month with gastro-enteritis; has a broncho-pneumonia in the upper part of the left lung; has some anasarca. Urine contains albumin and epithelial casts.

Case XXIV.—Male infant, fourteen months old; has intestinal diarrhœa three months; œdema of the hands and feet; general state good. Stools show streptococci. Urine, which at first showed a trace of albumin and no casts, in a day was found to be much diminished and finally suppressed, and contained hyaline, epithelial, and blood casts, and leucocytes. The patient recovered.

Case XXV.—Female infant, nine months old; has acute gastro-enteritis and partial suppression of urine; has a lardaceous œdema and cerebral symptoms. Urine contains albumin and casts of all kinds, and blood.

From the above it will be seen that of twenty-five consecutive cases of gastro-enteritis, all but four showed a more or less severe involvement of the kidney. In all the cases in which the kidney was involved there was albuminuria, and the majority of the cases showed the presence of casts in the urine. In Cases XXIV. and XXV. especially, there were blood and blood casts, and in spite of this the children made a good recovery. In only one of the cases we found the Hirsch and Libman streptococci in the movements, and this patient recovered.

It will also be seen from the cases which are cited in this paper that the nephritis sometimes appears early, sometimes late in the gastro-enteritis; that its severity is not dependent on the duration of the primary disorder; a severe suppression may appear on the first days of a gastro-enteritis; that in some of the recorded cases in which recovery finally occurred, the suppression was all but complete.

The Nature of this Nephritis in these cases is as yet little studied from a pathological standpoint. The nephritis is scarcely identical with the acute nephritis which is found in adults, nor clinically does it act like that form of nephritis which is found to complicate scarlet fever or measles in children. I have come to this conclusion from a study in my cases of the clinical histories and of the pathological find in some of Booker's cases. Although Booker does not discuss the nephritis in these cases, in his protocols, which are quite exhaustive, we find in two or more instances a description of the pathological find in the kidneys. He says there is "epithelial necrosis" in the convoluted and irregular tubules, and the tubules show hyaline casts. He mentions also the presence in the kidney of streptococci and bacterium coli and staphylococci. In view of the peculiar physical signs and the rapid improvement of an almost complete suppression, without leaving behind any appreciable lesion of the kidney, as evinced by albumin or casts in the urine, it is seen we are not dealing with a nephritis in the ordinary, but in a special sense. It seems that in these cases there is an immense loss of fluid from the system; the toxins circulating in the different organs are thus placed in contact with the delicate cell structures in concentrated form. As soon as the water taken from the system is partially supplied, these poisons are washed from the organs and the latter have an opportunity to resume their functions and are restored to the normal. This is a unique explana-

tion; it is theoretical and purely clinical, and certainly needs the support of physiological experiment. But it is the best I can give.

Prognosis.—Though the lethal ending of many cases of gastro-enteritis, which are not necessarily to be labelled as cholera infantum, has always appeared to me to be hastened by the kidney complication and the methods of treatment directed to the individual cases, the general prognosis of the vast number of these cases is good, if the physician will not apply modes of treatment to the gastro-enteritis which will react and intensify the crippled state of the kidneys. With a treatment for the gastro-enteritis which I will try to outline, and which has been followed by me with great success, I think the cases can finally be brought to a condition *quo ante*. It is, in fact, astonishing to see how an infant can be rescued from the very severest toxæmia and intestinal infection of the kidneys, the latter secreting but few drops of urine every few hours.

Treatment.—The treatment and management of these cases is practically the management of all severe forms of gastro-enteritis. We should never lose sight of the fact that opium in any form, mercury, coal-tar products, designed to disinfect the intestinal tract, like benzol, salol, carbolic acid, guaiacol, are ruinous; they only tend to deepen the toxæmia, and by irritating the kidney intensify the functional disturbance in that organ.

In all these cases the suppression of urine, the rapid emaciation, are manifestly the result of the withdrawal from the tissues and blood of a vast amount of the fluid elements. I grant that the irritation of the kidney elements is due to infectious material circulating in the blood, but in these cases also the concentration of the toxins, as I have said, and thereby the total suppression of the urine, may be favored by their presence in concentration due to the great loss to the system of its watery elements. The full and free supply of water through all the possible channels is one of the greatest means of placing these cases on a convalescent basis.

Stomach washings should be daily employed, and also rectal irrigations. In the latter I have employed Cantani's physiological solution.[1] This solution was also made use of in the hypodermoclysis. For making a rectal irrigation in the infant in the severe cases cited, I employ an adult size stiff-rubber rectal tube. A small catheter is worse than useless. It doubles up on introduction in the lower rectum. The child is completely undressed, shielded with a blanket from exposure, and the buttocks are raised high. The rectal tube is introduced high up the gut, and a quart or more of the above solution is thrown into the rectum and allowed to flow out at intervals, so as to clear out what little fecal matter there may be in the lower gut. The irrigation is so managed that a large amount of fluid is left in the gut after the withdrawal of the tube; in other words, we make an effective enteroclysis. We do this daily. In the very severe cases I introduced daily 200 c.c. or more of sterilized physiological salt solution under the skin of the abdomen (hypodermoclysis). The medical treatment is confined in these cases to the exhibition by the stomach of bismuth in large doses.

In all cases the milk is suspended, artificial or breast, and the child fed on albumin water or beef juice mixed with sterilized barley water. Inasmuch as the barley may be in cases mouldy, I have lately prohibited its use, as it seemed in some cases to aggravate symptoms. The so-called acorn cocoa has been a useful food substitute in many cases.

If you will stop to study the above, you will see that I have only outlined the treatment of severe gastro-enteritis, but in doing so I have found a defence for the application of these measures in the state of the kidneys; and I have also shown how the use of drugs, formerly much in vogue, must finally injure these patients. Take, for example, the simple matter of opium. I have always warned against its use in any form in these cases. The physician would defend its use on the ground that it quiets the patient. This is so, but the quiet thus produced is a stupor analogous to the stupor in cases of uræmia, in which too much morphine has been made use of. Such a case I had occasion to see lately in consultation. I warned against opium. It was used, and the babe never roused itself from the stupor which, I believe, was brought on by its use, and which, I think, was intensified on account of the vulnerable state of the kidneys.

Sublimate, also, even in smallest doses, is a dangerous drug in these cases of gastro-enteritis, as also calomel in repeated doses of one-tenth grain, such a favorite with many physicians. I wish, in closing, to speak of the beneficial effects of warm baths with massage in the bath, and the cautious use of strychnine to stimulate the heart. I do not use alcoholics in these cases.

In thus evolving the treatment for these severe forms of gastro-enteritis, I have shown how step by step scientific medicine has advanced to protect the little patients from the injurious effects of the former indiscriminate and blind use of drugs of all kinds and most diverse action.

66 East Fifty-eighth Street.

[1] Sterilized water, 1,000; Natrium chloratum, 4.00; Natrium carbonicum, 3.00; at a temperature of 38° to 40° C.

PROLONGED CHLORAL SLEEP IN THE TREATMENT OF CHOREA.

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Chorea is a neurosis characterized by involuntary, inco-ordinate, spasmodic movements of muscles or groups of muscles, in one or several parts of the body. These movements, in a majority of cases, are not noticeable during sleep.

The causes of chorea are still doubtful, but its symptoms are well known. The true pathology of chorea is unknown as yet. Barbour maintains that in chorea there is an altered state of nutrition of the motor cells of the cerebro-spinal axis, by reason of which they lose in part their capacity for storing nerve force, and discharge themselves prematurely; Money encountered capillary emboli in the optic thalamus; Flechsig found hyaline changes in the two anterior divisions of the lenticular nucleus; Dana found an intense cerebral and spinal hyperæmia, dilatation of the vessels, small hemorrhages, spots of softening, and an infiltration of the perivascular spaces with round cells; Carrod suggests the possibility that chorea is due to an overgrowth of connective tissue in the nerve centres; Golgi found calcification of the Purkinjé cells of the cerebellum; and Elischer saw hyaline degeneration in the nerve cells of the central ganglia. We cannot say with any degree of assurance what is really the cause of this disease. As so many observers have found different changes in different localities of the central nervous system, it may be taken for granted that the changes mentioned above are accidental, individual changes, which have little or nothing to do with the clinical symptoms of chorea; but there is a consensus of opinion regarding the general aspect of the disease, that it is an affection of the whole central nervous system, and especially a nutritive and func-

tional disturbance of the higher nerve elements. The average duration of chorea is about ten weeks; sixty to ninety days from the beginning of the attack to its entire disappearance. Patients afflicted with idiopathic chorea get well in a majority of cases without any medical treatment whatsoever, but experience has taught us that certain procedures have the power to abridge the duration of the disease.

Among the many drugs that have been employed, undoubtedly the most important is arsenic in the form recommended by Romberg. Salicylate of physostigmine, enormous doses of carbonate of iron, chloroform, narcotics, many other drugs, as well as cold-water treatment, galvanization of the brain and spine, and change of location, have been used with more or less good results. Then, in acute chorea, hygienic measures and changed surroundings, or with one or several drugs in combination, will cause a cessation of the disease. But in a small minority of cases all those means mentioned above do not effect a cure, and the disease lasts for years. The patients become exhausted, anæmic, and arrested in their physical development, and even their intelligence suffers. What shall we do with these cases?

In the treatment of neurasthenic patients I have for some years employed the rest cure of Weir Mitchell, enforced with the administration of chloral hydrate in doses sufficient to keep them in a somnolent condition. During the treatment of these patients I have observed that their appetite increases, digestion and assimilation improve, and as there is no other kind of energy expended, a rapid gain in weight and strength, and consequently a remarkable abating of nervousness and irritability, result. Furthermore, taking into consideration that choreic movements generally cease during sleep, and that for some time after a night's rest the choreic movements are weaker, and grow stronger only as the day grows older, I came to the following conclusions:

Given a long rest during sleep, and the time of so resting being employed in rapidly strengthening the body, we might have a twofold result: First, the nutrition of the nervous system being improved, the premature discharges of nerve impulses to the muscles may cease; and second, the impressions in the nerve centres caused by the centripetal impulses emanating from the agitated muscles may grow weaker and weaker, the longer those twitching muscles are at rest, and finally disappear. During sleep, be it natural or artificial, the whole brain and nervous system, with the exception of those parts that superintend the vegetal functions of the body, are at rest. There is no part that need expend more energy than another; therefore an equalization of vital force in the nerve centres is possible, that could not take place if the patient was awake. Though he is in bed and perfectly isolated, he cannot help performing mental work, as thinking, hearing, seeing, etc., which requires the expenditure of as much cell energy as the physical work does, and perhaps more. And now, if during this nearly perfect rest we are able to furnish the means wherewith this equalization of cell energy can be effected—nay, more, if a reserve force can be accumulated, we have accomplished our purpose.

And here, again, sleep is preferable to the waking condition. When the patient is awake, we have to contend agalnst his tastes and his discriminations against such foods as we think it necessary to give him, and the digestion in chorea being bad, we must and have to abstain absolutely from crowding food into his stomach. During a somnolent condition caused by chloral, we avoid these obstacles; and it does seem as if the chloral acted as an antifermentative and appetite-exciting remedy, for the patients under its continued influence crave for food and assimilate it more readily.

I have observed in the treatment of neurasthenic patients, with whom I have first employed the prolonged sleep by means of chloral hydrate, that small doses of chloral—gr. v.–x. every three or four hours—had no effect, did not diminish the restlessness, nor produce sleep. I had to resort to twice, nay, three times as large doses to have the desired effect, viz., a deeply somnolent condition. It seems that neurasthenic and to a greater extent choreic patients need more chloral to become quiet and sleepy than those suffering from other diseases. Still, in giving chloral one has to be very cautious in determining the necessary quantities to be used. It is good to give one single dose, say gr. x.–xv., first, and, if sleep is produced, to determine from the depth and duration of the sleep the dose of the drug and the time at which it is to be repeated. If the first dose does not cause sleep, increase the dose until sleep is produced, and determine as above. The sleep should be superficial enough to allow patients to respond when loudly spoken to, and still be sufficiently deep to keep them quiet.

One would raise the objection that chloral is a dangerous remedy, is a heart depressor, and that its continued use would weaken the heart; but by giving at the same time small doses of strychnine and watching the pulse and respiration, and immediately reducing the dose of the chloral if the former is greatly accelerated and the latter has become less frequent, I have, in the cases of neurasthenia treated by this method, never observed any bad effect whatsoever, either during the sleep or after the patients were awake.

I have treated with this prolonged sleep three cases of chronic chorea in all, with excellent results. These few cases I would deem insufficient to draw conclusions from, were it not that, in searching the literature of the treatment of chorea, after the success in these three cases, I found the following reports from England, France, and Germany:

Legros and Onimus' report having observed choreic movements in the dog abate entirely by injections of chloral (3.5 gm.) into the rectum.

Frerichs[2] gave 5 gm. of chloral in one dose to a young man of seventeen years, suffering with severe chorea, with nothing worse than a refreshing sleep resulting.

Bouchut[3] gave his patient, fourteen and one-half years of age, suffering with chronic chorea, 3 gm. of chloral daily for twenty-seven days—altogether 81 gm. The patient slept continuously during the whole time, and no ill after-effects of the chloral were noticeable. Improvement on the fifth day, and entire cure on the twenty-eighth day.

Verdallé[4] gave his eleven-year-old patient 90 gm. of chloral, in fifteen days. Improvement on the first day, cure on the sixteenth day of treatment.

Fr. Mosler,[5] of Greifswald, Germany, reports a case of acute chorea (girl, eighteen years of age), treated with chloral. He gave her gr. xxx. three or four times a day for fourteen days. The patient did not sleep continuously. Improvement on the seventh day. Absolute cure.

J. Bostock[6] reports a case of acute chorea treated with continuous inhalation of chloroform (eight days with occasional awakening and afterward sleeping continuously for thirty hours), with good results.

H. Charleton Bastian[7] reports that during twelve years he had treated with chloral nine to ten cases of

[1] "Recherches sur les mouvements choréiformes du chien," Comptes rendus de la Soc. de Biologie, tome 60, 1870, p. 1,046.
[2] Frick's Dissertation, 1871.
[3] Bull. Gén. du Thér., February, 1873.
[4] Bull. Gén. du Thér., March, 1873.
[5] Zeitsschrift für klinische Medicin, 1882, v., 614–617.
[6] Med. Chirurg. Journal, 1885, v., 175–181.
[7] Lancet, 1889, ii., pp. 55–57.

chronic chorea. He speaks very highly of the good results obtained, and concludes as follows: "I think this [chloral] treatment is especially applicable to a class of cases in which there is no fever and no heart disease, but where the movements are usually severe and continuous, and have so continued for months or years without abatement. The essential object of the treatment is to ensure the prolonged cessation of the unnatural movements by producing sleep. I attach little importance to any supposed curative influence of chloral itself over the chorea, except through the intervention of the sleep which it induces. This drug has been used simply because it was originally recommended for the purpose, I think by Bouchut, and because no evil effects have followed its use. Paraldehyde, which might otherwise be suitable, has too nauseous a taste to be employed; sulphonal might prove, however, to be quite as efficacious in procuring continuous sleep as chloral. The difficulty we have here to contend with is its great insolubility and slower action, which would probably involve a distinct lengthening of the interval of wakefulness on each repetition of the drug. Whichever medicine be used, however, the great object should be to give no more than is absolutely needed to maintain the continuous sleep; and therefore all accessory means—such as quietude, slightly darkening the room, the administration of fluid nourishment five or six times a day whenever the patient awakes, and the use of the bedpan—should be had recourse to. The period in which the patient is awake should as far as possible not exceed half an hour at a time."

W. T. Gairdner,[1] of Glasgow, had treated several cases by this method. In January, 1870, he treated a case of chorea the first time with chloral. He gave to a girl, eight years of age, gr. xx. of chloral three or four times a day for several days. Accidentally an overdose of gr. lx. was given. "The girl was unduly drowsy for twenty-four hours. All the spasms had absolutely disappeared. What was still more curious, this freedom from spasm continued even after she became fully awake and after every trace of the action of the drug had disappeared. Two months after the overdose we were able to record that the girl had had no return of the chorea, even in the slightest degree."

John A. Jeffries,[2] of Boston, reports several cases of chorea treated with sulphonal in small doses, not sufficient to cause sleep. Still, improvement was noticed in some.

B. Baskett,[3] of Bristol, published a case of chorea treated with chloral. The following is an abstract of his paper: "A. Y——, a young, well-nourished girl of fourteen years, was admitted into the Bristol General Hospital, August 24, 1891, for rheumatism accompanied by chorea. It was her first attack, was mainly right-sided, and presented no unusual features; it was attributed to excessive mental work. She improved with rest and treatment, viz., salicylate of sodium and subsequently Fowler's solution, until September 3d, when through a shock she fell into a state of furious excitement. The choreic movements became incessant and maniacal in character, so violent that she was constantly being thrown out of bed and had to be tied down. She seemed conscious all the while and to understand what was said; she tried to answer questions, but could not frame words. She was isolated, and at night chloral, at first combined with bromide of potassium, was given in gr. xv. doses of each, the arsenic being continued during the day. On the night of September 4th I gave her gr. xxx. of each, without producing sleep, and increased it to gr. xl. on the night of the 5th, with equally little effect. On September 6th, as she was becoming completely worn out and had no sleep since September 3d, it was obvious that if the movements were not in some way checked, she must sooner or later die. I gave her chloroform. She was kept under it for several hours, but when she came round she was as bad as ever. It was then determined to make a systematic attempt to chloralize her, and for the next four days doses of chloral were given at frequent intervals, according to the results produced. Temperature and pulse were carefully observed, she never being roused from sleep except to be fed, and if one dose was ineffectual another was given within the hour. The chloralization was begun on September 6th. She was kept under the influence of it for four days, the quantity required to produce the effect being altogether about gr. c. daily. The chloral had no perceptible effect on the temperature. By September 11th the violent movements had entirely disappeared. She had gained ground so far that the choreic movements were decidedly less marked than at the beginning. The probability is that if the chloral had been further pushed a few days more, she would have been entirely cured of the chorea."

Having the report of such excellent observers, I may be pardoned for drawing your attention to this mode of treating chronic chorea with an experience gained in but three cases. The history and course of treatment of the three cases are as follows:

Case I.—Mary R——, twelve years old, of German descent, born in Brooklyn, N. Y. Parents well, though mother is suffering occasionally with migraine. Two brothers and one sister well. Mother's brother had epilepsy and died of apoplexy at the age of twenty-eight. Patient at the age of six had measles, followed by pertussis. Was well then until the age of ten years and seven months, when the mother noticed in the usually lively child a certain listlessness and a great desire to sleep. This lasted a few weeks, when choreic movements appeared; first in the right arm, then in the course of a month or so extending to all the extremities and the face. The little girl became unruly at school, and lost all interest in study, so that by the advice of her teacher as well as of her physician she was taken away from school. She was treated by several physicians in succession, but the choreic movements increased in extent, and even prevented her from sleeping the whole night for a considerable time. She lost flesh and had trouble with her digestion. She was sent to the country; there she became somewhat stronger and the choreic movements ceased at night when she was sleeping, but in daytime grew to such a degree that she could not be quiet for a minute; her head jerked and she emitted at the same time a sound as if she would choke. The mouth and facial muscles twitched in a measure to make her eating, drinking, and speaking very difficult.

She was brought to me on the 9th day of September, 1896. She was emaciated and very anæmic. She could hardly answer on account of the twitching of the tongue and lips. Aside from exaggerated patellar reflexes, everything was normal. She could sleep about six or seven hours every night.

I observed her for about three weeks, giving her tonics. She did not improve. Knowing that she had been treated with various drugs for months without any result, I decided to put her into a prolonged sleep to last eight or ten days. September 30, 1896, I gave her gr. xv. of chloral hydrate and gr. $\frac{1}{100}$ of sulphate of strychnine every two hours, with directions to decrease the dose one-third as soon as sleep was induced, and to continue with that reduced dose, keeping her continually in a dozing condition, watching, of course, pulse, respiration, and temperature. I found, however, that this dose of chloral was inadequate to produce sleep, and seemed rather to excite

[1] Lancet, 1889, ii., pp. 205–208.
[2] Philadelphia Medical News, 1890, v. 56, pp. 275–277.
[3] Lancet, 1892, i., p. 796.

her than to quiet her. I then gave her gr. xx. every two hours, and as this did not seem to work either, I increased the quantity of chloral to gr. xxx. per dose, and this proved to be sufficient to produce a deeply somnolent condition. This somnolence attained, the dose of the chloral was immediately reduced to gr. xxv., and subsequently to gr. xx. every two, three, or four hours, according to the depth of sleep produced, and the latter quantity was given during the whole course of her sleep.

From the beginning her appetite began to improve, and from the fourth day on it became almost ravenous. She had to be given food every two hours, and then she asked for more. On the tenth day she had gained four and one-half pounds in weight; she was quiet. The pulse and respiration increased in frequency a little above normal, 95 and 20 respectively in a minute. Seeing that she daily grew stronger, I resolved to prolong the sleep for three weeks. She ate still more. She became steadily stronger and gained in weight. On the twenty-first day of treatment I began to reduce the quantity of chloral, giving it in gradually diminishing doses for four days more, and then I stopped it. On the twenty-fifth day of treatment she was thirteen pounds heavier than at the beginning. The average daily quantity of chloral given during the first twenty days was 8 gm. Altogether 160 gm. were given during the whole treatment. The choreic movements did not reappear after awakening. She looked blooming and was bright. A little more than two years have elapsed, and she is still well and developing.

Case II.—Joseph B——, nine years old. Family history negative, except that an older brother of his mother died in an insane asylum. When one and one-half years old he had scarlet fever and diphtheria. At two years of age he had convulsions lasting two and one-half hours, and which were attributed by the attending physician to digestive disturbances. Occasional colds excepted, he was entirely well up to seven years and five months, when the right arm showed choreic movements, for which medical advice was asked. No amelioration resulted. On the contrary, the twitching extended to the whole right side, the facial muscles of that side and the tongue included. Except a twitch now and then in the upper extremity, the left side was entirely free. At the same time a tendency to quarrel developed in the boy, with a desire to scratch whomsoever he quarrelled with. There was no disturbance of intellect, nor was there any laziness or unwillingness to study noticeable. He slept well at night, and was quiet during that time. Through the twitching of his mouth and tongue his speech as well as mastication and deglutition was interfered with, and he grew very anæmic.

He was brought to me March 18, 1897. His disease had lasted then more than one year and a half. March 20th he was put to bed, and, after ascertaining the effect of smaller doses, he was given gr. xv. of chloral hydrate, with gr. $\frac{1}{100}$ of sulphate of strychnine, every two to three hours. This dose was sufficient to make him sleep, but he was still somewhat restless, and so I increased it to gr. xx. This latter dose caused a deep sleep and the boy grew quiet, the twitching ceased. On the third day, the sleep being very deep, the chloral was reduced to gr. xv., and then to gr. x., every two or three hours. For the first two days the boy had no desire to eat, and when given food he took it mechanically; but on the third day he began to grow hungry and ate greedily during the entire course of his prolonged sleep. On the tenth day he weighed three pounds more than on the first day. The pulse and respiration were slightly accelerated, and the face was somewhat flushed. From the fifteenth day he received diminishing doses of chloral to the eighteenth day, when its administration was stopped. On that day he was eight pounds heavier than at the beginning of the treatment. The choreic movements ceased entirely and did not reappear. His quarrelsome disposition had changed for the better. He was given altogether 96 gm. of chloral during eighteen days.

Case III.—Mary K——, eleven years old. Family history negative. She had most of the children's diseases before her sixth year of age. She was well up to her ninth year, and then gradually all her extremities began to twitch. I could not ascertain in which limb it commenced first. No remedies seemed to help. The twitching grew worse, the arms moving in a way which resembled greatly athetotic movements. She came to me August 21, 1898. She was very anæmic and emaciated. I treated her first with large doses of arsenic and carbonate of iron, and, seeing no improvement, on October 5th I began the treatment by prolonged sleep. Small doses of chloral proved to be ineffectual; therefore she was given gr. xxx. of chloral several times, with an interval of two hours. Sleep having been produced, the dose was quickly reduced to gr. xx. and xv., and subsequently to gr. x. every two or three hours, as the depth of the sleep demanded it. Nothing of interest occurred during the sleep. She was kept three weeks and two days under the influence of chloral and strychnine, receiving during this time about 120 gm. of chloral. At the twenty-third day of treatment she had gained ten and one-half pounds. The choreic movements have stopped and have not reappeared since.

These three cases show that the susceptibility to chloral differs greatly; that no ill after-effects were noticed; that during the rest by chloral the patients gain on the average nearly half a pound a day; that the twitching of the muscles ceases, and that their restoration to health is permanent.

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THE USE OF THE URINE SEGREGATOR IN THE DIAGNOSIS OF DISEASES OF THE URINARY TRACT.[1]

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The instrument which forms the subject of the following remarks is sufficiently familiar, so that it will be unnecessary to occupy any of your time with a description of it.

We may proceed at once, then, to a consideration of the technique of its use, and some of the points which may be learned by its use. If I enter somewhat minutely into details which at first may appear trivial, it is owing to the fact that a more extensive experience with the instrument has impressed me with their importance. The technique of the use of the instrument is not difficult in any sense of the word, nor is special skill or manipulative dexterity necessary. Most of the points are self-evident when one's attention is directed to them, and all of the errors or failures which have come to my knowledge from its use, in proper cases, have been due to a failure to appreciate properly some little point of technique.

Of first importance is the position of the patient

[1] Read by invitation before the Surgical Section of the New York Academy of Medicine, February 13, 1899.

during the examination. Examinations should not be made on the ordinary office chair, that elevates the shoulders and depresses the hips, as such a position gives to the base of the bladder a slight declivity which may permit some of the urines to gravitate toward the internal orifice of the urethra, and thus circumvent the septum.

The patient should lie on a flat table, with the legs flexed and the feet resting on the same level. The buttocks should be at a sufficient distance from the end of the table to provide space for the resting of the vials. The bladder should be irrigated with sterilized water in all cases before introducing the instrument. I make this an invariable rule, even when there appears to be no question as to the location of the pathological process.

The differentiation of bladder from kidney disease, or the determination whether one or the other or both kidneys be involved, often depends upon finding in the urines pathological products in microscopic quantities. If the instrument be introduced and the mixed urines be permitted to flow through it, sufficient urine may remain within the tubes to contaminate, microscopically, the urine which may flow for the next few minutes. A few erythrocytes or a few pus cells are often the key to a diagnosis, and it is remarkable how much urine a few red blood cells may contaminate when sought for with the centrifuge and microscope.

After irrigating, it is well to allow from one hundred to one hundred and fifty cubic centimetres of water to remain within the bladder. This facilitates the turning of the instrument after its introduction and diminishes the liability of exciting hemorrhage from a sensitive or inflamed bladder wall. Before introducing the instrument the forked piece should be fixed to the catheter exactly at the point indicated. It is necessary to be precise in this matter, as the point of fixation is what determines the height of the partition or septum in the bladder, and any deviation from the point indicated may produce an imperfect partition.

The catheter, sterilized by boiling, closed and slightly lubricated with sterile vaseline, is now introduced. In order that the fluid in the bladder may not at once escape the tips of the instrument must be closed, the straight ones by a short piece of rubber tubing, the curved ones by a piece about twenty centimetres in length.

While the catheter is maintained accurately in the midline the lever, passed through the fork, is introduced into the rectum or vagina respectively, until the perforation near its distal extremity is opposite the perforations in the forked piece, when it is fixed by the little pin. In the female, the first or second perforation, numbering from above, is used, while in the male one of the lower holes is used in order to accommodate the varying-sized prostate. In a small or close vagina there is, at times, a tendency for the inner end of the lever to slip to one side of the catheter before it is opened, being drawn forward by a firm levator ani muscle. This is easily guarded against by holding the lever firmly in the midline.

The instrument is now opened by rotating the catheters slowly and gently until the distal extremities point outward and backward, where they are fixed by the small spiral spring. The large spiral spring is caught in the notches on the lower border of the lever so as to produce a moderate pressure only, thus gently crowding the inner end of the lever between the diverging ends of the catheters. Upon opening the instrument it almost always assumes its correct position as regards the base of the bladder, but in order to insure that it is not too far in, it should be gently drawn on until one feels the resistance of the tissues to its further withdrawal. When held properly in position, the lever should be horizontal, the catheter itself having, at all times, an inclination upward and outward. The rubber tubing closing the curving tips is now removed, and the fluid in the bladder permitted to escape, after which the catheters are attached to the vials, right and left respectively.

If, for any reason, it be deemed desirable further to irrigate the bladder, after the introduction of the instrument, it may be done through the straight tips before detaching the tubing from the curved tips. If hemorrhage be excited by the introduction of the instrument, the bladder should be irrigated with hot water until all bleeding ceases and the water returns perfectly clear.

After emptying the bladder the first fluid that drops into the vials is simply the water that remained in the catheters and tubes and must be discarded. As each catheter and tube hold about three or four cubic centimetres of fluid, we must wait until that much urine has come down from each kidney to displace the water, before collecting for examination or timing the flow. The aspirating bulb should be used but sparingly and only with the greatest gentleness. Vigorous manipulation of it is never permissible, as it is not only painful to the patient, but may excite hemorrhage from the bladder. Its use, however, cannot with safety be dispensed with entirely, as the abdominal walls may be so lax as to produce, when lying down, almost a negative tension in the bladder, so that the urine may accumulate in the bladder in sufficient quantity to overflow the septum unless kept aspirated by the bulb. I have seen one such case. Usually, when the flow is once started the dependent position of the vials and tubes produces sufficient siphonage to insure the immediate escape of the urine as soon as it leaves the ureters, without the further use of the bulb.

The flow of urine usually begins as soon as the instrument is adjusted, but this is not always the case. It frequently happens that four or five or even more minutes elapse before the urine begins to drop into the vials. There appears to be a slight or temporary suppression. A few times I have had to wait fifteen to twenty minutes for the flow to begin; but, when once started, it proceeded with regularity. The flow is never continuous, but always intermittent; four to six drops every few seconds, first from one side then from the other. Sometimes—and I am inclined to think it the rule rather than the exception—a wave of activity followed by a corresponding depression appears to pass over the kidneys. These waves may be synchronous in the two kidneys or alternating. One of the best examples of alternating activity that I have seen was in Mr. D——, a case of tuberculosis of the right kidney. After adjusting the instrument, a cloudy, purulent urine began dropping from the right kidney. This continued about thirteen minutes, and until some 10 c.c. of urine had collected in the vial, without anything appearing from the left side. We were just beginning to wonder what had become of the left kidney, when clear normal urine began dropping into the left vial. The flow from the right side then slackened up, while that from the left continued, so that at the end of thirty minutes we had 15 c.c. from the right and 25 c.c. from the left kidney. This is the longest and most marked interval I have recorded; usually they are much shorter and less well marked. The quantity of urine collected in a given time varies considerably.

In the case of a small, nervous, bedridden woman, weighing less than forty kilos, I collected only 7 c.c. in thirty minutes, while from another woman, Mrs. B——, weighing fifty-nine kilos, I collected the enormous quantity of 126 c.c. in ten minutes. Were this rate continued for twenty-four hours, it would amount to 18,144 c.c. It was, however, only temporary and the urine purely one of high tension. The manner of the flow in this case was likewise

of interest. After the flow was established the right vial, holding 30 c.c., was filled in two minutes; the left kidney, during the same time, furnished but 10 c.c. The left kidney then became the more active, and during the next eight minutes furnished 56 c.c., while the right only furnished 30 c.c. For the whole ten minutes, however, it will be seen each furnished about the same quantity, namely, 60 c.c. from the right; 66 c.c. from the left.

If urine flows from each side, we may be certain that two kidneys exist; on the other hand, should but one side flow, we must not hastily conclude that the opposite kidney is absent, as it may simply have suspended activity temporarily or the flow have been interrupted mechanically by some cause.

I examined Mrs. M—— twice, on different days, but failed to obtain any urine from the right kidney. The right ureter was catheterized by Kelly's method, and the catheter allowed to remain for several hours. Nothing but a few drops of bloody fluid were obtained. In this case there was no question of the existence of a right kidney, as it could be easily palpated, and had but a short time since been cut down upon and stitched in place. To all appearances the kidney was normal.

Mrs. G—— came to me with an extremely movable right kidney, which was producing considerable disturbance in the nature of pains in the side and back, distressing vesical symptoms, and nervousness. I examined her with the instrument for thirty minutes, but not a drop of urine escaped from the right side. At the operation, a short time thereafter, I found the right kidney almost completely inverted, the upper pole pointing downward and the lower pole pointing upward. The ureter passed upward for about four centimetres, then made a sharp bend downward. The ureter, at the point of angulation, was fixed so that whenever the kidney dropped into its inverted position the ureter became sharply flexed, thus temporarily interrupting the flow of urine.

In intermittent hydro- or pyo-nephrosis one would, of course, get no flow of urine during the period of obstruction, and, as is well known, such periods are irregular both as to the time during which obstruction persists and the time of recurrence.

I examined a young lady with intermittent pyonephrosis who, at irregular intervals, would have attacks of chills, high temperature, pains in the region of the kidney, etc., which would last several days. Suddenly there would be a discharge of considerable pus with the urine, when the septic symptoms would temporarily disappear. During these attacks, there would be no flow of urine from that side.

The ureter may be obstructed by a calculus, thus interrupting the flow of urine, as in a case I examined for Dr. Henrotin. A young woman presented a small tumor just below the edge of the liver on the right side. There was some doubt as to the origin of the tumor. By the use of the instrument, we found that no urine whatsoever came from that side, while the flow from the left side was free and the urine normal. The tumor was, therefore, referred to the kidney. At the operation, a large calculus was found lodged in the upper end of the ureter, causing complete obstruction. It will thus be seen that numerous causes may interfere with the flow of urine from one side. The information thus far obtained, by the use of the instrument, is such as is afforded by the presence or absence of a bilateral flow, and the manner in which the flow takes place. The instrument is simply a urine collector, and any further information must be obtained by careful analyses of the urines thus collected.

From this we may determine the location of the pathological process, whether in the bladder or kidneys, and whether both kidneys are affected or only one. As is well known, it is not always a simple matter to diagnose a cystitis correctly. We may have all of the subjective symptoms present, such as painful, frequent urination, etc., without the bladder being at all involved in the pathological process. We may even add to these the presence of pus and triple-phosphate crystals in the urine and still find the pathological process remote from the bladder. It is not sufficient to know that the urine contains abnormal constituents, we must know their exact point of origin. This is not always so easy to determine as some may believe.

Only a few days since, I was talking with quite a prominent surgeon in regard to the use of this instrument. He spoke of a case he had with pus in the urine, in which he was going to use the instrument, and then said: "But there can be no doubt about the pus coming from the kidney, because the urine is acid." Nothing could be further from the truth.

We may have pus from the bladder with an acid urine or from the kidney with an alkaline urine, and *vice versa*. The reaction of the urine bears no relation whatsoever to the point of origin of the pus, but depends entirely on the character of the microbes present. The value of this instrument in the diagnosis of affections of the bladder depends upon the fact that by its use we are able to eliminate temporarily, as it were, the bladder from the urinary tract.

By comparing the urine taken from the bladder just before the examination with that drawn directly from the kidneys, we are able to determine which constituents are of vesical and which are of renal origin. If the urine taken directly from the kidneys be acid while that from the bladder be alkaline, it is very certain that the change must have taken place in the bladder. If the urine from the kidneys be clear and normal while that from the bladder contains pus, there can be no question as to the origin of the pus. In conducting analyses of urines thus collected, it is always well to proceed in a definite, orderly manner. This is best conducive to uniform results and facilitates comparisons.

We usually have to deal with but small quantities of urine, all of which may be necessary for the analysis; hence the order should be such that one test shall not interfere with a subsequent one. The order which I have adopted is as follows:

Take reaction, note the color and odor, measure the quantity, centrifugalize and examine the sediment microscopically and bacteriologically (if necessary), estimate the percentage of urea, test for sugar, test for albumin.

In addition, the patient's weight is always recorded as well as the exact time occupied in collecting the quantity analyzed. The reaction should always be taken at once, as secondary changes sometimes occur quite early after the urine is passed. As is well known, the degree of acidity during health depends upon the general state and possesses a normal diurnal curve.

The urines from the two sides may, however, differ in the degree of their acidity, showing that not only the general state, but also the local conditions may influence the reaction of the urine. I have seen the urine neutral on one side and strongly acid on the other, or even acid on one side and alkaline on the other. A comparison of the analyses of the urines from the two sides will at once determine whether the condition be bilateral or unilateral, and, if unilateral, which side is affected. Every surgeon will appreciate the value of being able to do this.

The difficulties that heretofore were encountered in attempting to decide these points are well illustrated by the numerous errors that are found recorded in surgical literature. It is unnecessary here to consider the significance of the various pathological elements found in the urine, points with which you are all familiar,

nor is it necessary to occupy your time with a detail of cases illustrating these points. I would like, however, to direct your attention to the great frequency with which affections of the kidneys are primarily unilateral. Renal calculi are unilateral in from eighty to eighty-five per cent. of the cases.

Israel says[1] that of all suppurative affections of the kidneys one-third are tuberculous and about one-fourth are primary renal tuberculosis; that the chronic form of renal tuberculosis is pre-eminently an unilateral affection; 87.5 per cent. of his cases involved but one side.

During the past year I have three times successfully removed the kidney for primary unilateral tuberculosis. The large majority of all suppurative affections of the kidneys are primarily unilateral. New growths are almost always unilateral. A certain percentage—how great my limited experience does not enable me to say—of that class of cases grouped under the heading nephritis, or Bright's disease, is primarily unilateral.

I examined one case in which the casts and albumin all came from one side. I received a letter recently from a friend of mine in which he stated that he had a patient with Bright's disease whom he had scheduled to die a long time ago, but who would not die. He made an examination with the instrument and, much to his surprise, found the albumin and casts all came from one side, while the opposite kidney secreted normal healthy urine. This is a matter of considerable importance to our interne friends in view of the fact that recent experiments seem to lend hope that some of these cases may be relieved by surgical means.

When we have located the pathological process, when we have determined which kidney is involved, our work is not yet finished. We must not only know the diseased kidney, but we must know the supposedly healthy kidney. We must not only know the quality of the work, but we must know the amount of work done by each kidney.

To designate the amount of work done, I have used the term "functional capacity," and, next to knowing which side is diseased, I consider the determination of the "functional capacity" the most important.

In order that we may have a fixed standard to guide us in all cases, I have determined the amount of urine eliminated per kilo per minute by a healthy individual with normal kidneys. Recognizing, of course, that considerable variation in the amount of elimination through the kidneys takes place from time to time, still for a normal individual, on an ordinary diet, the average is very constant. The average quantity I have found to be .016 c.c. of urine per kilo per minute, containing two per cent. of urea, or .008 c.c. of urine per kilo per minute from each kidney.

In order, then, to find the functional capacity of the kidneys in a concrete case, we divide the quantity of urine collected from each kidney in cubic centimetres by the actual time consumed in its collection, and this by the weight of the patient in kilos. The quotient multiplied by the percentage of urea which the urine is found to contain, gives the work being done by each kidney per minute per kilo. This amount compared with the normal standard (two per cent. of .008 for each kidney or two per cent. of .016 for both) gives us the relative amount of work done. Taking 1 as the normal standard for each kidney, the above terms reduced to a fraction show at once the "functional capacity" of each kidney. Any examination which does not estimate the functional capacity I consider incomplete, as it is of the greatest importance both as regards diagnosis and prognosis. As the normal standard is computed for individuals in health, and as most examinations are made on those suffering from some ailment, it is found, as was to be expected, that the functional capacity usually falls below the standard.

All examinations should continue at least thirty minutes if possible, on account of the occasional alternating activity of the two kidneys. The importance of this is well shown by the first case here mentioned. Had the examination concluded at the end of ten minutes, we would have had about ten cubic centimetres of purulent urine from the diseased kidney and nothing from the healthy one, and would thus have been left in ignorance of its condition; while upon continuing the examination twenty-five minutes we obtained twenty-five cubic centimetres of clear urine from the healthy kidney. I set thirty minutes as an arbitrary interval simply from my present experience.

The functional capacity figures out very closely the same, regardless of the time of day when the examination is made or the quantity in cubic centimetres of urine passed. As the quantity of urine rises and falls, so inversely rises and falls the percentage of urea. We illustrate this fact by some examples:

Mrs. H——.

Patient's weight	62 kilos.
Time	25 minutes.

	Right.	Left.
Quantity	11 c.c.	14 c.c.
Urea	1.25 per cent.	1.55 per cent.
Functional capacity	0.55	0.87

Mrs. B——.

Weight	59 kilos.
Time	10 minutes.

	Right.	Left.
Quantity	60 c.c.	66 c.c.
Urea	0.075 per cent.	0.075 per cent.
Functional capacity	0.47	0.52

Here, in the first case, the quantity is small—11 and 14 c.c. respectively in twenty-five minutes—while in the latter it is enormous—60 and 66 c.c. respectively in ten minutes; being excreted over twelve times as fast in the latter as in the former. Still the functional capacity is not increased, but remains within proper limit. When one kidney is absent or its function destroyed or suspended from any cause, the functional capacity of the opposite kidney is proportionately increased, as in the case of Mr. H——:

Weight	55 kilos.
Time	20 minutes.

	Right.	Left.
Quantity	None.	14 c.c.
Urea	....	2.3 per cent.
Functional capacity	....	1.82

The right kidney was found practically destroyed by tuberculosis and suppuration. In the case of Mrs. S——, with but one active kidney, the functional capacity was found to be 1.96.

Mrs. G——.

Weight	52 kilos.
Time	30 minutes.

	Right.	Left.
Quantity	None.	12.5 c.c.
Urea	....	1.85 per cent.
Functional capacity	....	0.8

Here, notwithstanding the fact that no urine was obtained from the right side, the functional capacity of the left kidney is only 0.8. This is the case previously mentioned of movable right kidney which, at the operation, was found almost inverted, with the ureter sharply flexed about four centimetres below the pelvis. The kidney was active, but when displaced the pelvis emptied itself periodically, and the examination was made at a time when no urine escaped. It will thus be seen that the "functional capacity" may have considerable diagnostic value in aiding us to determine the nature of a unilateral flow.

[1] Deutsche med. Woch., 1898, vol. xxviii., p. 443.

The value of knowing the "functional capacity" in regard to prognosis is also great. One should never operate upon one kidney without knowing, if possible, the functional capacity of the opposite kidney. One must know whether it is capable of supporting life, provided it becomes necessary to remove the diseased organ. A case beautifully illustrating this point was reported by my friend, Dr. L. L. McArthur, at a recent meeting of the Chicago Medical Society. The patient, an elderly gentleman, presented symptoms of renal calculus. Dr. McArthur used the urine segregator and collected from the right side purulent urine and from the left side perfectly clear urine, thus deciding at once the side affected. Not being familiar at the time with figuring the "functional capacity," no further analysis of the urine was made. The patient was operated upon, and the right kidney found filled with calculi. He died shortly after, and at the autopsy the left kidney was found to be very small and atrophied and incapable of sustaining life. It would have been very important here to have known the functional capacity of the left kidney before operating.

A further detail of cases illustrative of the various points brought out, it appears to me, is unnecessary and would become tedious. I think sufficient has been shown to demonstrate the value of collecting the urine separately from the two kidneys in all cases of kidney or bladder disease.

So far as this particular instrument is concerned, I recognize the fact that its usefulness must rest upon its own merits regardless of what I may say concerning it. After an experience with it extending over nearly a hundred cases, I feel confident that it will find best favor with those who use it most.

In regard to the use of an anæsthetic, I will say that it is usually unnecessary. In the great majority of patients, the examination is submitted to without complaint. In cases of undue sensitiveness of the urethra or bladder, the local use of a dilute solution of cocaine, unless the bladder is ulcerated, is advantageous.

Patients with cystitis, so that spasmodic contraction of the bladder is produced by the introduction of any instrument, or those who are so nervous as to interfere with any proper examination, would best be anæsthetized. After using the instrument, it should be thoroughly cleansed by allowing hot water to run through it, including the rubber tubing, until every part is perfectly clean, when it should be carefully dried. Any pus or blood allowed to remain in the instrument may be washed out at the next examination and thus materially vitiate the result.

In conclusion, I wish to state that it is not claimed that this instrument is suitable in all cases. In fungous or other growths of the bladder that bleed upon touch, in contracted or distorted bladders, in vesical calculus, excessively enlarged prostates, etc., its use would be inappropriate. Nor does it supplant or displace other instruments of precision such as the cystoscope, but in its proper field, which is quite large, it finds a most useful and valuable application.

Hysterectomy.—In total abdominal hysterectomy for fibroma, it is of the greatest importance to reach as quickly as possible the surface of the uterus, so as not to divide the arteries which creep along its circumference. One then only has to pay attention to the uterine arteries, all branches divided in this way contracting so forcibly that there is no hemorrhage. It is even possible, as I have seen myself in the case of an operation performed by an American surgeon, to remove the entire uterus without any need of placing a single ligature. In other words, the uterus should be treated exactly as the bone in a subperiosteal resection.—Pozzi.

TEXAS CLIMATE IN THE TRANS-PECOS REGION.

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THE importance of climate in its relation to health and disease has been recognized from the earliest times by writers on medicine. It is only, however, of recent date that climatology has assumed a scientific aspect, as may be seen from the frequent references in literature as well as from the numerous works on this subject.

The science, if it may be so called, is by no means an exact one, as marked differences of opinion are held regarding some of its fundamental principles. This is due in a large measure to the many and unusual difficulties met at every stage of its study, and the further fact that it is only of recent date that the matter has been given serious attention. Dr. Fonssagrives, an authority, is credited with the remark that several centuries must pass before climatology shall have become an elaborate science.

The atmosphere, as we know, is a most unstable agent, varying greatly in its composition, its movements, its humidity, temperature, and density, not only in different sections of the same country, as might be expected, but we find the same region in different years presenting unusual conditions and unlooked-for extremes. In fact, the exceptions will often infringe upon the rule, as it is not uncommon for a repeated and impartial investigation to disclose many serious defects in the climate of a certain locality that had been heralded by an enthusiastic observer as a veritable paradise of health and comfort. As an instance of this the high altitude health resort known as Davos in the Swiss Alps may be mentioned. This village lies in a valley surrounded by mountains at an elevation of fifty-one hundred feet above the sea level. Its virtues were extolled in such glowing terms by a few writers that it might have been called, to use the words of a recent writer, "the capital city of the world" as regards its health-giving atmosphere. Recent investigations have shown that the benefits derived from this place, especially in the case of phthisical patients, have been exaggerated. Among other things unfavorable it is now stated that only about every other year is the winter climate suitable for this class of invalids; that there is an average of forty cloudy days during the winter; that out of a total of one hundred and eighty-one days during the winter and spring of 1877 and 1878, fifty-three were disagreeable, due in part to melting snows, high winds, humidity of atmosphere, defective drainage, etc. And then again, in regard to the famous Riviera, a recent reporter has stated that "the perpetual spring, the eternal summer, and the warm balmy southern atmosphere described to the reader in such glowing terms exist only in the imagination of the writer."

These descriptions by recent observers probably only give the darker side of the picture, but at the same time illustrate the fact that in the matter of climate distance is an enchanting factor, and in order to eliminate error the writer must either have had personal experience, or be in possession of reliable data extending over a series of years. Another important consideration in this connection is the fact that climate alone will not make a successful health resort. The place must be easy of access, have good accommodations for visitors and invalids, good water and good drainage. In addition to this, pleasant surroundings, with congenial friends, and some form of amusement, sport, and recreation are valuable adjuncts.

The question of mountain climate and high-altitude resorts is most largely engaging at the present time the attention of health-seekers as well as writers on

climatology. The stimulating effect of a high altitude, with its lowered atmospheric density, other things being equal, offers the greatest inducement to the greatest number of invalids. This is especially true of those who have lived for a long time near the seacoast and at elevations approximating the sea-level.

The climate of Texas is as varied as are her other resources, due in a large measure to thegreat extent of territory. For those who have not given the subject much thought it may be mentioned that the State extends through eleven degrees of latitude and thirteen of longitude. Its lowest parallel corresponds with the south coast of Florida, while its northern border is on a parallel with that of southern Virginia. It is not uncommon for the northern portion to experience a freezing temperature while the Gulf coast is still retaining its summer verdure. It will be seen from this that the task of considering the climate of Texas as a whole is an impossible one, and in order to facilitate its proper study the United States signal service has made five geographical divisions. These are named the Eastern, Gulf Coast, Southwest, Northwest, and Central regions. The first includes the eastern timbered portions of the State, limited by a line running north from Houston through Palestine to the Red River. The second or Gulf district includes the Gulf coast for one hundred miles inland. The third district, designated as Southwest Texas, embraces a triangular section bounded by the Gulf district on the south, by the Rio Grande as far north as the Pecos on the west, thence easterly to a point sixty miles east of San Antonio, near Seguin. The fourth district, or Northwest, embraces all that portion of Texas west of a line running from the mouth of the Pecos northward to the Red River at its junction with the Panhandle. The Fifth district, or Central Texas, includes the remaining central portion of the State.

According to this division the Northwestern district is made to include the great plains, or Llano Estacado, as well as the Rocky Mountain region west of the Pecos. As the river Pecos forms a distinct boundary line between these two entirely dissimilar regions, it has seemed to me most rational to add a sixth division known as the Trans-Pecos or Western district. This boundary line is by no means imaginary, as the river Pecos with its mammoth cañon cutting through the Llano Estacado marks with great exactness the eastern escarpment of the only true mountains in Texas. The section west of the Pecos is entirely mountainous, made up of the southern continuation of the Rocky Mountain range, which is deflected toward the Gulf of Mexico, after passing south of the thirty-third degree north latitude, and is the only region in Texas which is not the direct continuation of the physical features of some adjoining division. The Trans-Pecos region has a quadrangular shape, bounded on the east by the Pecos, south and west by the Rio Grande, and on the north by New Mexico. In size it approximates the State of West Virginia, with an area of about twenty-three hundred square miles. The altitude varies from two thousand feet in the lower lying plateaux to nine thousand feet at the summit of the highest mountains. As the whole district is an elevated one, the mountains do not appear to represent so great an elevation. In the southern portion near the Rio Grande and Pecos rivers the surface is much broken, rocky, and barren, but as we approach the interior the hills rise in smooth and in terraced peaks with wide intervening valleys and elevated tablelands. Still farther north the mountains become more precipitous and rugged, and are here and there intersected by deep watered cañons which in places widen into valleys and become very productive when assisted by irrigation.

The most marked feature of the country taken as a whole is the excessive dryness and comparative absence of vegetation. In the higher regions, and especially the Guadeloupe range, some forests are seen, and stunted growths at other high altitudes, yet as a rule the mountains and broad intervening plains are absolutely treeless. The soil is rich, sandy, and porous, and for the most part covered with a grass known as gramma, which retains its nutritive properties throughout the year and makes excellent feeding during the long droughts that annually visit this section. When the natural summer rains are supplemented during the dry season by irrigation the soil becomes very productive and is especially noted for its excellent quality of fruit. As it has been only a few years since this country was accessible except by the emigrants' trail, it is naturally sparsely settled and chiefly utilized for the grazing of cattle and some mining. El Paso, at its extreme northwestern border, is the only town of importance, and is well supplied with accommodations for visitors and invalids, and has enjoyed a considerable reputation as a health resort. Situated nearer the centre, and in a more mountainous portion of the Trans-Pecos region, a place known as Fort Davis has recently come into prominent notice on account of its remarkable climate and good location. The United States government located a frontier military post here as early as 1853 for the suppression of the Apache Indians, but abandoned the same about nine years ago. Attention was called to the place by the meteorological records kept by the government officials, as well as their report on the health of the soldiers stationed here. Near the site of the old fort is the town of Fort Davis, which is now the county seat of the lately organized county of the same name. The county has a territory of twenty-nine hundred square miles, mainly divided into large cattle ranches and controlled by men of an exceptionally honest, enterprising, and law-abiding character.

The town of Fort Davis is located at the foot of the Davis Mountains at an elevation of fifty-two hundred feet above the sea-level. It is protected on the north, northeast, and northwest by mountains which rise many hundred feet higher. On the south there is an unobstructed view of high tableland reaching for many miles. The topographical feature of the town site itself is worthy of notice. The American portion is located on the sloping foothills of the mountain, while across a narrow valley, which is the natural drainage outlet of the sloping tablelands on the south, the Mexican part of the village is similarly located on rising ground. After a hard rain the water that is not rapidly absorbed by the porous soil is immediately carried into the cañons below. The drainage could not be better and shows much forethought in the original projectors of the town. The mountains rise to a perpendicular height of three hundred feet immediately north of the American portion of the town, and with their rugged outlines stand as sentinels of rare grandeur and scenic beauty. In the neighborhood of the fort on the north and east the mountains are intersected by cañons which add much to the picturesque novelty of the scenery. The largest of these, known as Lympia cañon, has a stream of never-failing water, and cuts its way through the mountains for a distance of twenty miles to the lower-lying tablelands beyond. It was through this cañon that the government built its first road in this section when supplies were hauled by wagon from San Antonio, a distance of six hundred miles. During the time when the fort was occupied a pumping-station near the cañon was the only source of water supply, but of recent years a most abundant quantity of potable water has been obtained from bored wells at a depth of from seventy-five to one hundred feet. Windmills are used to raise the water to the required height and are adopted by the citizens generally.

As regards climate, we have here conditions that are probably more favorable than can be found in any other portion of the Rocky Mountain range. My information is obtained from personal observation made in the early fall for several years, from friends who have resided the entire year at this place, and from the United States Signal Service records taken over a period of six years.

Using the latter source of information, and taking some other points in the State by way of comparison, we have the following for the mean annual temperature: Fort Davis, 59° F.; Galveston, 78.4°; Austin, 67.6°; Palestine, 64.8°; San Antonio, 68°; El Paso, 63°.

The mean spring, summer, autumn, and winter temperatures for the same places are:

	Spring.	Summer.	Autumn.	Winter.
Fort Davis	64.3°	74.3°	59.5°	45.5°
Galveston	69.8	83.6	71.4	55.3
Austin	67.7	83.3	67.7	51.8
Palestine	65.3	79.9	66.5	47.6
San Antonio	69.6	82.3	68.7	53.8
El Paso	73.6	80.5	62.3	47.3

It will be seen that I have taken for comparison two stations in the Trans-Pecos region (Fort Davis and El Paso), one on the Gulf coast (Galveston), while the other three (San Antonio, Austin, and Palestine) represent respectively the Western, Central, and Eastern districts.

The altitude of Fort Davis is fifty-two hundred feet, El Paso thirty-seven hundred feet, while Austin, San Antonio, and Palestine are approximately at the same level of six hundred feet. It will be seen from this table that Fort Davis has a mean spring temperature ten degrees lower than El Paso, an average summer temperature six degrees lower, an autumn temperature three degrees and winter two degrees lower, while the annual mean is four degrees lower. El Paso has also greater extremes of temperature. The wide difference between the spring and summer temperature of these two places, located in the same region, may be accounted for by the greater elevation at Fort Davis. The fact, however, that the latter has not a more rigorous winter climate from the same cause is explained on the bases of a mountain protection on the north and a location two hundred miles nearer the Gulf.

The mean summer temperature of Galveston is ten degrees higher than that of Fort Davis, and when we take into consideration the greater humidity of the former place it is not surprising that the inhabitants of the coast region should find great relief in a higher and less humid atmosphere during the summer season.

The relative as well as absolute humidity of the entire Trans-Pecos region is very low, for reasons that have been given. The rainy season begins about June 1st and ends about October 1st, rain rarely or never falling during the late autumn, winter, or early spring months. On account of the more than usual amount of dryness and greater velocity of wind during the early spring, this season is the least desirable of the year for visitors and invalids.

The sand-storms which visit other portions of the West, and especially New Mexico, with great frequency are almost unknown at Fort Davis, and I am informed that other places in this region are similarly exempt, due to a mountain protection, direction of prevailing winds, and character of soil.

It is interesting to note that the hourly wind velocity is largely a matter of locality rather than region, as is well illustrated in the table given. Forts Stocton and Davis are in adjoining counties in the same region and have about the same elevation, yet the wind velocity of one is about double that of the other. The hourly wind velocity for the different seasons, as well as the yearly average, is given in the subjoined table:

	Winter.	Spring.	Summer.	Autumn.	Yearly Average.
Galveston	10.7	10.4	7.8	10.2	9.8
San Antonio	5.3	5.3	4.4	4.7	4.9
Fort Stockton	7.4	10.7	10.7	8.2	9.2
Fort Davis	5.7	6.6	5.1	5.9	5.9
Palestine	10.2	9.8	7.4	8.5	8.9

The mean annual rainfall is given for the following places: Fort Davis, 20.38 inches; El Paso, 13.14 inches; Galveston, 52.80 inches; Austin, 35.78 inches; Palestine, 47.56 inches; San Antonio, 32.31 inches.

The relative humidity of El Paso and Fort Davis is in accord with the difference in rainfall, as the following, giving the mean annual relative humidity and mean annual midday humidity, will show:

Mean annual humidity: Fort Davis, 53; El Paso, 48; Galveston, 76; Palestine, 71; San Antonio, 69.

Mean annual midday humidity: Fort Davis, 35.5; El Paso, 31.8; Galveston, 69.5; San Antonio, 52.

The mean annual difference between the temperature and dew point, taken at 11 P.M., is as follows: Fort Davis, 18.1°; El Paso, 23.6°; Galveston, 7.2°; San Antonio, 10.3°.

In the case of El Paso and Fort Davis the difference between the night temperature of a given time and the temperature necessary to bring the air to a point of saturation is so great that it is practically never reached, and no dew falls at either place.

In the matter of sunshine and the entire absence of cloudy days for long periods, it is probable that no other country can make a more favorable showing. An average of only five cloudy days has been noted for the winter climate of Fort Davis.

The observation for cloudy days for the entire year and the average made for a number of years is given for the following places: Fort Davis, 37; El Paso, 35; Galveston, 94; Palestine, 78; San Antonio, 78.

The question of the greatest moment in connection with a healthy atmosphere is the amount of moisture it contains. In the opinion of most authorities it is more important than the temperature, no matter how variable or how sudden the changes. A damp atmosphere makes a damp soil, retarding evaporation from its surface and producing a fruitful field for all manner of bacterial life. The effect also of a high degree of humidity upon the human organism is felt in a lessened secretion from the skin and evaporation from the lungs, thereby tending to produce a congestion of the kidneys and a catarrhal condition of the respiratory tract. It is a matter of common observation that Bright's disease of the kidneys, phthisis, asthma, bronchitis, etc., are more commonly contracted and harder to relieve in proportion to the dampness of the soil in which they are found. It is true that in dry climates of high altitude we have greater extremes, and especially greater daily ranges of temperature due to the increased radiation and evaporation. The extremes of temperature in such a climate, however, are not felt with the same degree of discomfort as a much more moderate variation in a moist atmosphere, from the fact that dry air is not so good a conductor of either heat or cold.

My personal observation of Fort Davis and its immediate vicinity is limited to a residence of a few weeks during the late summer and early fall for several years for the relief of hay fever. In order to economize time it has been my habit not to leave for this place until the disease became very annoying, usually about two weeks after its onset. The relief is always immediate, and with a three weeks' stay my

return home is made with the assurance of no further trouble until the next autumn.

It has been my observation that the climate is an excellent one for asthma, incipient phthisis, hypertrophic catarrh, bronchitis, general debility from overwork and mental strain, and in fact all cases in need of a tonic and bracing atmosphere. The climate is contraindicated in dry catarrhs, organic heart lesions, and advanced phthisis.

As yet the accommodations for invalids are meagre, but the increasing patronage will soon demand the building of larger and more comfortable hotels. For those who are able to engage in outdoor sports and are fond of hunting, the place offers superior advantages, as the mountain quail, black-tail deer, and antelope are found in abundance. Of recent years the county has been found most admirably adapted for the raising of fruit, and now produces an abundant quantity of apples, pears, peaches, apricots, and grapes.

The nearest station is Marfa on the main line of the Southern Pacific Railroad, from which place Fort Davis is distant twenty-two miles, and is reached by stage over an excellent road.

Other towns in this region, known as Sanderson, Marathon, Alpine, Marfa, and El Paso, offer inducements to visitors, and, while not so well located in some respects as Fort Davis, have the advantage of being on the direct line of railroad.

The entire region is gaining in popularity on account of the marked tonic and invigorating effect of its climate, and bids fair to rival in interest other resorts of a similar altitude in other parts of the world.

Progress of Medical Science.

The Use of Diphtheria-Antitoxin in Private Practice.—To illustrate the usefulness of antitoxin in the treatment of diphtheria in private practice, Armstrong (*Lancet*, March 4, 1899, p. 574) reports the results of his experience with one hundred and twenty-two cases seen in the course of eighteen months, the antitoxin being employed only in the severe cases. In the first six months twenty-two severe cases were treated with antitoxin, with two deaths (nine per cent.), while twenty mild cases were treated without antitoxin, with four deaths (twenty per cent.). In the next twelve months fifty-five severe cases were treated with antitoxin, with one death (0.18 per cent.), while twenty-five mild cases were treated without antitoxin, with two deaths (eight per cent.). All of the patients received, in addition to other treatment, ferric chloride, ammonium acetate, and brandy.

The Presence of Foreign Bodies in the Vermiform Appendix, with Especial Reference to Pointed Bodies.—As the result of a study of fourteen hundred cases of appendicitis collected from various sources, Mitchell (*Bulletin of the Johns Hopkins Hospital*, January to March, 1899, p. 35) found that true foreign bodies were noted as being present in seven per cent., while among seven hundred of the whole number in which a definite statement on this point was made there were fæcal concretions in forty-five per cent. It is, therefore, concluded that foreign bodies, at one time thought an essential feature of appendicitis, are now known to play a much smaller rôle than was formerly accredited to them, while fæcal concretions are more likely to be present as an exciting cause. While many curious and unexpected things are occasionally found, the appendix would nevertheless seem to act especially as a trap for pointed bodies and for small heavy objects like shot or bullets. Conspicuous among pointed bodies acting in this manner are pins, and their presence in the vermiform appendix is not at all uncommon. Foreign bodies of light weight, like grape-seeds and cherry-stones, popularly assigned as a cause of appendicitis, are in reality exceptional in this connection, and their frequency is much overestimated on account of the close resemblance of fæcal concretions and the lack of careful examination of the bodies found.

The Treatment of the Sphincter Ani in the Repair of Lacerations of the Perineum.—Kelly (*Bulletin of the Johns Hopkins Hospital*, January, February, March, 1899, p. 1) divides cases of complete laceration of the perineum into two groups: (1) Those in which the tear extends barely through the sphincter and goes no farther; and (2) those in which the ends of the sphincter are separated by a well-defined interval of a centimetre or more. In the first of these groups the muscle is merely divided and the ends lie close together; the resulting cicatrization is conservative and leads to the approximation and union of the ends, separated by only a plug of scar-tissue. The muscle is then no longer a true sphincter. In the second group of cases the conditions are even more aggravated, but in both groups continence is maintained by the activity of the internal sphincter. Not rarely, however, both sphincters are lacerated as a result of the same injury. Kelly therefore makes an important point in operating, of dissecting and liberating both ends of the torn sphincter muscles and uniting them end to end with buried catgut sutures, and he reports eleven cases in which this plan of procedure was pursued, the result in each being an immediate restoration of control of the bowel on the part of the patient as soon as she was well over the effects of the anæsthetic.

The Causes of Albuminuria.—In considering the reason why albumin appears in the urine in Bright's disease, we must remember that the occurrence of albuminuria is not limited to cases of nephritis, but accompanies a variety of other disorders. The different conditions under which albuminuria has been observed may be enumerated as follows:

I. Arising in the kidney—(1) Acute and chronic nephritis and contracted kidney, forming Bright's disease; consecutive nephritis and cystic kidney. (2) Suppurative nephritis. (3) Degenerative changes, such as lardaceous disease and tuberculous kidney. (4) Acute febrile processes, probably causing temporary degeneration of the renal cells. (5) Venous obstruction in diseases of the heart and lungs, and local disturbances of the circulation. (6) Malignant endocarditis and embolism of renal arteries. (7) New growths and parasites. (8) Temporary obstruction of the ureters. (9) Nervous disorders, such as apoplexy, convulsions, and concussion. (10) Chronic general disorders, like leukæmia, diabetes, and anæmia. (11) Disturbances of digestion, and disorders of a temporary nature, including so-called cyclic and physiological albuminuria. (12) The influence of certain poisons, and the presence in the blood of forms of albumin other than serum albumin.

II. Arising in the urinary passages below the kidney—(1) Disease of the pelvis of the kidney, calculous pyelitis, and tuberculous disease. (2) Tuberculous disease of the ureter. (3) Cystitis and tuberculous disease of the bladder.—Frederick Taylor, M.D., F.R.C.P., "Practice of Medicine," fifth edition.

Epistaxis.—Grasp the nose between the thumb and forefinger, and press backward against the alveolar border of the maxilla and downward against the teeth. "This compresses the lateralis nasi and septal arteries." Satisfactory results are reported to follow the use of tannin and acetanilid.—A. C. Smith.

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DISPOSAL OF SEWAGE.

OF all the many sanitary problems which are now occupying the attention of those who make a study of public and domestic hygiene, no one of them is of graver importance to the community at large than that dealing with the disposal of sewage. The old slipshod ways of getting rid of the wastes of a town or of a family are no longer countenanced, and an eager ear is given to any scheme that promises to solve the difficulty in the most effective manner. Numerous have been the plans suggested and attempted to bring about this result. In the early days, when the country was sparsely populated, the wastes of the house were carefully spread on the gardens and lawns, thus "killing two birds with one stone"—it was a safe method of disposal and at the same time a good fertilizing agent. Many large cities have reverted to this system. In the neighborhood of Berlin the various sewage farms cover an area of about seventeen thousand acres, and the experiment has answered so well that every year an addition is to be made to the irrigation system. The sink drain was next introduced—a decidedly retrograde step; for through this drain the sewage ran in large quantities, and, as it necessarily flowed on to a restricted space, the emanations therefrom were both offensive and harmful. Increase of population and the more lavish use of water called for a means of sewage disposal in proportion to the greater needs. This epoch then witnessed the advent of the cesspool—surely the most obnoxious device ever evolved from the brain of man, and one that, like the wicked and the green bay tree, is still flourishing in many parts of the world. *The Lancet*, speaking of this abomination, and to which it gives the fitting name of the soak-away cesspool, says: "Soak-away cesspools are not only objectionable, but must constitute a source of great danger to the springs from which the water supply is derived." When villages grew into towns and as the inhabitants of the country everywhere multiplied, this inevitable fouling of the wells occurred. Warned at length by epidemics of typhoid and other complaints, the idea slowly germinated and took root in the minds of the people that something was wrong with their sanitary arrangements, and, after giving the matter due consideration, the conclusion arrived at was that the wells had become contaminated and were the cause of the mischief. Accordingly the wells were abolished and a water supply was obtained from the nearest convenient source. But this innovation, while it ensured a supply of more or less pure water, did not tend—in thickly populated centres—to bring the question of sewage disposal any nearer an elucidation, but rather added to the complications of the situation. Finally, the municipal authorities were compelled in the interests of public health to build a sewer system, in order to secure perfect drainage for houses and generally for streets as well.

This imperfect sketch, many of the facts of which were taken from the "Report of the Sewage Commission of the State of Connecticut," will convey some idea of the history of sewage disposal up to a comparatively recent period. The subject of sewage disposal as now carried out is so large a one that it would be absurd within the limits of an article to attempt to describe the various systems now practised. The manner of clearing away sewage chiefly resorted to is by water. When a town is located near the sea the ocean is naturally made the receptacle, and on whatever other grounds objections may be brought against this method, at least it cannot be urged that it is fraught with any grave danger to health. In the case of inland districts, however, where rivers and streams are made use of, the question as to whether they can purify themselves is of vital importance. That there is a certain amount of self-purification is practically agreed upon, but that this process of nature is sufficient to preclude all fear of danger is opposed to facts. Convincing proof has been afforded on innumerable occasions that water taken and used for drinking-purposes from a sewage-polluted stream is in a high degree injurious to health. Again, the advantages of dilution of sewage are said to be more apparent than real. If, then, water carriage and dilution are to be regarded as having been "weighed in the balance and found wanting," what system is to take their place? This is at the present time the crux of scientific men and of sanitary engineers. The sewage commission of the State of Connecticut summarizes the situation in their State as follows: That there are only three methods of sewage disposal which are at all permissible as substitutes for water carriage and dilution, viz.: 1, Chemical precipitation; 2, broad irrigation; 3, intermittent filtration. And, after saying that the first of these cannot be regarded as in itself complete and that the second requires in many cases too large an area of land, the commission decides in favor of the third, as securing the almost complete destruction of the dangerous organic matters and bacteria of sewage, and as having successfully stood the crucial test of time in the climate of New England. For the past ten or twelve years the Massachusetts State board of health, and in Great Britain Messrs. Dibdin, Scott, Moncrieff, Cameron, and others, have been engaged in a great number of valuable experiments and investigations, and state as their opinion that it may be safely assumed that the only way in which sewage can be purified is to bring it under the influence of micro-organisms. The classical researches of the Massachusetts State board of health have gained such a world-wide fame

that in matters sanitary their word almost passes as law. Dibdin's method of sewage filtration, while the principle is the same as that of intermittent filtration —the destruction of the organic matter of the sewage —differs from the latter in that it is a more artificial method and requires less space for its operations. Its advocates also claim that it is more certain and thorough. This system has been in use in Sutton, England, for a considerable time, and has given great satisfaction. In Leeds and Sheffield the same method is in working order, while Manchester is experimenting with a view to its adoption. Of Cameron's septic tank, little can be said in regard to its practical use, as it is still in the experimental stage. The same remarks apply to Moncrieff's cultivation beds. Sanitary experts, however, both here and in Europe, seem to be agreed that the principle of purifying sewage by bacteria is the right one, whatever may be their opinion as to the methods calculated to obtain the best results. In England there has lately been a rapid revolution of opinion to the bacterial system of sewage purification. As *The Lancet* remarks: "Indeed, the treatment of sewage is rapidly passing from the domain of chemistry to that of biology, and it is probable that precipitation processes and other chemical methods will be relinquished ere long in favor of natural processes."

Regarding the comparative qualities of intermittent filtration and of Dibdin's method of purifying sewage, the fact should not be lost sight of that the conditions are not the same in this country and in England. Intermittent filtration is more suitable for America than England, because in America the sewage is much weaker and greater in volume, owing to a more abundant supply of water than in England. There are doubtless towns in America, where land is dear or difficult to obtain, to which Dibdin's method would come as a boon. But perhaps it will be as well for even these towns to wait until it has been more conclusively proved in Great Britain that the system possesses all the merits which its upholders claim for it.

TYPHOID FEVER IN THE UNITED STATES.

Professor Osler's brilliant address on the above subject, delivered before the Medical Society of the State of New York on February 1st, is one that should be read carefully and digested slowly by the sanitarians of this country. After referring to the splendid work accomplished by the medical men of America in investigating typhoid from the beginning of the century to the present time, and after alluding to the fact, not generally recognized, that it was American scientific men and not Sir William Jenner who first distinguished between typhus and typhoid fever, Dr. Osler briefly reviews a few points in regard to the increase of knowledge of infectious diseases during the past half century. He shows how effectually sixty years of sanitary reform have swept away typhus and cholera and have restricted the area of cholera, that we have learned to fight cholera and diphtheria, that in a hundred other ways the prevalence of infectious diseases has been lessened, and, lastly, that with a clean soil and pure water typhoid fever disappears. Regarding the lethargy of Americans as to public sanitation, Dr. Osler remarks: "This is a nation of contradictions and paradoxes. A clean people, by whom personal hygiene is carefully cultivated, displays in matters of public sanitation a carelessness which is simply criminal. A sensible people, among whom education is more widely diffused than in any other country in the world, supinely acquiesces in conditions shameful beyond expression." Dr. Osler has this to say concerning the solution of the problem of typhoid fever:

"The problem will be solved when, first, every city in the Union has a supply of pure water (including ice) and is properly drained; secondly, when suburban and rural hygiene is systematically organized. . . . The responsibility for the widespread prevalence of the disease rests directly upon the wanton carelessness of the people. God's own country, with man's own back-yards and the devil's own cesspools, expresses the existing conditions. A threefold duty devolves upon the members of our profession—first, to preach cleanliness! cleanliness!! cleanliness!!! second, to give a loyal and willing support to the State health officials; and, third, to guard every case of typhoid fever as a centre and possible source of further infection."

These stirring words will find an echo in the heart of every medical man in the country. When the people have been brought to understand the absolute necessity of public hygiene, then, and not till then, will the typhoid pestilence be stayed.

AUTOMOBILES FOR MEDICAL MEN.

As yet the horseless carriage is not looked upon with favor by the majority of medical men. Like the bicycle, it is not considered a means of locomotion quite in keeping with the dignity of the profession. No class, perhaps, is more tied down by ethical considerations than the medical. Notwithstanding the objections that may be brought forward against the automobile when viewed from this standpoint, there is no doubt that if it can be plainly shown that it possesses decided advantages over the much-loved horse as a means of traction, all this prejudice will quickly pass away. In France to a greater extent than in any other part of the world has the motor carriage taken root and flourished. About twelve years ago a steam motor vehicle was first seen on the streets of Paris, and the sensation it created may be better imagined than described. Unsightly, ungainly, and vomiting smoke and steam, it was a terror alike to man and beast. In the summer of 1898 an automobile exhibition was held in Paris at which more than a thousand of these invisibly impelled carriages were on show, and the wonderful improvements in shape, beauty, and speed that have been effected in twelve years were fully exemplified.

To return, however, to the question as to whether the horseless carriage is a suitable conveyance for the medical man, it should be said that before passing any

opinion on the subject many points must be taken into consideration. The *British Medical Journal*, referring principally to oil motors—which are practically the only ones used in Europe on account of the difficulty of obtaining electric motive power—says: "It is obvious that the real value of a motor car to a medical practitioner must depend on the efficiency of the motor or engine by which it is driven. Choice of a vehicle is really the choice of a motor." Here in this part of America, where almost all small towns and often villages have their power-houses, the conditions are different. The motive power is at hand, and it is not a matter of choice. The superiority, then, of a conveyance driven by electricity over one pulled by a horse would seem to be: First, that after the initial cost it is cheaper; second, that, unlike the horse, a uniform rate of speed can be kept up; and, third—and a most important point in those parts of the country where the winter is long—it can run unimpeded through snow and without slipping on the icy pavements. Added to these advantages the horseless carriage possesses this distinctive quality, that it is ready at any hour of the day or night without the need of coachmen; thus making the doctor who owns one a most independent individual; and, lastly, that by taking his key with him the doctor can leave his carriage alone and unprotected. *The Lancet* of March 20, 1897, commenting on the use of this description of vehicle for country practitioners in Great Britain, says: "It seems that motor carriages should prove especially useful to the general practitioner, and particularly to the country one, on whose shoulders the burden of maintaining the two or three horses, with their attendant expenses, necessary for a large and scattered practice falls very heavily. At present the initial cost is large, but on the other hand the cost of working them is small, and the country roads in England, unlike those of America, are peculiarly well adapted to their use." Fears have been expressed that the horse will be altogether driven out of the field by the motor carriage, but we venture to think that this will not be the case. In fact, it appears more likely that in the long run the horse will be the greatest gainer by the new order of things. No longer will he be compelled to shiver in the cold while standing at the door of a patient's house, no longer will he be urged by whip when time is precious or be overworked in any way, but will be relegated to his proper place—as a friend to be well treated and as a luxury to be enjoyed in leisure hours. Of course the time has not yet come—and probably many years will elapse ere it does come—when it will be possible to use motor carriages in all parts of the country. Still, this much may be said—that in those places where electric power is available the advantages of the automobile will become more and more patent to the medical man. The motor carriage, however, is by no means perfect, and perhaps its most unpleasant defect is the horrible humming noise it makes when travelling through the streets of a town. Nevertheless, looking at the rapid strides made in the direction of improvement within the past few years, there is every reason to hope that this objection will be eventually entirely overcome.

AN ENGLISH MEDICAL NOVELIST.

THE roll of English-speaking medical literary men is by no means long; indeed, the names of those who have even won their spurs in the field of general literature may almost be counted on the fingers of one hand. A few, indeed, have raised to themselves "monumentum ære perennius," and among that select band an American stands foremost. Recently a recruit has joined this small company who, if we mistake not, should rise to high rank. Dr. S. Squire Sprigge, an editor of the London *Lancet* and the author of "The Life of Thomas Wakley," the founder of that paper—one of the ablest biographies that has been written in years—has just issued a collection of short stories which in their way are, in our opinion, as good. These tales, which deal for the most part with various phases of London life, society, and otherwise, are first, it may be said, distinguished by a fine and correct literary style. The sentences are terse and to the point, redundancy of language is scrupulously avoided, while at the same time the picture intended to be conveyed by the writer is placed clearly before our eyes. But these are not the only merits of the book. The plot of nearly every one of the stories is ingenious and diverting, in the case of some markedly so, and underneath all runs a vein of distinctly original humor. In fact, this feature is that which will perhaps impress the reader most forcibly. Dr. Sprigge possesses imagination, but in "Odd Issues" he has not allowed this gift to run riot; he holds it discreetly in check. Some of the yarns, to use a home-made term, are improbable, but only to the extent of adding zest to the narrative. That the author knows his world intimately is evident in every word he writes, besides being an acute observer of men and manners. Two of the stories treat principally of medical matters, and in one of them certain aspects of hospital life are depicted with convincing fidelity. In short, taking upon ourselves the prophetic rôle, we predict for "Odd Issues" a successful career and for its author a brilliant future in the path of fiction.

Mortality in New York State.—There were 10,763 deaths in this State during February, according to the bulletin of the State board of health, issued March 27th. Compared with the corresponding month of last year there were 1,500 more deaths than then reported, which is due to the continuance of the epidemic of grippe, which reached its acme in January and is now declining; 1,800 deaths were estimated to have been caused by it in December, 3,000 in January, and it probably caused, directly or indirectly, about 2,000 deaths this month. From pneumonia and other acute diseases of the lungs there were 83 deaths daily, against 96 in January and 62 last February. There were 700 deaths from old age, which is 200 more than a year ago. In the city of New York acute respiratory diseases caused the same mortality as in January, nearly one-fourth of all deaths. One death is reported from smallpox in New York City.

News of the Week.

The Berlin Tuberculosis Congress.—The German central committee for the erection of sanatoria for consumptives has issued a call for a congress to be held in Berlin, Germany, May 24–27, 1899, for the purpose of discussing the subject of tuberculosis. All of the German states, also local authorities, medical faculties and societies, and all corporations interested in fighting tuberculosis have been requested to send delegates. The United States Embassy in Berlin has been requested to extend a cordial invitation to American physicians to become members of the congress, and the same invitation has been extended to physicians of other nationalities. As basis for discussion papers will be presented as follows: (1) "Distribution and Extent of Tuberculosis," by Geheimrath Koehler, director of the imperial health office, and Geheimrath Krieger, of Strassburg; (2) "Etiology," by Professors Robert Koch and B. Fraenkel, of Berlin; (3) "Prophylaxis," by Professor Gerhardt and Generaloberarzt Schjerning, of Berlin; (4) "Therapy," by Professor von Ziemssen, of Munich, and Professor Schroetter, of Vienna; (5) "Sanatoria," by Herr Gaebel, president of the Imperial Insurance Office, Berlin, and Dr. Dettweiler, of Falkenstein. Following the presentation of the two leading papers (limited to twenty minutes each) in the respective divisions, there will be a general discussion, speakers being limited to ten minutes each. All papers and remarks are to be in German, although the chairman is empowered to make exceptions in the general discussion. All persons interested in the subject of tuberculosis are eligible for membership; membership cards (20 marks=nearly $5) are to be obtained at the office of the congress (Bureau des Organisations-Komites, Wilhelmsplatz 2, Berlin, W.) and entitle the holder to a copy of the "Proceedings." An early registration is requested. Dr. Charles Stiles, scientific attaché, United States Embassy, Berlin, writes that he has been requested to furnish a list of Americans to whom special invitations to the congress should be sent. He has complied with this request, so far as his personal and professional acquaintance with specialists in this line has permitted, and has also suggested to the committee that invitations be sent to the various medical societies and faculties. There are undoubtedly many American practitioners especially interested in tuberculosis, and possibly some laboratory workers, whom he has overlooked. Should any such person desire to attend the congress, yet prefer to receive a personal invitation, Dr. Stiles will be pleased to forward the names of such persons, upon proper introduction, to the executive committee of the congress. As "proper introduction" will be considered a letter from any recognized medical, scientific, or veterinary faculty or society.

Aguinaldo is said by the *British Medical Journal* to have been at one time a medical student. He is a half-breed, born at Cavite, and was in boyhood in the service of a priest, who gave him some education. At the age of fifteen he entered the medical department of the Pontifical University of Manila, where he worked under Professors Nalda and Buitrago. He afterward studied at the Victoria College, Hong-Kong. He was remarked for his ability when a student, but it is not known whether he was ever graduated in medicine.

Typhoid Fever in Newark.—The epidemic of typhoid fever in Newark, N. J., is thought to be decreasing, the number of cases growing less daily. For the first three weeks of March the number of cases reported were two hundred and sixty.

Influenza is rife in Berlin, more than two hundred deaths attributed to that disease having been reported during the first three weeks of March. The schools in East Prussia were closed on account of the rapid spread of the epidemic.

Koch Still Studying Malaria.—The Reichstag has recently made an appropriation of 60,000 marks for the expenses of a scientific expedition under the leadership of Professor Koch, to be despatched to the tropics to continue the investigation of malaria begun by Koch some time ago.

Crusade against the Spitting Nuisance.—The following rule of the Boston health board was published recently: "The board of health hereby adjudges that the deposit of sputum in public places is a nuisance, source of filth, and cause of sickness, and it is hereby ordered that spitting upon the floor, platform, or steps of any railroad or railway station, car, public building, hall, church, theatre, market, or any sidewalk immediately connected with public places be and hereby is prohibited." Two years ago spitting in street-cars in Boston was declared a misdemeanor punishable with a fine of $100, and now the privilege of indulging in the nasty habit is further restricted. In Jersey City a man was arrested last week for refusing to abstain from spitting in a street-car. The board of health will prosecute him.

Congress of Insurance Examiners.—The first international congress of medical examiners for life-insurance companies will be held at Brussels, September 25th to 30th. One of the objects of the congress, as stated by its promoters, will be the establishment of universal formulas for the examination of persons desiring to be insured. It is to be proposed that in every country permanent boards be created, composed of five members, who will see that the decisions of the congress are observed, and whose work may serve to lessen the difficulties of application. Among the subjects upon which it is suggested that general discussions be held are the following: The continuity of morbid states throughout life; the study of constitutional flaws; the admissibility of glycosuric, albuminuric, and syphilitic lives; neurasthenic patients; traumatic neuroses (accidents); statistics as regards life and as regards accidents; the necessity of a uniform medical schedule in regard to life insurances; general paralysis; professional secrecy in regard to insurance companies, etc. The organizer of the congress is Dr. Poël, of Brussels, the chief examiner of the leading Belgian insurance company.

The State Board of Health.—Governor Roosevelt has appointed Prof. Walter Francis Willcox, of Ithaca, a member of the State board of health. The appointee is associate professor of social science and statistics in Cornell University.

Vaccination of School Children.—Complaint has been made by the sanitary superintendent of the board of health that the borough boards of education outside of Manhattan and the Bronx have failed for a year or more to coöperate with the health department in enforcing the vaccination of the children in the schools under their control.

A Plague Scare in Vienna.—Considerable alarm was created in Vienna recently by the fact that an attendant in the Bacteriological Institute, the successor of the man who died of bubonic plague, contracted while assisting at experiments in the institute last October, had been taken ill and been isolated. The isolation, however, was only a matter of precaution, and examination showed that the man was suffering with simple bronchitis.

The Practice of Medicine in Cuba.—Under the Spanish rule, in order to practise legally in Cuba it was necessary to hold a diploma of the University of Havana or of some university in Spain, viséd by the proper authority of the district. Those holding foreign diplomas were obliged to pass an examination or to obtain a temporary license. Since the expulsion of the Spaniards, the *Archivos de la Policlinica* complains, many foreigners have come to the island and begun practice without let or hindrance. Our contemporary naturally holds that such an abuse should be stopped by the authorities now governing the country.

Health Board Appointments.—The following physicians have been appointed medical school inspectors in the borough of Brooklyn: James J. Bowen, Emily C. Charles, John L. Corish, Thomas C. Craig, Peter J. Curren, Charles Herrman, Arthur C. Jacobson, Christopher D. Kevin, George S. Lamont, Forbes J. Munson, Victor Neesen, F. Burton Otis, Herman T. Peck, John H. Rob, Daniel J. Sheehan, Frank C. Skinner, William S. Tromer, R. H. Willis, and George H. Winterburn. The salary of a medical school inspector in Brooklyn is $30 a month. Dr. C. L. Bjerring has been appointed assistant resident physician in the Willard Parker Hospital, at a salary of $100 a month.

What One Medical Man Has Accomplished.—In an article in *The Fortnightly Review* on the work done at Santiago by General Wood, the following catalogue of good deeds is printed: "The conversion of one of the foulest cities on earth to one of the cleanest. The reduction of an average daily death rate of two hundred down to ten. A considerable progress in a scheme of street and road improvement that will add immensely to the convenience and beauty of the city. A radical reform in the custom-house service, resulting in increased revenues. A reduction in the municipal expenses. The correction of numerous abuses in the management of jails and hospitals and in the care of the inmates. The reformation of the courts and a strict maintenance of law and order. The freedom of the press."

The Plague at Mauritius.—It is reported from Port Louis, Mauritius, that the plague has been thoroughly stamped out of the island. Clean bills of health are now being issued.

New Idiots' Home on Randall's Island.—Plans have been filed in the building department for a new idiots' home on Randall's Island. The building will be a plain brick structure three stories high.

The Porous Plaster and liver pill trust is one of the latest combinations to be established. The enormous amounts involved in the transaction is some slight indication of the number of people who put their trust in such preparations.

Dr. Emil Ponfick, professor of pathological anatomy at the University of Breslau, celebrated recently his twenty-fifth-year jubilee of professional life. He had fortunately recovered, just in time for the celebration, from a severe septic infection acquired in the laboratory.

The Northwestern University Woman's Medical School of Chicago.—Dr. Marie J. Mergler has been elected dean of this school, in place of Dr. I. N. Danforth, resigned. Dr. Danforth has been elected dean emeritus. The yearly course has been changed from one of two terms to one of four terms of twelve weeks each, commencing the first of July, October, January, and April. Three terms only will be required each year, attendance during the other being optional. The number of regular students in the school is limited to one hundred, twenty-five in each class. They are admitted to competitive examination for place in class, only after having complied with the requirements of the State board of health.

Tri-State Medical Society of Iowa, Illinois, and Missouri.—The seventh annual meeting of this society will be held at Quincy, Ill., on April 4th and 5th. To judge from the titles of papers announced in the programme, this will be an interesting and instructive meeting. The officers of the society are as follows: *President*, Dr. C. E. Ruth, Keokuk, Iowa; *First Vice-President*, Dr. J. C. Murphy, St. Louis, Mo.; *Second Vice-President*, Dr. George L. Eyster, Rock Island; *Treasurer*, Dr. D. S. Fairchild, Clinton, Iowa; *Secretary*, Dr. J. W. Fowler, Dubuque, Iowa.

An American Commission for the Study of Tropical Diseases.—The Johns Hopkins University has just sent off a scientific expedition to the Far East to study tropical diseases. The party, which started from Chicago on Tuesday of last week, consists of Dr. Simon Flexner, professor of pathological anatomy and resident pathologist of the Johns Hopkins Hospital; Dr. L. F. Barker, associate professor of anatomy and assistant resident pathologist of the Johns Hopkins Hospital; Joseph M. Flint, of Chicago, and Frederick P. Gay, of Boston, who are medical students, and Mr. John W. Garrett, of Baltimore. Among the places

visited will be Yokohama, Kobe, Shanghai, Hong-Kong, Singapore, and Colombo, but most of the actual work of the commission will be done in Manila.

Exemption from Medical Licensing Examinations.—The following, from the report of the board of medical examiners of New York State, defines clearly the position of the board as to the examination of practitioners removing here from other States in which they have already passed an examination and been qualified to practise: "The board again wishes to state clearly its position regarding exemption from examination in individual cases. When candidates who hold a registered literary degree graduate subsequently from accredited medical schools, and are then licensed by other State boards of medical examiners with standards equal to those required by the New York law, they should be permitted to practise medicine in New York State without the necessity of passing another licensing examination, provided the regents are satisfied that examination safeguards have been all sufficient. We wish widely to circulate the information that it is not our purpose to annoy or hamper competent or skilful practitioners of medicine from other States. The intent of the law is to keep out incompetent practitioners, not to make difficult the licensing of those who are qualified. Signed: M. J. Lewi, M.D., *Secretary.*"

Vivisection in the District of Columbia, and a Personal Attack on the Surgeon-General of the Army.—In his wretched attempt to cripple scientific research by a bill prohibiting animal experimentation in the District of Columbia, Senator Gallinger recently invoked the aid of a Dr. Leffingwell, of New York, who prepared for him an argument showing up the alleged cruelty of vivisection. The veracious pamphleteer opens with a slur on a Catholic order, the members of which were said to favor lying, and then a couple of pages beyond he says that he saw, on a visit to the Pasteur Institute in Paris, "scores of rabbits lying in their compartments slowly dying, *with their eyes rotting out* (italics his), the result of inoculations which the American Academy of Sciences informs Congress 'involved less suffering than the administration of an anæsthetic.'" He then attacked Surgeon-General Sternberg as one of the cruel experimenters, and gave an account of certain experiments by him, so worded as to make him out a loathsome creature. To this Dr. Sternberg made the following reply, addressed to the chairman of the committee in the District of Columbia: "The fact is recognized by well-informed physicians throughout the world that the great progress made by scientific medicine during the past thirty years has been to a great extent due to experiments upon the lower animals, and that our exact knowledge with reference to the cause and prevention of infectious diseases of man and domestic animals is based largely upon inoculation experiments, made for the most part upon small animals, such as mice, guinea-pigs, and rabbits. Those who have engaged in such experiments insist that the pain attending the inoculation is trifling and does not call for the administration of an anæsthetic. But no one, so far as I know, has ever denied that as a result of such inoculations there may at times be more or less pain. To give an anæsthetic to an inoculated animal during the time it is under observation to determine the result of the experiment would entirely neutralize the value of the experiment, and a law requiring this would effectually arrest all investigations of this kind. Dr. Leffingwell has referred to certain experiments upon rabbits made by me in the laboratory of the Johns Hopkins University nearly twenty years ago. Those experiments resulted in a very important scientific discovery—that of the germ of pneumonia. If Dr. Leffingwell had consulted a modern text-book of bacteriology he would have found that in the experiments referred to the fatal result in the rabbits experimented upon was due to the accidental presence in my salivary secretions of a pathogenic micrococcus, which has since been proved to be the usual cause of inflammation of the lungs; also that it has since been found temporarily present in the salivary secretions of many other healthy individuals as well as in the pulmonary secretions of persons suffering from pneumonia. Dr. Leffingwell's incomplete account of my experiments, and his incorrect statement as to the cause of the death of the rabbits experimented upon, have been published in the daily newspapers with a view to presenting me to the public as a man of cruel instincts, and also as one who carried in his mouth 'a venom more deadly than that of the viper or the rattlesnake.' Both allegations are false. If I had hunted rabbits with dogs there might have been some foundation for the charge of cruelty. But no one has proposed that the Congress of the United States shall legislate to prevent the wounding and killing of animals for sport, while my experiments made in the interest of science and of humanity are characterized by Dr. Leffingwell and his associates in this crusade against scientific investigation as cruel, and an effort is being made to convince the Senate of the United States that the government laboratories in this city should be placed under surveillance other than that of the bureau officers who, under present laws and regulations, are in charge of them."

Proposed Changes in the New York State Medical Examinations.—The following recommendations have been made to the regents by the board of medical examiners of New York State: "1. That as soon as practicable the subjects of examination be rearranged as follows: (*a*) Pathology and diagnosis, now grouped under one head, to be divided into: 1, pathology; 2, diagnosis. (*b*) Therapeutics, practice, and materia medica, now grouped under one head, to be divided into: 1, practice of medicine; 2, materia medica and therapeutics. (*c*) Anatomy and physiology, now grouped as two topics, to be united on one sheet, the number of questions in both topics not to exceed fifteen. (*d*) Chemistry and hygiene, now grouped as two topics, to be united on one sheet, the number of questions in both topics not to exceed fifteen. 2. That the State medical schools be requested to furnish for the use of the question committee thirty questions on each branch taught by each member of their respec-

tive faculties. 3. That with his application each candidate submit an unmounted photograph to insure identification."

Philadelphia County Medical Society.—At a stated meeting held March 22d, Dr. Joseph Head read a paper entitled "Lancing the Gums, and the Care of the Teeth during Illness, from the Standpoint of the Dental Practitioner," in the course of which he pointed out the reasons for and the wisdom of incising down to the irrupting tooth the gums of children presenting evidences of painful dentition, care being taken first to exclude all other causative conditions. It was also pointed out that when it is necessary to administer acids to patients the ingestion should be followed by the use of an alkaline lotion, or, better, the holding in the mouth for a couple of minutes of some soluble alkaline substance. Dr. E. D. Ferguson, of Troy, N. Y., by invitation of the directors, read a paper on "Cysts of the Urachus," in the course of which he explained their origin from the accumulation of increased secretion by the lining membrane, reporting a case successfully operated on by a most ingenious method. The condition is a rare one in man, the literature scanty, and the results of operation in general are unfavorable. Dr. A. A. Eshner read a report of two cases of erysipelas, one in a girl, fifteen years old, who presented excoriations about the nares, and in whom the condition had existed for more than three months. The appearances were suggestive of ivy-poisoning. The second case occurred in a boy, fifteen years old, in whom the symptoms had been present for some ten months. Abscesses formed upon the head and face and required incision. In both cases pilocarpine was administered, with most satisfactory results, being attended in the case of the girl with the appearance for the first time of the menstrual function.

Pathological Society of Philadelphia.—At a joint meeting with the Philadelphia Academy of Surgery held on March 23d, Dr. A. C. Abbott read a paper entitled "The Relation of the Bile to Infectious Diseases," in which he pointed out that while in rinderpest and snake-poisoning the bile appeared to possess bactericidal or antitoxic properties, in other conditions it appeared not to, as it has actually harbored some bacteria, such as the typhoid bacillus and the bacterium coli commune. The point was emphasized, however, that the biliary secretion had not been studied with the same scrupulous care and the same scientific precision as the blood, and it was believed that if this was done it might be found that the bile possessed vital qualities that confer upon it both bactericidal and antitoxic properties. Dr. John B. Deaver read a paper on "The Surgery of the Biliary Passages," in which he related that in an experience of forty operations for various conditions of the biliary apparatus there had been but six deaths, and these in persons either advanced in years or suffering from a hemorrhagic state due to the cholæmia resulting from the retention of bile. In view of these facts early operation was advised in all cases not susceptible of radical and successful treatment by means of the usual medicinal agencies. Dr. J. P. Arnold related that in a series of experiments with frogs, in which toxic doses of strychnine were administered both in conjunction with and without bile from another frog in various ways and at various times, symptoms of intoxication appeared later and were milder than in animals receiving strychnine alone.

Coroner's Physician.—Dr. William S. Wadsworth has been appointed physician to the coroner's office of Philadelphia in succession to Dr. Henry W. Cattell, resigned.

The Philadelphia Board of Health, after an existence of nearly a hundred years, has been abolished by an act of the legislature, and will be succeeded by a bureau of health, under the charge of a chief officer to be appointed by the mayor.

A Pasteur Institute for Hyderabad has been proposed and a plan formulated and laid before the Nizam. A bacteriological laboratory also is contemplated to replace the temporary laboratory that has been in operation for six or seven years, and in which much good work has already been done, especially in connection with the plague.

The St. Petersburg Institute for Experimental Medicine.—The report of this institution for 1898 states that there were prepared in the laboratory during the year 32,374 vials of diphtheria antitoxin, and the epizootological division furnished 18,085 vials of mallein and 15,984 of tuberculin. There were also made 74,330 c.c. of plague serum and 73,230 c.c. of plague lymph. In the department for the treatment of rabies 422 persons bitten by mad animals, chiefly dogs, were inoculated.

Dr. Edward A. Logan, a graduate of the College of Physicians and Surgeons of this city, lost his life last winter while crossing the Valdes glacier in Alaska. After graduation he began practice in Louisville, Ky., but soon removed to Denver. He went to Alaska about two years ago to prospect in the Copper River region. Last summer he broke the record in crossing the Valdes glacier, where he perished on his return, making the transit in two days.

"The Archives Generales de Medecine" for January shows a decided improvement in its transformation. The cover, print, size, paper, general tone, and scope have been changed, and after seventy-six years of existence the *Archives* begins a new series under most promising conditions. The first number contains a frontispiece portrait of the late Victor Hanot, and an excellent essay by this gifted writer upon Budd's cirrhosis illustrated by two colored plates. It is edited by Simon Duplay, and published by Emile Boix and A. Letienne. We are pleased to wish the *Archives* all success, and extend congratulations.

The Society of the Diseases of the Gastro-Intestines.—The new society of the above title was established in the Dr. S. Nagayo's Hospital of the Gastro-intestinal Diseases in order to study the diseases of the digestive organs. The diseases of the digestive organs have the close relations to other branches of the internal medicine, surgery, and gynæcology; and

as our food and climate are in some degree different from those of Europe and America, there may be also some modifications in the diseases of the digestive organs in Japan from those of Europe and America. The above points are the principal objects to establish the society. The regulations of the society are as following: 1. The society of the diseases of the gastro-intestines is to be organized in the Hospital of the gastro-intestinal diseases. 2. The meeting of the society is to be held once (the third Saturday afternoon) every month, and the address, speech, and discussion relating to the diseases of the digestive organs are expected to be made. 3. The transaction of the society is to be published once every three months (on the fifth days of February, May, August, and November). 4. When some questions regarding to the diseases of the digestive organs are asked by the members of the society they are to be studied in the meeting of the society and answered on the transaction to be published next. 5. Any person who has the government license of the medical practice and has the intention to assist the purposes of the society may become the member of the society. 6. Some learned and popural persons who are considered to be benefit to the purposes of this society are selected to the honorable members. 7. Every member of the society oughts to pay in advance one yen as the society expense at December every year, and at the time when admitted as a member, and to get the ticket of the membership.—*The Sei-i-kawaia Medical Journal.*

An Italian Congress of Hygiene will be held at Como, Italy, during the present year. Professor Baccelli, minister of public instruction, has been named honorary president of the organizing committee, other members of which are Professors Bizzozero and Golgi. An exhibition of hygienic appliances will be held in connection with the congress. The meeting will be made the occasion of a commemoration of Volta.

A Vivisection Play.—M. François de Curel has written a play which was recently brought out in Paris, the hero of which is a physician who places pure science above human life, and experiments with the latter until he gets into a heap of trouble. He has discovered the virus of some mysterious disease which infallibly kills in twelve months. Seeking for a good subject upon whom to experiment with the virus, he lights upon one of his patients, a young and pious maiden who is far gone with tuberculosis. He inoculates her and sets going the train of symptoms which would result in death in a year if the phthisis was not certain to kill her sooner, and then discovers to his horror that she has been to Lourdes and got miraculously cured of her consumption. His wife learns of the experiment and leaves him, and he gets tired and takes a dose of the same virus and begins to make preparations to die on the first anniversary of his wife's departure. Then he discovers an antitoxin and averts the death of his victim, his wife forgives him and comes back, and he concludes to live and so takes some antitoxin himself. The play is called "La Nouvelle Idole," the new idol being experimental medicine, and is reported to have scored a success.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending March 25, 1899. March 18th.—Surgeon C. G. Herndon detached from the *Richmond* and ordered to the *Prairie.* Surgeon C. T. Hibbett ordered to the *Baltimore* via the *Glacier.* March 22d.—Surgeon C. T. Hibbett, orders of March 18th revoked; ordered to the *Baltimore* via steamer of April 12th from *San Francisco.* Assistant Surgeon G. F. Freeman detached from the *Vermont* and ordered to the Washington naval hospital.

Electricity for Insect Bites.—Dr. Friedländer, of Wiesbaden, recommends galvanism to relieve the pain and irritation and to reduce the swelling caused by the bites of insects. The negative electrode is placed over the seat of the sting. It is effective in the case of gnat and wasp stings and would doubtless also be of service in neutralizing the poison of tropical insects.

The Birth Rate in New Zealand.—The last "Official Year Book of New Zealand" shows that the birth rate of that British colony is the lowest in the empire and lower than that of any European countries, except France and Ireland. The birth rate per thousand in 1897 in New Zealand was 25.96; in France in 1895 it was 21.9, and in Ireland 23.2. The New Zealand birth rate has been steadily diminishing for the last quarter of a century. In 1882 the rate per thousand was 37.3, and with a population of 509,000 the actual number of births was 19,202; in 1897, with a population of 721,609, the number of births had diminished to 18,737. The birth rate of Hungary in 1895 was 41.5 per thousand; of England and Wales, 30.4.

Willing to be Saved.—The "Peculiar People" in England are the members of a sect who have always proclaimed their conscientious objections to ward off the scourges of the Lord, in the shape of bodily disease, by other than spiritual means. Recently, however, their aversion to scientific medicine has resulted in the "removal" of several children among their number to other worlds, and, in consequence of the "judicial censure" which this untoward event has caused them to be visited with, the elders of the sect have decided to allow their followers to summon medical aid hereafter in case of the serious illness of children.

The Late Dr. W. A. Heacock.—At the meeting of the Harlem Medical Association, held March 13, 1899, it was unanimously

"*Resolved,* That this association has learned with deep sorrow of the recent death of their co-member, Dr. Willard A. Heacock. His early demise fills us with sorrow, as we are confident that a brilliant future awaited him because of his assiduous attention to his life work.

"*Resolved,* That these resolutions be spread on the minutes of this association, published in the medical journals, and that a copy be sent to his family.

"EMIL MAYER, A. C. GOODMAN, E. J. GRAFF, JR., *Committee.*"

Reviews and Notices.

A SYLLABUS OF MATERIA MEDICA. Compiled by WARREN COLEMAN, M.D., Instructor in Clinical Medicine and Materia Medica in Cornell University, Medical Department. One volume, 16mo, 175 pages. New York: William Wood & Company.

FOR so little a book this side-pocket edition contains much useful knowledge. Besides "The Actions and Use of Drugs," there are chapters on "Preparations," "Classification of Drugs," "Various Groupings," "Drugs Known by Common and Other Names," "Dosage," "Easy Method of Writing Prescriptions," etc. The object aimed at is to bring the drug and the dose in different ways before the student; the repetition will assist him in mastering this dull and difficult, though essential branch of preliminary medical education.

A TEXT-BOOK OF MECHANICO-THERAPY (MASSAGE AND MEDICAL GYMNASTICS). Especially Prepared for the Use of Medical Students and Trained Nurses. By AXEL V. GRAFSTROM, B.Sc., M.D., Late Lieutenant in the Royal Swedish Army; Late House Physician, City Hospital, Blackwell's Island, New York. With Eleven Pen-and-Ink Sketches by the Author. Pp. 139. Philadelphia: W. B. Saunders. 1899.

THIS volume gives to the profession a concise description of the various movements employed in mechano-therapy, with the physiological results obtainable in each, thus allowing the practitioner to judge better which method or movement to employ in local or general disease. Special chapters are devoted to the exercises which are of value in diseases of the respiratory organs, cardiac disease, rheumatism and gout, urinary organs, constipation, obstetrics, etc. The book can be commended as practical and interesting,

TRAITÉ DE LA DYSURIE SÉNILE. Par VICTOR ROCHET, Professeur agrégé de l'Université de Lyon, etc. Paris: G. Steinheil. 1899.

SENILE dysuria in all its phases is exhaustively treated by the author of this work, who approaches his subject logically from the standpoint of the normal and pathological histology of the urinary tract, and then proceeds to symptomatology. Prostatic hypertrophy, its results and complications receive proper attention, but the greatest interest centres about the author's views upon the treatment of this ailment. The medical treatment is dismissed with a few remarks upon hygienic and dietetic indications, as the author "does not believe in the efficacy of ergot, the iodides, or prostate-gland extract." Under surgical measures, although recognizing the fact that castration of animals often causes in them an atrophic fibrosis of the prostate, his experience with the procedure in man has been such that, notwithstanding the favorable statistics of certain operators, he does not consider its claim to recognition sufficiently established, and prefers Bottini's method with the galvano-cautery. The tone of the whole work is conservative, and this fact rather increases its value to the general practitioner as well as to the surgeon.

A MANUAL OF PHYSIOLOGY, WITH PRACTICAL EXERCISES. By G. N. STEWART, M.A., D.Sc., M.D. Edin., D.P.H. Camb.; Professor of Physiology in the Western Reserve University, Cleveland; Formerly George Henry Lewes Student; Examiner in Physiology in the University of Aberdeen; Senior Demonstrator of Physiology in the Owens College, Victoria University, etc. With Numerous Illustrations, including Five Colored Plates. Third Edition. Pp. 848. Philadelphia: W. B. Saunders. London: Baillière, Tindall & Cox.

THE third edition of this work differs from its predecessors chiefly in the additions to the Practical Exercises. The author has, however, rewritten many portions, and where he deemed it possible has omitted and abridged others. As a text-book to accompany laboratory work it is especially to be recommended, for great pains have evidently been taken to explain the methods and precautions so necessary for experimentation in physiological investigation. At times we feel the need of more complete data, but their presence in every instance would have defeated its purpose of being a text-book for the medical student; and as such it proves to be easily understood and interesting without being burdensome, a most important consideration when trying to arouse the attention of beginners. The plates are numerous and well-chosen, and include five in color, each of the latter illustrating several subjects.

THE PSYCHIC LIFE OF MICRO-ORGANISMS: A Study in Experimental Psychology. By ALFRED BINET. Translated from the French by THOMAS MCCORMACK. Pp. 120. Chicago: The Open Court Publishing Company. 1889.

THE author has written a most instructive little volume in which are weighed the various evidences of the existence of psychic manifestations in micro-organisms. He has herein written the results of his observations, and such examples as he quotes certainly seem to uphold his contention that freedom of choice, independent of environment, exists in unicellular organisms.

A POCKET MEDICAL DICTIONARY, giving the Pronunciation and Definition of the Principal Words used in Medicine and the Collateral Sciences, including very Complete Tables and a Dose-List of Drugs. By GEORGE M. GOULD, A.M., M.D., author of "The Illustrated Medical Dictionary," "The Student's Medical Dictionary"; editor of the *Philadelphia Medical Journal*; President, 1893–1894, of the American Academy of Medicine. A new edition, entirely rewritten and enlarged. Philadelphia: P. Blakiston's Son & Co. 1898.

THIS new edition of Gould's abbreviated dictionary reverses the figures on the cover of the first edition, the claim being made that the book contains definitions of twenty-one thousand words, instead of twelve thousand which was the modest assertion first made. It is very possible that the compiler's claim is fairly correct, but if the obsolete, impossible, and non-medical terms were cut out the book would shrink again quite close to its original dimensions. A comparison of this with the larger dictionaries arranged by the same compiler shows it to contain many, if not all, of the errors found in the larger books, and some others peculiar to itself. The definitions are especially incomplete and unsatisfactory, although the spelling is pretty bad.

ATLAS OF EXTERNAL DISEASES OF THE EYE. By A. MAITLAND RAMSAY, M.D. Fellow of the Faculty of Physicians and Surgeons, Glasgow; Ophthalmic Surgeon, Glasgow Royal Infirmary; Professor of Ophthalmology St. Mungo's College, Glasgow; and Lecturer on Eye Diseases, Queen Margaret College, University of Glasgow. With 30 full-page colored plates, and 18 full-page photogravures. The Macmillan Company, Publishers.

THE work is complete in one large, handsomely bound volume of one hundred and ninety-five pages, exclusive of the plates. The text is in large type and is printed on heavy paper. The volume corresponds in size and style to Frost's atlas, "The Fundus Oculi," published by the same firm.

The author in the preface makes the following statements, "The plates in this atlas are, with the exceptions mentioned in the text, executed from photographs of actual cases. . . . Obviously photographs present only the phase of the disease existing at the time, and leave preceding and subsequent stages unrepresented. I have therefore endeavored to make the letterpress not only descriptive of, but also complementary to, the plates, so as to give as faithful a clinical picture as possible of all the diseases dealt with."

The plate illustrating a condition accompanies the descriptive text, a very excellent feature. The description of a disease or condition is preceded by the name employed by English ophthalmologists, its etymology, a short definition of the disease described, and the synonym in French, German, and Italian. A simple, direct, clear, and complete description follows. The text is of a high order, the exposition of the subject being fully up to date. The cases for illustration have been well chosen. Diseases of the eyelids, of the conjunctiva, of the frontal and ethmoidal sinuses, of the cornea, the sclera, the globe, the iris, the lens, the orbit, intra- and extra-ocular tumors, etc., are treated of; in fact, the work is virtually complete. The plates, which are photogravures and chromo-lithographs, are excellent and strikingly present the conditions which they illustrate. The volume is one that will be of great value to the full-fledged ophthalmologist as well as to the student in ophthalmology. The elaborate and beautiful manner in which the work has been produced will cause it to be a valuable and handsome addition to any medical library that is fortunate enough to possess it.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, March 20, 1899.

LOUIS FAUGÈRES BISHOP, M.D., CHAIRMAN.

A Case of Spinal-Cord Disease Presenting Unusual Symptoms.—DR. WILLIAM M. LESZYNSKY presented a man, thirty-five years of age, a carpenter by occupation, who had been first seen by him on May 26, 1898. He had been in perfect health up to June, 1896, at which time he had fallen from a considerable height, striking on his buttocks. Immediately afterward he had been paraplegic, and had had no control over the bladder and rectum. There was now incomplete paraplegia, with slight spasticity affecting the adductor muscles of both thighs. There was a loss of the pain sense and temperature sense, with preservation of tactile sensibility. At one time this had been supposed to be characteristic of syringomyelia, but it was now known to occur in connection with several other disorders. The most unusual feature in this case was the absence of the knee-jerk and the presence of ankle clonus. The speaker said there had been only twelve cases reported in which this condition had been observed. If the ankle clonus were looked upon simply as an exaggeration of the Achilles reflex, the matter would be simplified a good deal. This patient also presented an extremely rare condition, *i.e.*, a gluteus medius clonus. The man had evidently had a hemorrhage into the spinal cord in the lumbar region, which had resulted in the cutting off of the reflex arc of the knee-jerk. Below this point the hemorrhage had done no harm, and the descending degeneration had taken place in the lateral columns of the cord. It was possible also that there was a cavity formation in the cord, accounting for the peculiar sensory symptoms present.

Observations on the Treatment of Hay Fever.—DR. BEMAN DOUGLAS read this paper. He said that this disorder seemed to have been far more severe last summer than in previous years. He had seen all the well-marked symptoms of an attack of hay fever develop within the space of two minutes. The general symptoms were often overlooked, but they were nevertheless very important, in his opinion, and indicated a deeper seat for the affection than simply the local process in the nose. The characteristics usually began about August 20th, in this climate, and reached their maximum in two weeks. There were two grand divisions of these cases, viz., (1) Those having nasal lesions, and (2) those free from such lesions. There was but little difference in the course and duration of the disease in these two forms, but the cases presenting no nasal lesions were decidedly in the minority. It was difficult indeed to understand why some people suffering from nasal obstruction were not in the least affected by dust irritation or the pollen of flowers, while others, with no discoverable nasal defects, could not tolerate such irritation at all. It would seem probable that some cases of hay fever resulted from the action of outside irritants on nerve filaments rendered hypersensitive by vicarious elimination. It was not difficult to believe that the removal of obvious nasal lesions would afford some relief in hay-fever patients, but it should not be forgotten that even then a hypersensitive condition still remained and demanded treatment.

Treatment.—The treatment naturally divided itself into four parts, viz.: (1) The treatment of the cause; (2) local and general treatment of the attack; (3) treatment of the general symptoms, and (4) treatment between the attacks. Seventy-four different kinds of pollen had been found capable of giving rise to hay fever. Many patients did well in high altitudes, or on islands about twenty miles from the mainland. The vasomotor disturbances should be treated by daily cold sponging and spinal douches, and by the internal administration of small doses of quinine and digitalis. Many nervines had been recommended, but the speaker had found them of but little value, and would especially warn against the use of opium. His chief dependence was upon the proper use of exercise, rest, and change of occupation and environment. Careful attention to the diet and to the elimination by the kidneys would aid the other measures very materially.

Treatment of the Attack.—At the present time patients need no longer seek a residence far from home in special districts. The local symptoms could now be controlled and the general symptoms combated with success. The local treatment consisted in cleansing the membrane of irritating pollen, mucus, or pus, relieving the hypersensitiveness of the parts, and restoring the tone of the overdistended blood-vessels. The home treatment should be directed toward keeping down the irritation, restoring the blood tone, and protecting the mucous membrane. For cleansing the membrane, a douche of decinormal saline solution at a temperature of 106° to 114° F. should be used. The nose should be first sprayed with a one-per-cent. solution of cocaine, and the bag of the syringe should be placed six inches above the bent head, and the patient instructed to breathe deeply and freely. If this were done, and efforts at swallowing were avoided, the fluid would flow through freely. About two quarts of the hot salt solution should be used, and this should be followed by the application of a four-per-cent. solution of cocaine applied on pledgets of cotton packed against the offending parts for only four minutes, and then removed. After this, nitrate of silver, in the strength of ten grains to the ounce, could be used, or phenol-camphor (two parts camphor and one part carbolic acid), or Clarke's solution (one grain of bichloride of mercury, one drachm of the muriate of quinine, and one ounce of glycerol of carbolic acid of the British Pharmacopœia). The home treatment should consist in the use by the patient of the hot douche after having been carefully instructed in its use. After the subsidence of the acute symptoms, an oily spray was desirable, a favorite combination being two grains of menthol and one grain of eucalyptol, in one ounce of benzoinol.

Suprarenal Extract.—A most important internal remedy was a rather new preparation—the dried extract of the suprarenal gland. In his experience it had proved almost a specific for the symptoms of hay fever. The remedy was used in a spray of the watery solution, or was given internally in the form of a compressed tablet. By either method its action was very satisfactory. The tablets should be given to adults every two hours, day and night, until some prostration or dizziness was felt, or until examination of the nasal mucous membrane showed that the vasomotor paralysis had been controlled. After this the remedy should be given at intervals of from three to six hours, and finally two doses a day should be kept up throughout the hay-fever season. If a spray was employed, it should be used every three hours. Under its continued administration the patient remained comparatively comfortable throughout the attack. During the intervals between the attacks, if systematic attempts were made to remove all defects in the nasal passages, a fair percentage of cases could be cured, unless heredity played a conspicuous part, when cure was impossible.

Constitutional Treatment Most Important.—DR. DWIGHT L. HUBBARD said that no one could claim to

know very much concerning the etiology and curative treatment of hay fever, as our entire knowledge of this subject was quite meagre. He had been pleased with the emphasis laid in the paper upon the relation of the body, as a whole, to the conditions found in the nose. He believed these attacks of hay fever could be modified by nasal treatment, and certainly the irregularities should be corrected; but when the case was a neurosis the treatment belonged to the domain of neurology rather than of rhinology. The disease did not always have the periodicity that many supposed; he had in mind a case in which the interval was anywhere from three days to three weeks, and lasted anywhere from a few minutes to an hour. In this case, the most marked benefit had followed the use of general tonics after the nasal defects had been relieved. He was not a strong believer in the pollen theory, for, in the cases exhibiting this kind of irritation most prominently, he had almost always been able to produce such attacks by mechanical irritation with a pledget of cotton at certain sensitive points. He did not believe, in other words, that it was so much a particular kind of pollen as the irritation resulting from the lodgment of the pollen that gave rise to the attacks. He had seen several cases in which dental irritation had been responsible for the attacks of hay fever. In these instances appropriate treatment of the teeth and of the general health had stopped the attacks of hay fever, and they had not returned until the patient's health had again become deteriorated and the dental disease had returned. When there was much congestion of the pharynx sodium salicylate seemed to have a specially good effect, as did also the iodides, or, still better, Lugol's solution of iodine in doses of five to twenty drops, well diluted with water.

Use of Cocaine Deprecated.—The speaker deprecated very much the use of cocaine in the treatment of hay fever, for, he said, the patients would soon learn what it was that gave them so much relief, and they would employ it. A solution of antipyrin would produce nearly the same result. A still better effect could be obtained by the introduction of cold air under moderate pressure. In using the actual cautery in the nose, a sharp edge only should be employed, and it should be just at a cherry-red heat. The applications should not be made broadly over the hypertrophied surfaces, but should be in the form of multiple and distinctly linear applications.

Nasal Obstruction and Deficient Oxidation.—Dr. D. H. Goodwillie said that as he believed hay fever to be a general disease he was glad that this paper had been presented to the Section on Medicine. A case was cited of a clergyman in whom the attacks were specially excited by riding behind horses or by certain alkaline dust. Examination showed extensive pleuritic adhesions in addition to considerable nasal obstruction, necessitating mouth-breathing. This obstruction to respiration had so interfered with oxidation that his general health had become greatly deteriorated. By relieving the nasal obstruction and giving proper attention to the diet, this patient had been wonderfully improved. He thought the part played by pleuritic adhesions in the production of the disorder under discussion was not generally appreciated.

Hay Fever a Neurosis.—Dr. W. M. Leszynsky objected to the term "hay fever," and thought the case referred to by Dr. Hubbard was really one of "paroxysmal sneezing." He knew, he said, of a number of neurotic individuals who suffered so much from attacks of sneezing and hydrorrhœa as to prevent them from attending to their business for some time. He knew of four or five persons who whenever they drank coffee suffered from sneezing and coryza for two or three hours afterward. He had suffered similarly himself from attacks of sneezing for some time after an attack of the grippe, and the same had occurred among several of his medical acquaintances. He felt that hay fever must be looked upon as a neurosis. For a long time he had been inclined to look upon the specialist in diseases of the nose and throat as a practitioner of a rather narrow specialty, but this evening his mind had been disabused of this view, for he had learned that some of them were good general practitioners as well. He believed all cases of hay fever required constitutional treatment. Some of these patients had told him that there had been such a severe reaction after the cocaine as to increase their distress. He was sure that auto-intoxication played a very important part in hay fever.

Carbonic-Acid Gas in Rhinitis.—Dr. Achilles Rose advocated strongly the use of the carbonic-acid-gas douche as a substitute for cocaine. He declared that it possessed none of the disagreeable after-effects of the latter, and that the benefit was more enduring. It relieved both the hypersecretion and the hypersensitiveness, and was perfectly harmless.

Therapeutic Possibilities of a Bottle of Seltzer.—Dr. Douglas, in closing the discussion, said that he had recommended in his paper the use of the alkaline douche; Dr. Hubbard had advocated the use of cold, and Dr. Rose had spoken in favor of the douche of carbonic-acid gas. He, therefore, felt that all of these therapeutic measures might be economically and conveniently combined by using a siphon of seltzer on hay-fever patients. He had examined microscopically the discharges from very many cases, and had been unable to find the pollen even in cases in which the attacks had been precipitated by smelling flowers. He had spoken of pollen as a cause, but was inclined to believe that it was something else emanating from the flowers. His results from the use of suprarenal extract had been so very remarkable that he hoped it would be given a thorough trial.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, March 20, 1899.

Frederick Holme Wiggin, M.D., President.

A Large Uterine Fibroid.—Dr. Frederick Holme Wiggin presented a single woman, forty-one years of age, from whom he had removed a large uterine fibroid at the City Hospital. She had first come under observation on September 30, 1898, having suffered from profuse menstruation for two years previously. She stated that she had noticed during the past twenty years a gradual enlargement of her abdomen. The tumor had been removed by him on October 3d, through an incision six inches in length, beginning two inches above the pubes, and situated to the right of the median line. The tumor had been removed together with the uterus, the latter being amputated at the internal os. The growth had sprung from the anterior uterine wall. During the removal of the uterus and tumor there had been such a free hemorrhage from some of the calcified sinuses on the wall of the tumor, that it had been necessary to work very rapidly, and while doing this the fundus of the bladder had been accidentally cut open. After proper irrigation and cleansing the bladder was carefully sutured from the inside with catgut, and a peritoneal flap from the tumor dissected up and used to cover over the line of suture in the bladder. A self-retaining catheter had been placed in the bladder, and for ten days everything had gone well. Urine had then begun to escape from the lower angle of the wound, necessitating the formation of a vesico-vaginal fistula. The patient had ulti-

mately made a good recovery. The tumor was hard, nodular, and calcified in many places, and weighed seventeen pounds.

Dr. Thomas H. Manley congratulated Dr. Wiggin on the magnificent result he had obtained, and commended especially the plan of making a vesico-vaginal fistula and taking advantage of gravity without inflicting serious traumatism. He called attention to the fact that a recent writer had claimed that, when there was a large fibroid obliterating the cervix, great caution must be exercised in removing it, because in most instances the fibroid caught up the ureters.

A Fibro-Myxoma of the Pharynx.—Dr. Francis J. Quinlan exhibited a large fibro-myxoma that he had removed six weeks previously from the pharynx of a young girl who had suffered from difficult deglutition for a long time. She was extremely emaciated on coming under observation, and stated that for eight years she had been unable to assume the recumbent position because of the presence of this growth. The tumor had involved the larynx itself, resting upon the inner wall of the epiglottis. He had removed it by slowly tightening the snare. At the end of three days the girl had been able to leave the hospital, and she had been gaining three pounds a week since the operation. The operation had been done under cocaine anæsthesia, by first spraying a two-per-cent. solution of suprarenal extract through the nostrils, and following this with the cocaine. The operation had been both painless and bloodless.

A Blighted Ovum.—Dr. Charles I. Proben presented a specimen of blighted ovum obtained from a woman, twenty-eight years of age, who had been five months pregnant. Two months before she had come under observation there had been a severe hemorrhage, with nausea and vomiting. This hemorrhage had ceased after the patient had rested in bed for a few days. After an interval of two months, during which it was supposed that the pregnancy was advancing normally, a low form of anæmia had appeared, and she had lost flesh rapidly. Suddenly there had been a severe flooding, accompanied by rhythmical uterine contractions, and a temperature of 102° F. After two days the tumor had been expelled *en masse*, and her recovery had been uninterrupted. There was no history of syphilis. It was probable that the first hemorrhage had been sufficient to dissect off the membranes, and that the blood had gradually become organized, forming the dense walls of the mole.

An Artery Clamp.—Dr. Proben exhibited an artery clamp obtained from Montreal a year ago. Where the tissues were very dense, such as the periosteum or pericranium, it was quite serviceable, but for ordinary purposes it was not well adapted.

Images from Porto Rico.—Dr. Proben also exhibited a number of images which, having been blessed by the priests in Porto Rico, were worn by the native women during pregnancy in order to secure healthy children, or those of the special sex desired.

Dr. S. F. Brothers said that the case of blighted ovum reminded him of a case in which a woman had claimed that she had had an abortion, had flooded after it, and had been curetted by another physician. On examination, he had decided that the uterus had not been completely emptied. Ergot had been ordered pending a curettage on the following day, but before the operation could be done the uterus expelled a six months' placenta and a blighted ovum.

Dr. F. N. Nye also recalled a case.

A New Urethroscope.—Dr. Ferd. C. Valentine presented a new urethroscope which he had devised, and demonstrated its action. He said that there were three principal classes of urethroscopes: (1) The tube using reflected light; (2) that using reflected light from a prism, *e.g.*, the Caspar and Otis urethroscopes; and (3) those using direct light, *e.g.*, the Oberländer. In the instruments of the last class the illumination was the most intense, but the use of the Oberländer instrument was attended in practice by much inconvenience. His own modification of this instrument, although provided with no water-cooling attachment, could be used for over thirty minutes in the urethra without causing discomfort. The illumination was obtained from a tiny electric light, and while this light was in position almost any operation or manipulation could be carried out.

Report of a Case of Successful Excision of a Gastric Ulcer.—Dr. Hermann Grad presented this report. He said that in May of last year he had been asked by Dr. M. Asher, of Newark, to perform an exploratory gastrotomy, and, if the diagnosis of gastric ulcer was corroborated, to excise the ulcer. With the aid of a bag made of linen he had been able to satisfy himself that the stomach could be explored, and its contents prevented from escaping. The patient was thirty-two years of age, and had suffered for several years from pain and nausea, and occasionally from vomiting after the ingestion of food. The usual methods of treatment for gastric ulcer had been tried with but little benefit. After operation the patient had been fed for a few days by the rectum, and then cautiously by the mouth. Recovery had been rather slow, but now, eight months after operation, she was at work, and in fair health. Lavage of the stomach had been carried out about half an hour before the operation, and careful aseptic surgery had been practised throughout, including the use of sterilized rubber gloves. The incision was made parallel to the free border of the ribs on the left side, and about an inch and a half below this border. Its length was a little over four inches. Before incising the stomach, and in order to get proper control of the part to be incised, a suture was so introduced subcutaneously around the proposed line of incision as to leave a series of projecting loops which could be wound around a circle of wire. This gave the necessary support before making the incision. The ulcer was about half an inch in diameter. A purse-string suture of catgut was introduced beneath the serous coat opposite the location of the ulcer, and on drawing this taut the ulcer was made prominent. The puckered-up mass, consisting of the serous, muscular, and mucous coats, was then excised, and the bleeding points were tied. After proper suturing the stomach was returned into the abdominal cavity, and the abdominal wound was closed. The operation lasted over two hours, and at its close the pulse was 140 and there was considerable shock. However, she rallied after a few hours.

Indications for Operation.—Dr. Parker Syms opened the discussion. He said that the treatment of gastric ulcer by operative procedure was a well-recognized method of the present day, although, of course, the vast majority of simple ulcers of the stomach would heal without such treatment. The indications for operation were: (1) When a case was not benefited after the usual medical methods had been persisted in for a reasonable length of time; (2) when there were urgent symptoms present, such as severe and uncontrollable hemorrhage, or frequent bleeding, seriously affecting the general health, or when perforation of the stomach seemed imminent, indicated often by a more or less pronounced localized peritonitis around the stomach; (3) when emaciation was progressive and the patient could not be nourished without such radical treatment. The method described in the paper of holding open the stomach was to him a novel one, and seemed worthy of imitation. The closure after the excision could be best accomplished, in his opinion, by the Maunsell method of suture; it could be done entirely from within the stomach wall.

Dr. John F. Erdmann said that the surgical world owed a great deal to Dr. Grad for this method of controlling the stomach; it was novel and most ingenious. The method of closing the wound in the stomach after excision resembled very much that of Maunsell. The mortality of non-perforating ulcer being about fifty per cent., and the mortality from operative interference being practically *nil* at the present day, there was evidently good reason for operating in cases presenting the indications given by the last speaker.

Perforating Ulcer of the Duodenum.—Dr. Erdmann presented, in this connection, two specimens bearing on the symptomatology of gastric ulcer. One specimen had been taken from an Italian, thirty years of age, who had been seized at 9 A.M. with sharp abdominal pain. When first seen, thirty-six hours later, there had been marked shock and toxæmia, and the symptoms had pointed to appendicitis. A perforation of the first portion of the duodenum was discovered. There were no blood and no food in the peritoneal cavity. The second specimen had been taken from an Irishman, forty years of age, who, while at work early in the afternoon, had been seized with sharp pain directly beneath the xiphoid cartilage. When seen, twenty hours later, there had been general shock and septic toxæmia, and the abdomen had been enormously distended. On exploration, a perforation of the duodenum, almost at the same spot as in the other case, had been found, without escape of food into the abdominal cavity. Both patients had died within a few hours after operation.

Dr. Manley said that a recent English writer had reported sixteen cases of perforating ulcer of the stomach that had been recognized in the early stages and had been operated upon within twenty-four hours, without a single fatality. This showed how tolerant was the stomach of surgical procedures. He thought, however, that there should be almost incontrovertible evidence of perforation before operation was resorted to. If the perforation was on the posterior wall and near the cardiac opening, the operation would be a most difficult one. Under ordinary circumstances the wire arrangement used by Dr. Grad for supporting the stomach was not desirable, as it prevented thorough inspection of the organ in an upward direction.

Dr. F. Ferguson said that he had found in the dead-house very few ulcers in the location described by the reader of the paper; they had usually been between the middle of the stomach and the pylorus—just the location in which it would seem to him the greatest difficulty would be experienced in operating. They were very frequently situated in the pyloric ring, or just beyond it in the duodenum, and here, he thought, operation would dangerously narrow the calibre of the gut. Some time ago he had made an autopsy on a girl who had been supposed to be suffering from black measles. This had been followed by hemorrhage from the stomach. He had found one of the large arteries occluded, and about one pint of blood in the stomach. In another post-mortem examination there had been nearly one quart of blood in the stomach, yet both of these cases had been simple ulcers of the stomach.

The Diagnosis and Treatment of Fluid in the Pleural Cavities.—Dr. Louis Faugères Bishop read this paper. He said that the importance of a serous effusion into the pleural cavity depended chiefly upon the quantity. The diagnosis of such effusions was often very difficult because of the varying physical characteristics of the adjacent tissues, and even those most expert in physical diagnosis very commonly resorted to exploratory puncture. The classical signs were: flatness on percussion, the absence of vocal fremitus, and the absence of breath sounds. The first of these was the most constant. The absence of sounds was in itself most annoying because of the difficulty experienced in actual practice in getting the patient to make proper respiratory movements. When in doubt, exploratory puncture should always be made, for when properly carried out it was free from risk. The needle selected for this purpose should be three inches long and of small calibre, and the syringe should be large enough to contain about half an ounce of fluid. The physician was often misled if he contented himself with a single negative puncture. Fluid could be successfully aspirated from the upper part of the chest, the lung expanding to take the place of the fluid. Personally he preferred the Dieulafoy aspirator, because of its greater power and superior construction.

Dr. John Blake White said that all diseases tending greatly to depress the vitality—*e.g.*, typhus fever, phthisis, prolonged bronchitis, measles, scarlet fever, etc.—were prone to give rise to pleuritic effusion. In the condition of debility following mental worry, pleuritic effusion was a common complication. There was not usually a sharp attack, but it was prolonged. The quality of the fluid and the amount of distress caused by its presence were the chief factors in determining the importance of a given effusion into the pleural cavity. When the fluid accumulated rapidly, it was not well tolerated, and the signs and symptoms were exaggerated. The kind of flatness found in cases of pleuritic effusion was hard to describe, but was readily appreciated by those who had had experience with it. It was not uncommon in children for the respiratory sounds to be transmitted down through the fluid, so that unless this fact was borne in mind the physician was liable to be led astray. Exploratory puncture by means of a hypodermic needle would prove disappointing in perhaps eighty per cent. of cases because of the minuteness of the calibre of such a needle; he accordingly made it a rule to use a larger needle in order to secure trustworthy results. He personally preferred the Potain to the Dieulafoy aspirator. When the lung was considerably compressed by the fluid one sometimes observed a peculiar resonance over the unaffected lung; it resembled very much the percussion-note obtained over a cavity.

Dr. George Tucker Harrison said that pleurisy had assumed a special importance because of its frequent occurrence as a complication of the grippe. Aside from those forms of pleuritic effusion arising from disease of the heart and kidneys, he believed that all pleuritic effusions were the result of infection with micro-organisms—streptococci, staphylococci, pneumonia diplococci, and tubercle bacilli. The operation of exploratory puncture seemed to many so simple that they neglected well-known aseptic precautions. This was a great mistake. The site of the proposed puncture should be cleansed with soap and water, ninety-five-per-cent. alcohol, and a 1:1,000 solution of corrosive sublimate, successively. The needle should be sterilized by passing it through the flame of an alcohol lamp. When the effusion was purulent, incision and thoracotomy were indicated. When all of the effusion was withdrawn, severe hemorrhage sometimes occurred.

Dr. J. E. Traub said that an important aid in the diagnosis was a consideration of the relation of the heart to the effusion in the pleural cavity, the heart being displaced toward the sound side when there was much effusion in only one pleura. Some patients would tolerate a large quantity of fluid, while others demanded operative interference with comparatively small quantities of fluid. If the effusion had been in the pleural cavity a very long time, the prognosis was bad. In one such case coming under his observation, the patient had been markedly relieved by the operation, but had died of tuberculosis six months later. He had just seen that day a policeman, forty years of

age, who four years ago had had a slight pleuritic effusion, and had apparently recovered from it. During the last two years there had been more or less dyspnœa on exertion, and an old empyema had just opened spontaneously. In cases of tuberculous pleurisy the accumulation of fluid was much more rapid than in the other forms of pleurisy.

Dr. M. C. O'Brien said that the subject of pleurisy came before the physician so frequently for investigation that it seemed a wise rule to examine the chest in all cases in which the diagnosis was in doubt. The back should be explored with special care, the patient being in the sitting posture and leaning somewhat backward so that the fluid would fall against the posterior wall of the chest. It was often so exceedingly difficult to distinguish between varying grades of dulness and flatness that he had been in the habit of resorting to the exploratory puncture quite freely, using a large needle. It was his practice to put ten to twenty drops of sterilized water in the syringe before introducing the needle, so that, if no fluid were obtained, pressure on the piston would force this sterile fluid into the track of the needle, clearing it out. One should not hesitate to make several punctures when necessary.

The Effect of Atmospheric Changes on the Hearing in Chronic Catarrhal Otitis Media.—Dr. Seymour Oppenheimer read a paper with this title. He said that the normal ear was practically uninfluenced by changes in the weather. Catarrhal states of the tympanum and of the pharynx must be regarded as different states of the same disease. Changes in the atmospheric tension caused hyperæmia of the mucous membranes generally, and especially of the respiratory tract. Marked congestion and swelling, with increased secretion, resulted. In bright, clear weather, with a normal or rising barometer, capillary congestion did not take place, and there was no obstruction to the passage of air through the nares. The air in the tympanic cavity was practically changed by each act of swallowing. The speaker said that the term "chronic sclerotic otitis media" was more accurately descriptive of the changes observed than was the more usual designation, "catarrhal deafness." The present paper was founded on observations in fifty cases, thirty-one of which were in females and nineteen in males. Although the hearing was less in older persons, other things being equal, there was no direct relation between the age of the patient and the impairment of the hearing. Of the fifty cases, eleven had presented every evidence of a general atrophic condition of the tympanum, and in all of these the hearing had been greatly impaired. All had given evidence at the time of examination that barometric changes did not affect the hearing. Thirty-two of the patients had complained of nasal obstruction, especially marked in rainy weather. Three factors in the climatic conditions exerted more or less influence, *i.e.*, humidity, barometric pressure, and temperature. Patients with catarrhal deafness usually stated that they were worse in the winter months; the reason was probably to be found in the excessive dampness of these months and the favorable conditions for the development of catarrhal states.

Dr. Edward B. Dench, present by invitation, said that the same process which might affect the nasopharynx or nasal passages, causing subacute or chronic inflammation, might also affect the tympanic cavity independently. It was chiefly when the labyrinth was involved that audition was interfered with as a result of a lowered condition of the general health. In his opinion, atmospheric changes invariably affected those suffering from hypertrophic inflammation of the tympanic cavity; in atrophic or sclerotic cases this was not observed to any extent. Recurrent inflammations of the tympanum could always be referred to some condition of the upper air passages, and therein lay one of the strongest reasons for treating the upper air passages in these cases.

Dr. C. G. Coakley, being invited to take part in the discussion, said that there could be no question that atmospheric conditions decidedly affected the power of hearing. It was rather a combination of low temperature and moisture, acting to depress the capillary circulation of the skin, thereby producing a sense of chilliness, and a consequent congestion of the middle ear, that accounted for most of the changes in the hearing observed. Catarrhal affections of the middle ear were not necessarily associated with conditions in the nasal passages, although similar atmospheric states produced congestion in these two regions. The body could be inured to atmospheric changes by daily cold sponging or douching of the head and neck, together with certain well-known precautions as regards diet and general habits of life.

Dr. Edward Fridenberg said that in the treatment of these aural conditions one's principal reliance must still be the treatment of the naso-pharynx. In the advanced cases studied by the reader of the paper the atmospheric changes could hardly be considered of much importance.

Dr. Francis J. Quinlan thought there was a closer union between the nasal and pharyngeal cavities than many seemed to believe. Many persons suffering from more or less obstruction of the nose or throat were thoroughly and indeed painfully cognizant of the very great influence of atmospheric changes upon these parts of the body.

Dr. Oppenheimer, in closing the discussion, said that chronic catarrhal otitis was undoubtedly a local affection, but when these cases came to the otologist they were generally well advanced. It must be admitted that when there were advanced sclerotic and atrophic changes present, a cure was rare, although the tinnitus might be relieved and the acuity of hearing might be slightly improved. He thought that about ninety-five per cent. of all cases of chronic catarrhal otitis had manifested at some previous time some catarrhal manifestation of the nares or pharynx, and that one's hope in the future, in attempting to relieve the condition, was to be found, not in the prophylaxis referred to by Dr. Coakley, but rather in the early recognition and prompt eradication of these catarrhal manifestations as they showed themselves in childhood.

Planting Trees in City Streets.—Dr. Stephen Smith spoke of the advantages, sanitary and otherwise, accruing from the systematic planting and cultivation of trees in the streets of our cities, and pointed out, as brilliant examples of what might be accomplished in this direction, the condition of Paris and our own city of Washington. He then introduced a memorial to the New York legislature, which was unanimously adopted by the association, and copies of it were ordered sent to the members of the legislature from this city. This memorial commends to the favorable notice of the legislature Senate bill No. 612, which extends the jurisdiction of our Department of Parks, now limited to the parks and parkways, to include the planting and cultivation of trees in all the streets of Greater New York. At present, New York City is without any organized system of tree cultivation, and, as a consequence, few trees are planted, and the old ones are fast disappearing.

No Case of Ruptured Tubal Pregnancy is out of danger until after a good ligature has secured the bleeding points.—Cordier, *International Journal of Surgery.*

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, March 7, 1899.

FREDERICK PETERSON, M.D., PRESIDENT.

Sensori-Motor Palsies of the Musculature of the Face, with Remarks on Oculo-Motor Palsies in the Early Stages of Tabes.—DR. JOSEPH FRAENKEL presented a paper with this title. He said that in tabetic patients a characteristic facial expression was often observed, and that he had given this subject special attention since presenting to the society a case which had greatly impressed him with the diagnostic significance of facial expression. The case referred to was that of a musician, forty-two years of age, who had been first seen by him when presented to one of the medical societies here as a case of tic douloureux. At that time the man had complained of severe pain in the area of distribution of the fifth nerve. To speak briefly, this man had presented motor impairment of the facial and ocular musculature, particularly of the left side. The defects had been chiefly those of co-ordination rather than of the motor power proper, as shown by the fact that the extent of the paralysis had varied on different occasions, and that exercise of the eye muscles had improved the motility. It was important and convenient to endeavor to establish an analogy between the cranial and spinal nerves, and between the cranial and spinal anterior and posterior roots. After a careful review of the literature, Dr. Fraenkel said that he had made a careful study of twenty-two cases, seventeen being in males and five in females. In six cases venereal infection was probable, in seven there was no indication of it, and in the remainder it was admitted. Five cases without syphilitic history and eight with such history had no disturbances of the external muscles; three without and six with it showed disorder of the functions of the external eye muscles. Seven showed marked disorder of the fifth nerve. In two the diplopia was transient. In some of the cases in which there was apparent paralysis of the external eye muscles, persistent exercise diminished this apparent paralysis. He concluded that it was possible that ocular palsies of the early stages might not be purely motor, but sensori-motor paralyses. Disease of the fifth nerve, in his opinion, had a decided effect on motility, but no single function of the trigeminus could be justly accused of being the cause. The effect of disease of the fifth nerve on the motility of the eye seemed to be similar to that upon the face. Some of the ocular palsies of the early stages were probably sensori-motor.

DR. EDWARD D. FISHER said that he had not specially examined his cases with reference to the fifth nerve. As a rule, he had not found much disturbance of this nerve, possibly because he had not carefully searched for it. With regard to the oculo-motor paralyses occurring early in the disease, he believed the majority of them were transitory, and in that condition it was not difficult to imagine that the explanation given by the reader of the paper might be correct. The permanent paralyses usually occurring later, either in the form of ptosis or affecting the muscles of the eyeball itself, he was inclined to ascribe to absolute disease of the nerve itself. In the early stages, strabismus was often noticed, and the irregularity of the muscular action did not seem to be wholly due to ataxic movements of the eyeball. If the eye was at rest, there should be no strabismus, if he grasped the idea presented in the paper. Ataxic movements could not be exhibited constantly, but only when the patient changed the direction of his vision. He had not observed the condition of the facial muscles dwelt upon in the paper.

DR. JOSEPH COLLINS said that true paralyses of the ocular muscles were of such rare occurrence in this disease that they scarcely required consideration. Paralysis of one or more of the ocular muscles was not infrequently seen in the early stages of true syphilitic tabes, in contradistinction to metasyphilitic and other forms of tabes, in which, if ocular palsies occurred at all, they must be looked upon anatomically as evidences of nuclear degeneration in the pons and clinically as epiphenomena and not an integral part of the disease. This might seem a radical and sweeping statement, yet from his experience with the disease, he would say that with these exceptions true ocular palsy was not an ancillary manifestation of true tabes dorsalis. He had not heard Dr. Fraenkel's explanation of the diplopias, strabismic states, and other forms of ocular troubles whereby the axes of the eyeballs lost their parallel in the early and later stages of this disease, but for himself such conditions were explainable on the hypothesis of a loss of reciprocal relationship between the sensory impulses and the motor responses. In other words, they were comparable to the acute ataxia which was often seen to develop in an extremity. Although the ataxia in the extremities was rarely so intense as to cause paralytic symptoms comparable to those constituting the basis of the diplopia, it should be remembered that the movements of the former were not physiologically so delicately co-ordinated and, therefore, so functionally upset by slight loss of balance. He did not deny that genuine palsy did sometimes occur, but the explanation of these had already been offered. As to perversion of function in the domain of the fifth nerve, he believed that it was not at all a very rare condition even in those cases that had no clinical conformation to so-called high or cervical tabes. This disorder of function must be posited to explain the "tabic face," which, if not so striking or characteristic as the Parkinson face or the Hutchinson face, was still very readily recognizable by one who had had much dealing with the disease. It was difficult to describe of what this facies consisted, but there was a something made up of differences in palpebral aperture, condition of the pupils, changeable asymmetry of the face, and disparate expression between the upper and lower segments of the face, that was rather pathognomonic.

DR. FISHER said that he was surprised at the statement of the last speaker regarding ocular palsies in cases of tabes. The existence of these conditions could hardly be denied; the difference of opinion should be only in regard to the explanation of them.

DR. L. STIEGLITZ said that he differed very materially from the reader of the paper regarding the conception of the ocular nerve palsies. There seemed to be no necessity for ascribing the ocular nerve palsies, as seen in both the early and late stages of tabes, to ataxia. The whole clinical picture was not that of ataxia. There was an acute and absolute paralysis lasting a few weeks, and then it gradually improved, or perhaps disappeared. After recurring once or twice the picture might simulate partial ataxia. All had seen cases of genuine tabes in which there had been very distinct peripheral palsy, *e.g.*, drop-foot. Such a case ran a course very similar to that of ocular nerve palsies, the recovery taking place, as a rule, within a few weeks. In tabes the motor neurons were sometimes involved without any direct connection with sensory neurons. The sensory disturbance in the first —the involvement of the fifth nerve—was not very uncommon, but occurred, as a rule, rather late.

DR. COLLINS said he did not wish to draw any parallel between ataxia of the eye muscles and that in the extremities, but wished to state positively that there were no such things as ocular palsies in tabes, bearing in mind the exceptions already mentioned. In his experience, true muscular palsies in true and uncom-

plicated tabes did not occur save as accidental conditions.

Dr. Fisher remarked that the only contention then seemed to be in regard to what was understood by the term "tabes."

Dr. Peterson said that the paper was a valuable contribution to the clinical symptomatology of tabes, and the suggestions were worthy of the most careful study. He felt with Dr. Stieglitz regarding the statements made by Dr. Collins—they seemed very radical. It seemed to him that genuine ophthalmoplegias in the metasyphilitic cases were so common that they could not be considered exceptional.

Dr. Fraenkel, in closing, said that all had seen in tabes acute ataxia in the upper and lower extremities, and had seen it disappear, with or without treatment, after two or three weeks. The explanation must be found in the progress of the disease. He would not state that the final ocular palsies of tabes had no more material basis than sensory disturbance.

Report of Sixteen Osteoplastic Resections for Intracranial Disease.—Dr. George Emerson Brewer read this report. He said that the brilliant results early achieved by Horsley and Macewen had resulted in an amount of enthusiasm which had brought scores of sufferers to the operating-table, who not only had not been benefited but had often been made worse because wholly unsuited for such operative interference. During the past five years from thirty to forty cases of intracranial disease had fallen under his observation at the City Hospital, and nearly all of these had been seen in consultation with the neurologists of the hospital. The object of the present report was to furnish unbiassed data for further study of this important subject. Of the sixteen cases coming to operation, seven had been in fair physical condition, while nine had been recently subjected to traumatism, or were in conditions of more or less pronounced sepsis or alcoholism. Of the seven non-septic cases, six, or eighty-four per cent., recovered, the wounds all healing primarily. Of the nine septic cases, or those in which unfavorable results were to be expected, three recovered. In thirteen out of the sixteen cases a lesion sufficient to account for the symptoms had been found; while in two instances the operation had undoubtedly saved life. Both of these patients had subsequently died, one after three months from recurrence of the growth, and the other from a disease entirely independent of the condition of the brain. Five of the patients were still living. In none of the cases that had terminated fatally had there been any possibility of improvement without operation; in five death would have occurred almost immediately without such interference. In two cases death had resulted from the operation, one from acute uræmia, the other presumably from an acute septic infection.

Dr. Pritchard said that he wished to place on record the history of a case that had come under his care over one year ago. The patient had had Jacksonian epilepsy along with symptoms which made the diagnosis of tumor quite evident, and which localized it quite accurately. The tumor had been found at the operation, but it had been considered inoperable because of its nature and situation. In view of the fact that the symptoms had been growing rapidly worse before operation, and that the man had been apparently restored to health since then, he was inclined to attribute the improvement to the surgical interference. He believed it to be generally conceded that exploratory operations had often resulted in amelioration and even in disappearance of many symptoms, and his personal observations had been corroborative of this.

Dr. E. D. Fisher said that he thought the reader of the paper had shown by his results that one was absolutely justified in making exploratory operations in these cases. It had been claimed that only two of the patients had died as a result of the operation, and in one of these cases he felt sure that it was not fair to attribute the death to the operation, but in the absence of an autopsy record this had been thought the most warrantable assumption. The paper especially emphasized the comparatively little danger of these exploratory operations in competent hands.

Dr. Collins said that he thought the value of the contribution of Dr. Brewer lay chiefly in teaching us that intracranial surgery had a very limited field as a therapeutic agency. Until this view had been generally accepted, he thought the indiscriminate operations on intracranial conditions, so common among surgeons at the present day, would continue. At the last meeting of the British Medical Association, Ferrier had presented the results of his work. He claimed to have benefited thirty-five per cent. of his cases, and seventeen per cent. of these had been absolutely cured. Of the remainder he claimed that one to five years had been added to their lives. Dr. Collins said that in the discussion on that occasion he had expressed his surprise at these results in view of the fact that the usual percentage of recoveries was thought to be about one to five per cent. In a recent letter received from Ferrier the same position had been maintained, and the explanation offered was that he had selected his cases for operation with greater care and more diagnostic discernment than he had expended on any other class of cerebral disease. This must be the keynote to all future intracranial surgery. With all due respect to the skill of Dr. Brewer he felt that the cases should have been selected with greater care, for in at least two or three of them it seemed to be a foregone conclusion that the operation could not be beneficial. The statement had been repeatedly made in the paper, that the dangers of the operation had been explained to the patient and had been accepted, but it should be remembered that these patients were not in a condition to judge. He mentioned this to warn surgeons against allowing themselves to be influenced by the statements or wishes of these patients. He believed intracranial surgery should be limited to sinus thrombosis, intracranial abscesses, and a very few cases of intracranial tumor.

Dr. Stieglitz said that this candid report was of great value, although he agreed with the last speaker that the field for such work was very small. The pyogenic cases offered a far better field than did epileptic cases, or intracranial tumors. The experience of Macewen in the first class should lead the surgeon to undertake operation, even in apparently severe cases. The cases of intracranial tumors which had been successfully operated upon were practically those of new growths in the motor area, although occasionally success might be achieved in operations on tumors of the cerebellum.

Dr. Peterson remarked that, as much was to be learned from both successes and failures, the paper was really a valuable contribution.

Dr. Brewer, in closing the discussion, said that under ordinary circumstances these brain operations could be undertaken in hospital practice without danger of sepsis. In only one of these cases, which was not septic at the time of operation, did sepsis occur, and he was willing to admit that this should have been avoided. None of the epileptics was apparently made worse by the operation, but, of course, if local infection occurred, the operation was liable greatly to aggravate the condition. It was quite probable that nineteen-twentieths of the cases of epilepsy operated upon were fruitless, still it was well to undertake the operation in recent cases in the hope that occasionally a person would be saved from a life of epilepsy. He had always felt that even in the beginning of septic

meningitis there was a possibility of affording relief by operation. He proposed as soon as opportunity offered to try the effect of irrigation in a case of this kind.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

NON-PULSATING ANEURISM—ADJOURNED DEBATE ON "PSEUDO-TUBERCULOSIS"—MISLEADING NOMENCLATURE—"AUTO-INTOXICATION"—A "PECULIAR" ESCAPES—MORTALITY OF DIPHTHERIA AND INFLUENZA—DEATHS.

LONDON, March 20, 1899.

AT the Royal Medical and Chirurgical Society's meeting, Mr. Walsham read a paper on a case of a large non-pulsating aneurism involving the common internal and external carotids of the right side. There was no pulsation, no bruit, and nothing escaped on puncture with an exploring syringe. It was thought that the swelling was glandular and probably malignant, but on incision it was found to be an aneurism. The common carotid was tied in two places below the sac and divided between the ligatures; the sac was dissected up; collateral vessels entering were secured, and the internal carotid ligatured above the sac was removed entire. A good recovery resulted. Only a few cases are recorded, and the cause of non-pulsation is not evident. Nine cases of extirpation of carotid aneurisms were quoted, all terminating in recovery. From a review of thirty-two cases of spontaneous aneurisms, in addition to his own, Mr. Walsham looked upon extirpation as a successful operation and in certain cases as the best method of treatment of an external aneurism. But in an ordinary popliteal aneurism without complications ligature is preferable.

Mr. Godlee mentioned a case in which he excised the sac of a popliteal aneurism, though it was by no means easy to do so, for there were many vessels coming out of the sac, and he had great difficulty in freeing it from the vein. The state of the artery must be ascertained, as if calcified it would be most difficult to deal with.

Mr. Holmes referred to the causes of non-pulsation in some aneurisms, a subject he discussed some years ago in St. George's Hospital Reports.

Mr. Gould related a case in which ligature was done on one side in 1897 and extirpation on the other in 1898, for popliteal aneurism. The extirpation of the entire sac was so difficult on account of close adhesion to the vein that a portion had to be left. Six months after the ligaturing pulsation had not returned in the tibials; but it returned on the thirteenth day after the excision, and the patient said the discomfort from numbness, etc., was much less. Excision gave rise to but little disturbance of the circulation, but was dangerous when there were extensive adhesions to the vein.

Mr. Bowlby had seen Mr. Walsham's patient and confirmed the absence of pulsation. He thought it would usually be absent at some stage of a spontaneous cure. Moreover the calibre of the artery diminished between the heart and the aneurism, as proved by all museum specimens. This is perhaps due to the establishment of collateral circulation. The artery near a popliteal aneurism is more healthy than higher up, hence the ligature should be on the popliteal itself, or on the femoral at the lower part of Hunter's canal.

The president (Mr. Bryant) mentioned that in one case he had failed in an attempt to excise the sac. He also said that there might be a bruit, even in a non-pulsating case.

Mr. Walsham, in reply, said that in ordinary cases dissection could not displace the ligature. He agreed with Mr. Bowlby as to the lower part being tied. As to leaving a portion of the sac and clot he held that would increase the risk of suppuration and also of overlooking some collateral vessel insecurely closed by clot, which might be subsequently displaced and give rise to hemorrhage.

The adjourned debate at the Pathological Society on pseudo-tuberculosis was resumed on Tuesday by Professor MacFadyean, who exhibited a series of lantern slides, illustrating some of the conditions in cattle which had been called pseudo-tuberculosis. He said that in bovines true tuberculous lesions gave rise to formations tending to become pedunculated, and in tuberculous mastitis of the cow, it presented itself as diffuse fibrosis undergoing caseation. There were also other conditions in animals which had been called pseudo-tuberculosis. He agreed with the speakers who objected to the term as unscientific. But it was very difficult to decide on the nature of a lesion, as there were no characteristics (macro- or microscopical) which were absolutely distinctive. There were fallacies, too, in bacteriological examination, owing to some bacilli having similar staining reactions.

Dr. A. Foulerton exhibited specimens of granulomatous lesions produced by the injection of a pathogenic yeast, some of which were not distinguishable from tubercle. He said there was nothing characteristic about a tubercle follicle, and he believed a similar lesion might result from the action of several different bacilli. He proposed the appointment of a committee to devise some nomenclature for the lesions which had been included in the term pseudo-tuberculosis. This was accepted by the meeting and a committee appointed.

Mr. W. C. Pakes considered that it was time the term pseudo-tuberculosis was rejected. The prefix pseudo always led to confusion—witness pseudo-diphtheria, pseudo-rickets, pseudo-erysipelas, and, still worse, pseudo-leprosy. Better a person's name than this misleading prefix. Some of the cases were evidently due to an aspergillus and could now be differentiated.

Dr. Lazarus Barlow put in a word for the term pseudo-tuberculosis for some cases in which it might be convenient. In diabetes there occurred lesions very similar to those of tubercle. Sometimes the bacilli were very difficult to find. He mentioned that on one occasion he did not find a tubercle bacillus until he had mounted his forty-ninth slide.

Dr. Wethered said he had sometimes been unable to find bacilli in cases which clinically appeared to be advanced phthisis.

Prof. Woods Hutchinson admitted that the term pseudo-tuberculosis was absurd from a scientific point of view, but it had the advantage of not expressing anything very definite, and did not commit the observer to a statement of the cause of lesion.

The president (Dr. Payne) said the various lesions that had been discussed had but one feature in common: that was, they imposed on observers as if tubercle, but the observer who escaped error, proud of his own acuteness, gave them a name which drew attention to his acuteness. But the term ought no longer to be kept up. He agreed with Dr. Foulerton that there were a number of microbes which would produce a structure just like a tubercle follicle. He would go further and say any irritant would do so. In a case of ophthalmia nodosa Mr. Lawford found that the hairs of a caterpillar had produce the nodules, and Baumgarten had had another case due to the hairs of a mouse. He referred to some specimens he had figured in the transactions of the society for 1870.

At the Medical Society a good deal was also said about "misleading" terms. Dr. Sidney Martin read a paper on "Auto-intoxication and its Relation to the Treatment of Disease." At the outset he found it necessary to state the sense in which he would use certain words. Infection he defined as the invasion of the body by a living germ which by itself or its products injures the tissues; intoxication as poisoning of the body by chemical agents, usually the products of living germs. Thus "infection" is seen in anthrax when from the primary infection the bacillus invades the body. "Intoxication" occurs in tetanus, when the bacillus is localized at the seat of injury and the toxic products are absorbed from that spot. Coming to "auto-intoxication" he was obliged to question the propriety of retaining the term, which includes (1) that of gastro-intestinal origin; (2) that occurring in the course of chronic diseases, such as renal diabetes, etc.; (3) that in association with the glands, the thyroid, suprarenal, pituitary, liver, pancreas, testis. Dr. Martin discussed these three varieties, and considered the question of internal secretions being absent (as in removal of glands), diminished, or increased.

Mr. Owen said he thought rickets, the peripheral neuritis following influenza, the fatigue and headache caused by unwonted exercise, and renal disturbance that sometimes followed massage, were all due to auto-intoxication.

Dr. Mott said that in general paralysis of the insane well-marked degenerative changes took place in the nervous system leading to the formation of a fatty substance which stained black with osmic acid. He had injected cerebro-spinal fluid from a case of general paralysis. It caused marked fall of blood pressure. Cholin produced the same effect and was perhaps the toxic agent in the disease.

Dr. Washbourn pronounced the term auto-intoxication misleading, as it was applied to distinct conditions.

A case against one of the "Peculiar People" was dismissed on Tuesday, but the man is under sureties to appear to answer for the death of another of his children. He has had nine, and only four are living.

There is a decline in the mortality from influenza, but an increase in that from diphtheria. Both are very prevalent just now.

The Medical Society's dinner on Wednesday was unusually successful, one hundred and sixty-eight fellows being present. The Medical is the oldest of our societies.

The death is announced of Surgeon-Major John Bowron in his one hundred and first year. He retired from the Bengal army in 1851. He entered the East India Company's service as a pupil in 1813, and became assistant surgeon in 1825, retiring in 1851.

Surgeon-Major John Stuart Smith, M.A., M.D., aged eighty-four years, died on the 1st inst. He was the elder brother of Lord Strathcona and Mount Royal. He saw much service in India and China. He rendered great service in the typhus epidemic in Ireland in 1847–48.

The death is also announced of Prof. F. N. Macnamara, M.D., also of the Indian medical service, which he entered in 1853. He became chemical examiner to the Indian government.

Dr. M. A. Boyd, one of the most respected physicians of Dublin, is dead.

Every Tumor of the Larynx suspected to be malignant, of intrinsic origin, of limited extent, and apparently within reach of free removal, justifies an exploratory thyrotomy in a suitable patient, in the absence of infiltration of the surrounding structures and of affection of the lymphatic glands.—D. B. DELAVAN.

THE MEDICAL SIDE OF THE KLONDYKE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: So many exaggerated accounts—in fact, so few authenticated ones—regarding the sickness on the Klondyke are published that a verified statement may be worth your notice. I can write up to date of leaving there last September. Dawson is the chief camp of the Klondyke region, and except in prospecting all the mining was done within forty miles of it. I went to Dawson the year previous. In August of that year (1897) St. John's Hospital, a Catholic hospital, was finished and in operation. During the winter it had beds for fifty patients, but could be strained to accommodate seventy-five sick. It was pretty full all the winter, scurvy predominating largely; a few cases of pneumonia and of typhoid; the rest were the usual miscellaneous mass, including a few surgical cases—frost-bite—and some old age. The terms of the hospital were $10 per day, of which $5 went to doctors as often as their visits were necessary. Two doctors were given the hospital practice, with privileges to all the rest to attend and enter their private patients.

Father Judge was at the head of the hospital, with only men nurses, and they were such as he improvised. Food consisted of fresh meat, canned roast meats, canned milks, canned goods generally, no eggs except the prepared eggs.

About the middle of March Father Judge published his report, and only thirteen had died from all causes in the hospital up to that date. This represented almost the total deaths on the Klondyke, for nowhere else had the sick to go than to this hospital; and no miner could afford to take care of his "pard," when it could be more cheaply and better done. There were about five thousand people during the winter in the Klondyke, in and about Dawson.

About July, as is common to the country, appeared a malarial fever which was prone to merge into typhoid. It is in all particulars the mountain fever as we know it in the Rocky regions. It is a very simple thing to manage, and Dr. Chambers, who had been on the Yukon for several years and who did most of the work in and about Dawson up to this period, declared he never lost any cases except those complicated with scurvy. My own experience was, at the end of my year, that none need die with experienced management.

At least thirty thousand people gathered into Dawson about this sickly season, and necessarily many cases of illness were reported.

In the midst of it a Canadian law was enforced in the Yukon district, which incapacitated all Americans for practice. The camp is almost wholly American and likewise the medical men were almost exclusively Americans. I do not wish to be understood as being malicious in using the expression, but all the sick were mercilessly turned over to the Canadian doctors. I will be plain: among the new doctors were some very able men. None had had experience in this disease peculiar to this region, and they did not know how to manage it. As an instance, when I was remonstrating against his giving his patient stewed prunes and ice-water, an Edinburgh man retorted: "Well, this is not typhoid as we have it in the East!" Though his patient died he yet did not want to agree as to the disease. Of course this typhoid does not behave as it does in Eastern cities.

About the 1st of August all Americans quit practice. Some time later I heard Rev. Mr. Young in a lecture at Seattle say he buried forty people in the Klondyke. That, I am sure, represents about half the deaths up to his leaving about the 1st of September, for Protestants much predominated and Mr. Young was chiefly in demand for funerals.

Early in July a new hospital, not strictly a church

hospital although rather under Protestant control, was started, supplied with several female trained nurses, and with a capacity of a few dozen patients, yet with the possibility of a continual enlargement. I noticed as I was about leaving the country some woman advertising a private hospital. That was the total hospital accommodation of the Klondyke about the 1st of September last. It was current that thirteen licensed physicians were established. Seven or eight Americans were arrested and made to quit. The matter of license stands thus: graduates of any Dominion or British schools are allowed a license by virtue of their diplomas; all others must stand an examination before a Dominion examining-board for license. This necessitated our going out of the country, for no such organization existed in the Yukon district.

The past winter was characteristic only by a large number of scurvy cases; this was due to scanty and monotonous food. Very few died, though many quite old, feeble men had gathered together here, and among them chiefly were the deaths. Scurvy was not due strictly to any one thing, but to scanty diet and to a lack of variety. Persons living on moose meat and dried fruits exclusively were often victims as well as those eating pork and beans.

In addition to the section preventing one from practice in the Dominion of Canada without a license is a section making it a penalty to use the title of "doctor." One of us left his shingle up to answer for a door-plate, and though he had in good faith quit practice, with a date fixed to go out, yet he was arrested for this infringement, "using the name, title, etc., of doctor," and in default of paying $50 fine was thrown into jail. He was placed with four insane men, sixteen drunks, and partitioned off from three condemned murderers. One night here, without bed, blankets, or room on the floor to lie down, took all the Yankee Doodle out of him, and he handed over his little sack of dust to the queen's minions. We are all content to say amen to the law requiring a license to practice; but when an American in Canada dares not call himself doctor, he feels that the great American eagle, which cannot protect him, is little less glorious than the buzzard, that fit emblem of the Yukon division of the Dominion.

J. J. LEISER, M.D.

HELENA, March, 1899.

ECTOPIC GESTATION WITHOUT CESSATION OF MENSTRUATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of March 11th, Dr. Mundé reports a very interesting case of ectopic gestation in which the patient had not missed a single menstrual period. I have seen two such cases. One occurred several years ago, in a married woman, the mother of two children, the youngest two years of age. She had menstruated regularly only three weeks before the occurrence of rupture of the pregnant tube. Her attending physician telephoned me two or three times during the day as to her condition, and on each occasion I told him that I thought it was a case of ruptured ectopic pregnancy. I did not see her, however, until late. The operation verified the diagnosis. The second case occurred only a few months ago, the patient being an unmarried girl who had menstruated regularly only the week before I operated. The pains of which she complained were quite characteristic. On examination I found in Douglas' cul-de-sac a fusiform, pulsating, and exquisitely tender mass about the size of the thumb. She admitted that she had a "friend," but stated that there had been no intercourse since her last menstruation. This tender mass had certainly been present but a very short time, as there had been no dyspareunia. There was no history of any inflammatory trouble or of any infection. Under the circumstances, therefore, I thought a diagnosis of unruptured tubal pregnancy reasonable. The tube was removed without difficulty through the vagina and at once turned over to the hospital pathologist, who reported it as a case of ectopic gestation.

J. F. BALDWIN, M.D.

COLUMBUS, OHIO, March 14, 1899.

THE ROTHKRANZ HOME.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In reply to the article in your issue of Mch. 11th by Mr. Taylor, Esq. the learned counsel of the County Medical Society, permit me to say that the gentleman labors under considerable error in the same, or his evident desire to shield Mr. Gerry, has overstepped the facts. The article by Mr. Gerry, (that called for my letter to which Mr. Taylor took exception,) was a gross injustice to my clients. If Mr. Gerry had the evidence to convict my clients and did not present it to the Court, he is unfit for the position, which at present he holds; on the other hand, (substantiated by the acquital) he done wrong in publishing the letter of which he was the author.

As to the County Medical Society, why it is true that a fine was imposed upon Mrs. Rothkranz. That is about all Mr. Taylor knows, or otherwise he might have recalled the words of the presiding judge, "There is no evidence that the defendant has committed any wrong, or intended to do so, but the letters, "Drss" in her advertisement, and on the sign at her house, are contrary to Chapter 398, Laws of 1895.

The lady in question is a German, and her knowledge of English is very limited, and while I knew the advertisement was written by another, etc. under the circumstances I considered the best thing to do was plead guilty, and state the facts. This was done, as before replied to, and she was fined $100. Without any error I might add that this woman has been the victem of persecution for years, and all the Society's etc in existance cannot prove her other than a law abiding citizen, unless the technical conviction on the above score be construed such. Were self praise, and commendation reserved for the curtain fall, it might be excusable in Mr. Gerry, but he made the error of printing the judgment of a Court before the case was tried, so was rather mistaken. With sincere thanks for the use of your journal in righting a wrong, believe me, Very Sincerely Yours,

H. W. LEONARD.

NEW YORK, March 14, 1899.

New Instruments.

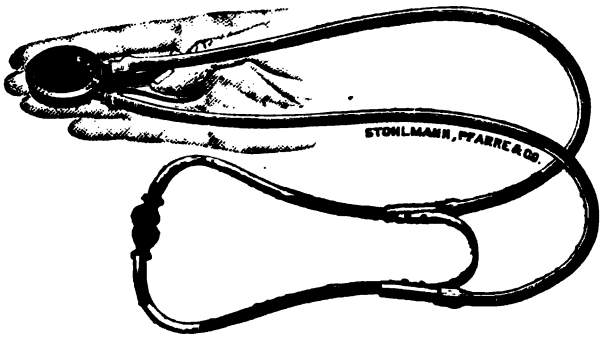
A STETHOSCOPE FOR EXAMINING THE POSTERIOR PORTION OF THE CHEST, THE PATIENT LYING ON THE BACK.

BY ANDREW H. SMITH, M.D.,
NEW YORK.

IT often happens, especially in pneumonia, that we forego auscultation of the posterior portion of the chest, rather than subject the patient to the distress and possible danger of turning him on his side or raising him into the sitting posture. If the weight of the affected lung is greatly increased and that side be turned uppermost, the pressure upon the sound lung will cause distressing dyspnœa; while the opposite position, with the affected lung underneath, does not afford satisfactory access with any of the usual stethoscopes.

To meet this difficulty I have devised the stetho-

scope figured in the cut. The cup is flat and shaped like the cover of a pill-box, the depth being less than half an inch. The rubber tubes are attached to the side at points separated but a little distance from each other. The instrument is carried under the patient on the tips of two fingers, the thumb resting upon a pro-



jecting tongue, which is continuous with the bottom of the cup, thus giving the necessary control.

With this instrument the auscultatory signs in the back of the lung can be obtained with scarcely any disturbance of the patient. I find it convenient also in office practice, and especially in examining the heart in females, as it can readily be slipped down under the corset by simply unhooking the upper fastening of the latter.

The cup arranged as above described has some of the acoustic properties of the phonendoscope, and the instrument can be used with considerable satisfaction through several thicknesses of clothing.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending March 25, 1899:

	Cases.	Deaths.
Tuberculosis	178	178
Typhoid fever	8	3
Scarlet fever	155	21
Measles	283	11
Diphtheria	177	25
Laryngeal diphtheria (croup)	4	4
Cerebro-spinal meningitis	0	13
Chicken-pox	24	0

Disease of the Alimentary Tract.—As regards the parts of the alimentary tract affected by the disease (secondary tuberculosis), the reason why the stomach and duodenum nearly always escape is probably because of the acid secretion of the former. Most commonly the ileum and colon are both affected, the most frequent site being about the ileo-cæcal valve.—Dr. Rudolf.

What is a Disease?—A perturbation of the normal activities of a living body.—Huxley.

(*a*) In general, a morbid, painful, or otherwise distressing physical condition, acute or chronic, which may result either in death or in a more or less complete return to health; deviation from the healthy or normal condition of any of the functions or tissues of the body.

(*b*) An individual case of such a morbid condition; the complex series of pathological conditions casually related to one another exhibited by one person during one period of illness; an attack of sickness.

(*c*) A special class of morbid conditions grouped together as exhibiting the same or similar phenomena (symptoms, course, result), as affecting the same organs, or as due to the same causes, etc.—*The Century Dictionary.*

Suicides in Males.—The great preponderance of suicides in males may be due to several factors: (1) Men are more exposed to weather than women, and exposure may be equivalent to living in a colder climate. (2) Men eat more meat than women. (3) Women excrete large quantities of uric acid every month or just after the menstrual period, so that, other things being equal, they will have less retention and accumulation than men; this monthly increased excretion accounts for the fact that when they do commit suicide it is often just before the monthly period.—Dr. Alexander Haig.

Odor as a Symptom of Disease.—Most diseases have characteristic odors, and by the exercise of the sense of smell they could be used in differential diagnosis. For example, favus has a mousey smell; rheumatism has a copious, sour-smelling, acid sweat. A person affected with pyæmia has a sweet, nauseating breath. The rank, unbearable odor of pus from the middle ear tells the tale of the decay of osseous tissue. In scurvy the odor is putrid; in chronic peritonitis, musky; in syphilis, sweet; in scrofula, like stale beer; in intermittent fever, like fresh-baked brown bread; in fevers, ammoniacal, etc.—J. H. McCassy.

Some Possible Sources of Infection in Enteric Fever.—Beer has not, as far as I know, ever been suggested as a source of infection of enteric fever. And yet apparently in this fermented beverage the bacilli of enteric, having once gained an entrance, would grow and multiply exceedingly. Moreover, suspicion of it arises when it is remembered that the European soldier, who is the chief victim of enteric, consumes it daily as regularly as he does his ration of bread or meat, while the sepoy, who so seldom contracts enteric, presumably never tastes beer at all.—Dr. M. D. O'Connell, *The Indian Medical Gazette*, November, 1898.

Health Reports.—The following cases of smallpox and yellow fever have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending March 25, 1899:

Smallpox—United States.

		Cases.	Deaths.
Alabama, Mobile	March 17th	2	
California, Los Angeles	March 5th to 11th	10	1
Dist. of Columbia, Washington	March 18th to 23d	No new cases.	
Florida, Jacksonville	March 4th to 18th	1	
Key West	March 11th	1	
Indiana, Evansville	March 13th	1	
Kansas, Atchison County	March 16th	22	
Independence County	March 16th	Reported.	
Sumner County	March 16th	2	
Kentucky, Louisville	March 9th to 16th	26	2
Louisiana, New Orleans	March 4th to 11th	57	
Mississippi, McLaurin	March 4th to 11th	..	3
Missouri, St. Louis	March 15th	10	
Montana, Missoula	February 23d to March 9th	2	
New York, New York City	March 11th to 18th	2	1
Ohio, Cleveland	March 11th to 18th	17	
Texas, Laredo	February 25th to March 4th	59	29
Virginia, Alexandria	March 18th	1	
Alexandria	March 20th	1	
Alexandria	March 22d	No new cases.	
Norfolk	March 15th to 21st	13	
Wyoming, Cheyenne	March 4th to 11th	3	

Smallpox—Foreign.

Brazil, Bahia	February 11th to 25th	3	
Rio de Janeiro	February 3d to 10th	5	4
China, Hong Kong	January 28th to February 4th	3	1
England, London	February 18th to 25th	2	
Mexico, Chihuahua	February 25th to March 18th	..	5
Mexico	February 26th to March 5th	6	1
Vera Cruz	March 2d to 14th	1	
Russia, Moscow	February 18th to 25th	7	
St. Petersburg	February 18th to 25th	22	3
Warsaw	February 18th to 25th	..	1

Yellow Fever.

Brazil, Rio de Janeiro	February 3d to 10th	65	50

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Original Articles.

THE IMPORTANCE OF URETERAL CATHETERIZATION IN GYNÆCOLOGY.

BY THEODORE LANDAU, M.D.,

BERLIN.

ON account of the close connection between the female generative and the urinary systems, the catheterization of the ureters must be of the highest importance for the gynæcologist. It is my purpose to give a short account of several cases, and to make a *résumé* of the manifest advantages of this new method for this line of work. Cystoscopy, from a gynæcological standpoint, will be omitted entirely at this time.

We have, in our clinic, made a thorough trial of all the different methods of ureteral catheterization. To take them in chronological order, we tried in succession, first, the original method of Simon; secondly, Pawlik's; then Kelly's; and finally Casper's; and I do not hesitate to recommend this latter as by far the most reliable and best. A short time ago one of the associates in our clinic had had great experience in applying Pawlik's method of catheterizing by the sense of touch. In spite of his expertness, however, in only one of a series of three cases was he able to find the ureter, and that one after a search of several minutes; while with the aid of sight the catheterization was easily accomplished in all three cases in a very few seconds. In addition to this, we could, in the case in which the sound had been introduced according to Pawlik's method, by introducing the cystoscope, demonstrate that by this system of palpation numerous bruises had been produced around the ureteral orifice, in the form of small extravasations, furnishing an unmistakable objective proof of the superiority of the method with the aid of sight over that in which only the sense of touch was employed.

In consequence of our observations, I am able to emphasize seven conditions in which ureteral catheterization is of benefit in the practice of gynæcology.

I. The first is well presented by the following case: Frau P—— was successfully operated upon on the 29th of August, 1893, for the closure of a vesico-vaginal fistula. In January, 1898, she presented herself at the clinic, complaining of intermittent colicky pains in the region of the left kidney. In every such attack there was developed a swelling in this region of such a size that the patient herself was able to observe it. This swelling disappeared simultaneously with the pain. It was shown, by cystoscopic examination, that on account of the previous suturing of the vesico-vaginal fistula there had been produced a distortion of the bladder wall (a diverticulum), in the immediate neighborhood of which was the orifice of the left ureter. The attempt at sounding this latter immediately cleared up the condition. The sound entered for a distance of only one to one and a half centimetres and could not be introduced farther. In spite of this, we could see that the ureter was patulous for urine, as it continued to flow during the proceeding. By persevering and cautious manipulations the obstruction in the ureter was gradually overcome. The patient has been, up to the present time, entirely free from all further attacks of pain. What is the reason of this success? We must realize that there was no real obstruction of the ureteral canal; the ureter was simply distorted by the excessive formation of cicatricial tissue at the site of the diverticulum, and this singular closure was for the time being a complete impediment to the urine secretion of the left kidney (the ureter being closed by the traction, just like a rubber tube), giving rise to an intermittent hydronephrosis, which had been entirely cured by the ureteral catheterization.

II. In the second case, which I will merely outline, the ureteral catheterization has given no beneficent results. This case belongs in this record, because in similar cases, treated under the same circumstances, there is no reason why cure should not follow. In a case of uretero-vaginal fistula, we were able to introduce a catheter from the bladder through the peripheral end into the main canal of the cut ureter.

It is well known that the reuniting of the cut end of a ureter in this way is the main step of one of the first methods of the operative cure of a ureteral fistula, recommended by Leopold Landau in 1874. It is probable that in some cases the union of the cut ureter by means of a permanent catheter is in itself sufficient to bring about a closure of the fistula. This method was not tried in this case, because the urine collected from the kidney on the affected side gave distinct signs of a pyelitis; therefore nephrectomy was successfully performed, and the patient made a good recovery.

At the present time, however, after the observations of Casper on the cure of pyelitis by syringing out the pelvis of the kidney, we must confess that in all cases we should make a trial of this method to preserve the organ if possible. We might possibly have had, in the case just described, a double therapeutic success if we had practised this syringing through a permanent ureteral catheter and had waited for the spontaneous closure of the fistula. If, after a trial of this method, we had still had no success, the favorable result of the radical operation would not have been jeopardized by the extra time consumed. Therefore, ureteral catheterization may, and should be, tried in every case, as even in the case of non-success the success of more radical methods is not jeopardized by the attempt, and these can be instituted later.

III. At this point I would emphasize my third head, a most important one in ureteral catheterization; namely, the healing of wounds and tears of the ureter, after vaginal operations, for example. In these cases of ureteral fistulæ we must, just as in a case of nephrectomy we satisfy ourselves by catheterization of the presence and healthy condition of the unaffected kidney, employ the same means—namely, ureteral catheterization (in this case naturally from the vagina) to convince us that we do not furnish an opportunity for a diseased kidney to empty its harmful contents into the bladder, and thus, by ascending infection through the opposite ureter, affect the other kidney—before attempting to close the fistula by a plastic operation. In such a case, given a diseased kidney, it is possible to employ the method described under II., or to introduce a catheter from the vagina before the closure of the fis-

tula and syringe out the pelvis of the affected kidney, trusting to cure the pyelitis in this way, before the final closure of the fistula. Nephrectomy should be performed only as a last resort, when the more conservative means of cure have failed.

IV. Now we come to the discussion of the value of ureteral catheterization in cases under operation for uterine carcinoma. Here two situations are to be considered: (*a*) Operations performed on the carcinomatous uterus, and (*b*) those practised on recurrences after total extirpation.

The question of injuries to the ureters possesses no practical interest for the practitioner who operates only on carcinomata confined to a movable uterus or who does not perform operations on the second class of patients just mentioned. On the other hand, the one who holds the opinion that in uterine carcinomata, when the organ is fixed as well as when it is not, the most radical surgical measures give the only hope of cure or benefit, will, as Pawlik taught years ago, catheterize the ureters before and during such an operation. The reason is obvious. The ureter is transformed from a soft, collapsible tube to a hard, well-defined one, and thus is avoided with comparative ease. When they cannot be avoided, as in the cases in which they are included in the carcinomatous mass and are carcinomatous themselves, the operation can, by means of the ureteral catheter, be planned beforehand as to route (abdominal or vaginal) and as to extent, and the diseased portions of the ureters can be excised with the rest of the growth and the remainder planted immediately either into the bladder or into the vagina, as the case may be, and in the latter case the resulting fistula may be closed by a subsequent plastic operation. In this way the accident, only too common, of unconsciously cutting the ureter and flooding the peritoneal cavity with urine can be avoided. The following case will show how important this procedure of catheterization is in cases of cancerous involvement of the ureter.

Frau D——; total hysterectomy on account of carcinoma of the portio on July 25, 1896. She had no relapse for two years, but then developed a recurrence in the left side of the true pelvis. Catheterization of the ureter before the second operation, which took place on the 6th of June, 1898, showed that the carcinomatous mass came critically near the left ureter, so that during the extirpation of the new growth I possessed, in the introduced catheter, a safe guide to the position of the ureter, and was thus enabled to avoid it.

V. The next point, somewhat similar to No. IV., is the determination by catheterization of the course of the ureter in cases of hystero-myomectomy. Certain myomata, more especially the intraligamentary ones, produce great abnormalities in the course of the ureters, sometimes by pushing them out of their places and sometimes by inclusion in the growth itself. By the introduction of a ureteral catheter and allowing it to remain during the operation we can easily bring the ureter into prominence, and thus avoid ligating or cutting it.

VI. We now come to the use of the ureteral catheter in the cure, by the abdominal route, of uretero-vaginal fistulæ which were produced during vaginal operations. Here the sounding of the ureters, naturally done from the vagina, gives us information as to the hidden course of the ureter, and gives also valuable aid in the after-treatment. In this regard, the observations and teachings of H. J. Boldt (New York) deserve consideration. On account of extensive pelvic suppuration he performed vaginal hysterectomy on a patient, and during the operation a right uretero-vaginal fistula was produced. Three months later, to cure the fistula, implantation of the ureter into the bladder, by the abdominal route, was tried. In this operation the ureteral catheter, introduced from the vagina before the operation, was of the greatest service. The right ovary, which had become adherent to the wall of the pelvis, covered the ureter so completely that it would have been impossible without this guide to find the course of the cut ureter. After the ureter had been freed and implanted in the bladder the operator left a catheter in the ureter for forty-eight hours. This procedure was, as Boldt himself says, the chief reason of the success of his operation, as in this way an infiltration of urine in the tissues at the site of implantation was prevented. The permanent ureteral catheter in this case served the same purpose as does the permanent catheter in the bladdera fter the operation for vesical fistula.

VII. Finally, the ligature of the ureter can be a *fait accompli* in spite of precautions, and this brings me to the seventh and last head, in which ureteral catheterization can be useful. Often, as is well known, in abdominal operations, such as myomectomy or hysterectomy for cancer, or in cases in which the ureters are bound by adhesions to inflamed adnexa, even the most skilful surgeons may and do include one or both ureters in their ligatures. Here the damage can be detected by ureteral catheterization much earlier than by observation of the clinical symptoms, and it is obvious that the chances of repairing the damage done are greater the earlier it is detected. Often in such cases the ligatures have been loosened and the patient has been saved. It is certain that there is no more sure and reliable method of diagnosing ureteral occlusion, whether from external or internal causes, than ureteral catheterization. This has been practised in our clinic in a very large number of cases, and not once has been followed by bad results, and it is safe to say that there is hardly a gynæcologist who, once having performed the method skilfully, would be willing to abandon it. Even if surgeons and genito-urinary practitioners should, as is highly improbable, give up ureteral catheterization, it has won for itself in gynæcology a permanent and well-deserved position. Ureteral catheterization is for us in gynæcology a method of diagnosis par excellence, and in many cases a powerful healing factor.

But everything has its uses. Ureteral catheterization will drive from the field neither nephrectomy nor the other reliable and safe procedures in ureteral and kidney surgery. But I venture the assertion, that by means of ureteral catheterization many cases are cured and the nature of as many others is for the first time clearly shown, and that this method often gives us the first and most certain indications for the more radical surgical procedures on the urinary system.

THE TERM "CONSERVATIVE SURGERY" AS IT HAS BEEN PROPOSED TO APPLY IT TO THE UTERUS AND ITS APPENDAGES.

By LAWSON TAIT, M.D. New York (Hon.); LL.D. Albany; F.R.C.S. England, etc.,

late president of mason's science college and professor of gynæcology.

I was very much amused some months ago by an article in *The Nineteenth Century* on anæsthetics, in which it was recommended to the laity that "each one of us should refuse resolutely to take chloroform or allow any member of our family to take it without first obtaining a guarantee from the anæsthetist that he will administer it on an open cloth, held at a given distance from the nose, and that the time taken to put us under shall not be less than eight minutes." I was amused because *The Nineteenth Century* is published in London, the very hotbed of new anæsthetics and

new methods of administering them. I was amused because here was Simpson of 1881 coming back after nearly fifty years, and his method being reinforced on the medical profession through a lay journal—an offence of the direst description. The offence was resented of course by a large number of medical journals in this country, on the continent, and in America, and of course the greatest amount of fun was to be had out of the criticism and opposition of our transatlantic friends. One of the most prominent and I think the best of the American medical weeklies had a leading article on the subject, in which the very difficult task was fully accomplished of admitting the need and justice of the outcry on the part of the patients as voiced by *The Nineteenth Century*. "The fault in this country," says the article, "is for the most part limited to the administration of ether where the most inexcusable indifference to the patient's comfort is often demonstrated. The man who gives the anæsthetic in a hospital is regularly the youngest man on the staff, a fresh graduate with theoretic teachings alone, or the example of only another interne as his guide. The cone soaked with ether is crowded down over the patient's face and he makes a courageous effort to stand it for a time. Very soon, however, he struggles to save himself from what these patients afterward describe as a feeling of imminent suffocation and death, and gains a breath of fresh air only in those cases where the orderly or orderlies are unable to hold him down." It may be a little comfort that they are as bad in America in one way as we are here in another, but the whole thing is discreditable to our profession and absolutely subversive of any claim it may make to rank as a science. For here we have the greatest drug ever introduced, and probably the greatest boon ever granted to humanity after opium, that is an ideal anæsthetic to my mind, of course chloroform, and we are not yet agreed about it, its method of administration, its power, and its method of fatality—in fact, we are agreed only that it is an anæsthetic. The history of this magnificent subject during the half century is a record of proceedings not only entirely unscientific but eminently discreditable to a body of men who are supposed, by their examination in Euclid's six books, to have at least mastered the elements of the art and science of logic. It is a history of rank and unjustifiable introduction of new substances and new methods going as far as the introduction of the old substance under a new name, "a substance most safe, more rapid, more and everything better than chloroform," by a man who was for a time a medical Cagliostro. We had of course hundreds of useless and misleading experiments on animals in India and elsewhere, with conclusions as absolutely hostile to each other as well could be. We have had initiated only one logical research in the shape of the "anæsthetic committee" inaugurated by our own association, which still dawdles its slow length along and will report, as I am informed, about the year 1950.

If I had time I could illustrate my purpose as well in the matter of new drugs, but I shall content myself with one short quotation concerning one of the nearly passing foibles, "thyroid," and its use in bleeding fibroids. In *The Medical News* (Philadelphia) of September 17th, Moseley reports "that while some patients can take comparatively large doses of thyroid with impunity, others are injuriously affected by small amounts," and having established this extraordinary conclusion concerning our cherished sweetbreads he tells us that they have a marked influence in bleeding fibroids, in checking the excessive loss of blood, and in some cases in diminishing the size of the growth. His observations were extended over five cases, and this is an example of the sort of thing which almost makes one desire to see new drugs kept out of the market by act of Parliament till they had passed through the mill of a judicial, protracted, and stipendiary investigation.

The fault of this logical deficiency is not of course confined to affairs medical, for we find the gravest affairs of the whole nation settled say at a general election by the will and votes of the floating residuum of voters in the least important and generally, therefore, the most incompetent electoral centres, and we seem now to be on the threshold of a vast upheaval within the serene demesne of our national church, the result of a restless spirit of innovation and desire for new methods and new manners, not even a revival of the good old things so faithfully followed by our ancestors for over a thousand years. But in matters medical we ought to do better than that; particularly is it possible in matters of surgery, where we have proof of results not tangible in the sister art of medicine save within very limited lines.

For the last forty years I think hardly one inaugural address dealing with the generalities of the advance of surgery has omitted reference to the history of ovariotomy as one of its crowning glories. But I do not accept the story in that way at all. I think the whole thing discreditable, and for one reason only, even if no others were available, that whereas Nathan Smith penetrated the mystery to the very depth and published his discovery in 1827, his great result was pushed aside by "new methods," and the great advantage of it was withheld from suffering humanity for more than half a century. Surgical historians writing toward the end of the coming century will not look on this as a brilliant record.

Arrived at the year 1878 we put the removals of ovarian tumors down with a mortality of five per cent., and then paused to look around. The start of abdominal surgery from this point was made when I showed that one hundred consecutive exploratory incisions could be done with a hardly appreciable mortality, and then I formulated and established the law that when conditions in the abdomen threatened life or made it unbearable, we were justified in opening the abdomen to discover the site and nature of the disease. Out of this as a matter of course arose one by one, and rapidly, as my records show, all the modern and fully accepted operations for gall stone, etc., which now fill large text-books. Among these rank fully numerous operations on the uterus and its appendages, most of which have become classic and will remain so unless upset for a time by new men restless and new methods wholly unnecessary.

It is needless to say that in this long battle, going over now a period, so far as I am concerned, of more than thirty years, I have not made, I did not consider it necessary and it certainly would not have been advisable to make, public every step in the process. Mistakes were made, methods employed were found to be faulty and unsuccessful, and nothing would have been gained by debating upon them or even drawing attention to them. Just as I started Dieulafoy had introduced his aspirator—an instrument in the device of which he had been anticipated by Bowditch and Protheroe Smith, indeed by many others until we get back to the Roman surgery of Pompeii; and Maisonneuve had fought the battle of the drainage tube. The pelvis did not escape either of these proceedings, and they were fully employed. Between 1871 and 1878 my carriage bag always had an aspirator, but for at least twelve years I have not used it. With it I carried a number of ingenious devices for making openings in the vagina and getting drainage tubes into something, never knowing exactly what, sometimes curing but more often failing to do real permanent good. But as it dawned on me that the peritoneum had no real terrors if respectfully treated, I found

that it was better to ascertain accurately what was needed by careful ante-mortem examination rather than make haphazard shots from below; and after a series of trials came my paper on "Treatment of Pelvic Suppuration by Abdominal Section," which revolutionized the practice of pelvic surgery all over the world. Not only so, but it cleared up the pathology of the pelvis and put a stop to the eternal and ignorant wrangling about perimetritis and parametritis, which had gone on for nearly thirty years. Of this of course the present generation has no need to know anything, and truly it does not, as may be seen from the contents of a paper by Dr. Noble in the *Philadelphia Medical Journal* of July last, entitled "The Conservative Treatment of Pelvic Suppuration of Puerperal Origin." He begins, as is not unusual with such people, by reference to and conclusions derived, according to his interpretation, from my own writings, and succeeds, as is equally usual, in completely distorting my teaching. He goes so far as to quote my own words almost verbatim, and then comments on them in this sentence: "These elementary pathological facts are now generally recognized, although some years ago they were sharply controverted, more especially by the disciples of Tait." According to his contention the truth was first established by the publication of four cases of "true pelvic abscess" by Dr. Charles P. Noble, in August, 1891, before English gynæcology was born. He gives his idea of the differential diagnosis between pelvic cellulitis and pus-tubes or pelvic abscess (regarding these two as the same), and misses the fundamental facts of my teaching on the subject first published ten years before his paper of 1891, that there are two varieties of broad-ligament suppuration, one in the outer half of the layers, which he has recognized, and another in the inner half, quite as easy to recognize. In fact, on the left side there is a sign which there is no mistaking, but my publication of which he ignores; and then he goes on to describe such a case, which he did not diagnose but mistook when he needn't have done; for which he opened the abdomen correctly enough but did not proceed to complete the operation as he should have done; and subsequently attacked the abscess from the vagina, as he might have done at first if he had been at all familiar with my teaching, or had been one of those disciples of mine upon whom he pours the vials of his contempt.

It is not for such blundering as this that I now draw attention to Dr. Noble, but because he is an example, though a very bad one, of the clouding school of abdominal surgery. Of these most exist in Germany, and the thickness of the gynæcological atmosphere seems to be reaching England; and while I would be the last by my utmost endeavor to check change merely because it was new, I depreciate change when introduced for no other purpose than its novelty, when its novelty leads us out of the track of the investigation of facts already quite familiar to us, but concerning which we have not arrived at final conclusions.

That suppuration in the pelvis should not be made the subject of surgical rule different from that affecting other regions had to be my cry for nearly ten years, or, as I put it, that a surgical writ shall run in the pelvis as it does in the knee-joint, and I carried my point against all comers. The chief opposition was of course from the uterine tinkers who were overwhelmed by seeing their consulting-rooms emptied of the helpless sufferers who came day after day for a glycerin plug or month after month for new pessaries. They raised the cry of spaying women, emasculation of women (a strange mixture of etymological definition), and even went so far as to say that we surgeons operated for the fees at the end of the cases. This cry ceased, however, when it was shown that the operating-table of the surgeon was much cheaper in the long run than the consulting-room of the pessary-monger; and personally I am now in a position to say that I should have been a much richer man if I had never seen any of these cases, for as I had to give bed room to the great bulk of them I was money out of pocket, and largely, by the whole transaction. The strange thing is that the cry is still kept up by beardless boys who tell us what they can have no personal knowledge of, whether it be true or not, "that the reckless way in which, in the past, gynæcologists have removed uterine appendages without adequate justification, is the opprobrium of our art." In the past I was in the habit of checking such nonsense by saying that such informers either knew of such proceedings or they did not. If they did not they were liars. If they did, it was their business to give such information as would put the offenders on their trial for felony, and, failing to give such information, they were accessories after the fact and so liable to indictment themselves. I went so far as to serve notice on a well-known London physician who was guilty of this, that I should prosecute him if he did it again, and since that time he has been quiet.

Another parrot cry still being repeated was that such operations made the patients absolutely sterile. But then they were so rendered by the disease before an operation. Disease of the knee-joint makes a man lame, amputation of the limb confirms the lameness, and the best cure of a "conservative" result of an excised knee-joint I have ever seen did not get about free from lameness—in fact, I think the lameness was worse than it would have been with a first-class artificial limb. Double pyosalpinx makes a woman absolutely sterile. Nay, more, as a rule she cannot have intercourse. Removal of the appendages does neither increase nor decrease the sterility, and it often removes completely and permanently a grave interference with marital life. Opening and draining a double pyosalpinx may do as much, but that it will cure sterility—pigs may fly, but I have yet to see a flight of them.

Foiled in all such arguments, our critics have found another platform, and I take again Dr. Noble as my example; he is as good for my purpose as any other of the score from which I might select—they are all as deficient in logical acumen as he is, they put their cases quite as badly, and they are all as open to the same suspicion of quackery; there is no use mincing terms or using plausible phrases to hide the pill which must be swallowed.

It is forgotten, or at least seldom acknowledged by gynæcologists, that the adoption of measures of any kind does not rest with them, but with the mass of the profession; it is the men in general practice upon whom rests the responsibility of advising their patients for what seems to be the best. It is perfectly true that the profession will be, and must always be, governed by the weight of a great name, so that I had a very hard fight after the international congress at London in 1881, when Spencer Wells said that he had only once in his life seen such a case as I described. I answered by publishing a long series of my own cases which had been previously under his own care. This cost me his personal friendship, a result I regretted as long as he lived, and still regret, but I won the battle. I silenced Mathews Duncan by compelling him almost by threats to come with me to a neighboring house in London to see me remove two huge bags of pus in a patient under the care of Dr. Chapman Griegg, who had quite recently been under that of Dr. Duncan. I met the personal difficulty with another case in London, where six distinguished practitioners met me and five of them assured themselves that I had exaggerated my diagnosis, that there was nothing much the matter, by taking Keith to London, making him operate, and

then submitting to them his written report of the operation.

Now another battle rages, and I shall halt no more in it than I did in the former, though my fighting powers are no longer as sharp as they were, nor my taste for warfare as great. We are told once more, though the contrary has been proved over and over again, that in a considerable majority of cases there is a diminution or total abolition of the sexual instincts. This is not true; in fact, it is absolutely untrue. It is a subject on which, of course, the publication of facts is extremely difficult, either one way or the other. But my own facts establish the conclusion that the cases of abolition are extremely few, not more than five per cent.; but they get greatly talked about by loose-minded women and by men whose sense of honor and proper reticence in matters concerning their wives is strangely defective. On the other hand, the instances of restitution of marital relations which had been entirely destroyed by disease and restored by the operation required are at least sixty per cent. of all the cases. In a few instances the mysterious fact remains that women who before operation had little or no sexual appetite had it developed after treatment to an extent which became inconvenient. I removed the appendages, twelve years ago, of a lady noted in public estimation to the highest degree. She had had one child, and to her husband had never shown any sexual response whatever till after the operation, till it became oppressive to him and he died. She lived as a widow for three years, applying to me from time to time for arrest of this symptom, until it got so bad that I advised removal of the uterus, and this I carried out not only without benefit but rather with a further increase of the trouble. She greatly objected to the idea of a second marriage, and had always resisted my advice and the advice of her parents in that direction; but at last, and entirely to save her conscience from the reproach of wrong, she married again, and a few months ago the fact was announced in every paper in Europe. It is, therefore, perfectly useless to say that in a few cases the sexual tastes are destroyed; what kind of an argument it is I shall consider afterward, but meantime I go on discussing it on what merits it has. To force the argument and put it in semi-decent form the word "conservative" is introduced, a piece of rampant deceit and chicanery.

Dr. Noble has two papers, that I have already quoted, and another on "The Conservative Treatment of Fibroid Tumors by Myomectomy." The paper is hardly worth referring to, reeking as it does, without acknowledgment, of all the work of Simpson, Péan, Marion Sims, and others of less note, who brought myomectomy as far as it would go, more than a quarter of a century ago, and then it was left by all of us. But the paper is a useful warning, an example of a common logical error, the use of the undistributed middle term, or, in fuller words, the use of a term devoid of definition and employed with various and irreconcilable meanings in the course of the same argument. Thus in the one paper he alludes to the preservation of parts of ovarian tumors diseased and adherent, and bits of occluded tubes, as "conservative surgery"; in the other precisely the same term means "removal of the whole uterus," the absurdly so-called pan-hysterectomy, revived from the survival of Péan's "morcellement" and hashed up as something new.

The term "conservative surgery" was introduced by Ferguson in the late "fifties," and was the cause of a hot feud between him and the more logically minded Syme. But as Ferguson put it it was fair enough, and became afterward limited almost entirely to its best example, that of excision of the knee-joint. Ferguson was a prince of operating surgeons, and none who can remember his magnificent figure and handsome face unmoved, as he made the knife fly at King's in the old days, with a rapidity which few eyes could adequately follow, can easily believe that such an operation as excision of the knee-joint would meet with his strong approval. In theory it was all right. "Conserve the lower limb," it must always be better than an artificial one. But, alas, though his pupils carried the banner of this conservatism far and wide, it did not keep its promise, and in Syme's face there was to be seen, and then only, that strange little smile of triumph as he lopped off a "conserved leg." "Conserve the parts" was his only comment, and the operation took a back seat and occupies now a very restricted area.

Fancy my astonishment, therefore, when I read in the second paragraph of Dr. Noble's second paper this sentence, "In the recent past true conservatism—that is, the welfare of the patient—has required, etc." Here is a third definition of the term and one which completely confirms my lifelong belief in politics that the advanced liberal is the truest conservative. Certainly with this definition we all are, all hope to be, all must strive to be truly conservative. But why should Dr. Noble pretend to be that and exclude others equally earnest in their efforts, and use for himself a phrase in a way which reminds one of the story of the two men who went up into the temple to pray? If he claims exclusively to be a conservative, then I say he is also a Pharisee, as are also those who use this phrase as he uses it. For what is its real intention other than to declare that he has and uses a method of operating which conserves the sexual instinct, as he plainly does in his concluding sentence, together with a hope that the sterility may not be complete nor completed?

In all such cases the probability of the restoration of fertility is so minute a chance that it is wholly unworthy of discussion or acceptance save in some very unusual set of conditions, as when the possibility of a successor to a crown is concerned, and then I for one would not accept the responsibility. Crowned persons are a rule unto themselves, and I never cared to share in the government. For the general public the terrible facts of over-population, and the fact that of all children born one-half die before they are five years old, are enough to dismiss such a bagatelle from my mind. When such patients have been married for years and remained sterile, it may be assumed that the sterility is complete, and when the mischief has resulted after the birth of one or more children, the patients themselves usually dismiss the argument with impatience. The second question I find is now being directed toward the apprehension of the husband more than to his partner, and here is where the quackery comes in.

In a recent case in which I was concerned and in which it was strongly wished by a rival practitioner that the case should be got out of my hands, it was urged that while on the one hand I should geld his wife and make her like a log of wood, another surgeon, strongly recommended as of the conservative school, would leave her active, the husband promptly replied that the case was that of his wife, not that of a strumpet, and the efforts failed. I confess that this is how I should look at the question, especially in the light of the published experience of Landau and others, who are practically the leaders of this new movement, aided by what is probably of far more importance, my own wide and longer-established experience. The whole thing is based on a misconception of the function of the ovaries, which have no more to do with the sexual appetite than the kidneys. Nor have the Fallopian tubes nor the uterus, as it is maintained and, as I have proved, sometimes increased by the complete absence of all five. The two most erotic women I have ever

come across were two sisters in whom not the slightest trace of uterus or ovaries could be determined, and in one of them I had positive knowledge of the fact of their complete absence when I operated upon her for tuberculous peritonitis. They were in good social position, were not insane, yet no kind of inducement, social, parental, or restrictive, could prevail upon these women to refrain from inducing every man with whom they could get an opportunity to have intercourse with them, and they were confirmed Sapphists as well as the daughters of a well-known physician.

Finally, is it an argument, even if it could be sustained, which we as surgeons can give weight to? I do not often quote Scripture, but I think that a great clinical lesson on this subject may be got in the fifth chapter of Matthew, where at the twenty-ninth verse we are told that "if thy right eye offend thee, pluck it out and cast it from thee. And if thy right hand offend thee, cut it off and cast it from thee: for it is profitable for thee that one of thy members should perish, and not that thy whole body should be" infected with bacilli—a lesson which is still more emphatically localized as pertinent to the present occasion by my national poet, in words which read:

> Geld you, quo' he, and what for no?
> If that your right hand, leg, or toe
> Should ever prove your spiritual foe
> You should remember
> To cut it off—and what for no
> Your dearest member?"

We are not called upon to play the part of moralists, but this we are called upon to do, to adopt as our guiding principle to do the best we can for our patients and for our art, and then for ourselves. I have always had in detestation any surgical proceeding which brings with it a risk that the patient shall have to submit to a second operation. I have therefore always steadily opposed all operations for malignant disease undoubtedly pronounced. Nothing brings so much discredit on our art, nothing so much discredits the individual practitioner. Not only so, but second operations in the pelvis are always more difficult than the first, and according to all published facts are far more fatal than operations completed at first. So much is this the case that I have been driven by the stern logic of facts to advise a more complete operation than ever in certain kinds of disease of the appendages. I refer to those in very young women when the mischief has arisen apparently at or even before the moliminal period. I am certain that of all the cases of suffering from the results of chronic inflammation of the uterine appendages they suffer the most, their sufferings begin soonest, and they are the most difficult to relieve. Among them I have had my worst and most bitter disappointments of relief expected, and have had most discredit in this class of cases. About eight years ago I removed the uterus in one young lady from whom I had removed the appendages thirteen years before, not only with a failure as a result, but I had made her worse: she had taken to drinking, been placed in an asylum, and had altogether gone to the bad. I removed her uterus and cured her promptly, and, after nearly eight years' lapse, I think I may say permanently. I followed this case up and hunted up a number of my known failures, removed the uterus in eleven more cases, and have succeeded in all, and I am now hunting up some more. This is conservative surgery. As a cross to it I was called to London a few weeks ago to a consultation with one of the eminent West-End doctors on a case of this kind. I advised a complete removal, but the patient was conservative in the other way. She was sure that it was all in the right ovary, and the right ovary alone was to be removed. After much arguing and a full understanding in black and white, I consented to divide the operation and removed the right ovary and tube. We shall see; I do not usually accept a fettered condition such as this, but my colleague is a man for whom I have a great reverence, and as he took the responsibility I acquiesced.

My belief is consummate in such radical surgery as will preserve my patients from further risk, and I do not regard the "sexual-appetite argument" as worthy of any but the brothel-keeper, with whom it would of course have great weight. Concerning the surgical difficulty and dangers of the so-called "conservative operations," my old experience of the early "seventies" are confirmed in a paper by Mr. Stanmore Bishop in *The Medical Press and Circular* for November 23, 1898, and I need do no more than refer to that common-sense contribution to the subject.

CONSTIPATION—ITS TREATMENT BY THE MECHANICAL MEASURES.

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In a paper on "Constipation—Its Treatment," read before the County Medical Association in 1894, I advocated that in habitual constipation the mechanical methods of treatment should be employed as the most appropriate and the most successful, an opinion justified by an extensive experience with the diverse other methods that depended upon the administration of drugs in one form or another. Later on, in my book on "Constipation in Adults and Children," [1] these mechanical measures were set forth in detail and the methods for their systematic employment fully described, with other necessary hygienic and dietetic regulations that both physiological investigation and long experience had demonstrated to be of great assistance in the furtherance of a cure. It was also shown therein that it was the consensus of the most eminent clinicians that only by these measures could the trouble be at all overcome in cases of any duration.

Numerous articles have appeared in various prominent journals advocating one or the other of the mechanical measures, and setting forth their superiority over the plans of treatment hitherto in vogue. Thus Le Marinel set forth the advantages of massage,[2] as had already been done by Schreiber, Reibmayer, and others, in an extensive paper with a long table of cases treated. In the *Journal du Praticien*, 1896, appeared a long article by Dr. Courtade, on the treatment of constipation by electricity and the mode of application of the same, and affirming its success, as had already been set forth by Erb and repeated in treatises on electricity since published.

However, as with all measures that are not directly surgical or do not pertain to the administration of drugs, the profession in general has been rather slow in taking up this mechanical method of treatment, and we still find throughout the periodical medical literature various formulæ given and special methods of administration of the various cathartics described for the successful treatment of constipation, and all more or less fulsomely lauded for the success achieved, which in absolute truth are as powerless as the others that have preceded them. This is indeed the more strange, as already some forty years ago that eminent

[1] "Constipation in Adults and Children, with Especial Reference to Habitual Constipation and its Most Successful Treatment by the Mechanical Methods," 1897.

[2] Annales de la Société Royale des Sciences Médicales et Naturelles de Bruxelles. Fasc. i. and ii., 1890.

clinician Trousseau[1] recognized the impossibility of achieving anything with the whole line of laxative and purgative drugs, and so proclaimed and taught.

There can be no question that the successful treatment of constipation is a very important matter to the afflicted, not alone for the discomfort the condition causes, but more so for the reason that it undoubtedly is the *fons et origo* of many grave ailments that may even lead to the endangerment of life, as has been fully set forth in the chapters on the "Consequences of Constipation" in the book referred to. There is, for instance, appendicitis. It is beyond a doubt, as has been there fully shown and as has been confirmed by Deaver in a later article on "Some Mooted Points in the Pathology of Appendicitis,"[2] that in the great majority of the cases appendicitis is due to a previous and more or less long-continued constipation. Then, again, we have disease of the kidney. Mahomed ascribed to constipation a decided etiological influence in the production of Bright's disease in the course of a scarlatina.[3] It is more than likely that long-continued constipation may, at times, give rise to conditions that ultimately lead to disease of these organs, perhaps the most serious that can befall the human being.

To call attention, therefore, once again to the mechanical method of treating this so obstinate trouble, is the purpose of this paper, and in order to demonstrate more clearly what can be accomplished thereby, and what gratifying results both to patient and physician can be obtained therewith, the following more recent cases are excerpted from my private case-book and here appended in exemplification:

Case I.—December 6, 1896. C. J. W——, aged twenty-seven years, merchant, five feet five inches high, weight one hundred and thirty-eight pounds. He is much confined to the office when at home. He was sickly up to his fifteenth year, having had various infantile ailments and at one time some trouble with his kidneys. Since then he has been fairly well. He is a good liver, and loves good cheer, both food and drink; takes whiskey, beer, wines, but mainly beer. He smokes much and strong cigars. He is very nervous; is much troubled with headaches, the pain greater on one side of the head than on the other; lately it is not so much pain as a dull, heavy feeling in the head. He is more troubled this way when at home than when he is on his travels. He enjoys his food, but it seems to lie heavily and long in his stomach; there is a sense of oppression, of weight in the epigastrium, and for the last three weeks he has had a dull gnawing pain in the stomach. The tongue is very heavily coated in the posterior half. He has eructations. He has a bad taste in his mouth on awakening in the morning. He is very constipated, obstinately so, for the last four years. Most of the members of his family are so. In the last years he has had much malaria, as his travels take him into a malarial country. Examination disclosed an atonic stomach and a greatly enlarged spleen.[4]

Treatment: Dietary regulations, especially as regards drink. Massage three times weekly.

January 24, 1897. His bowels have acted regularly daily, since the beginning of treatment, and neither drug nor injection has been required. He has not had any headaches since and his nervousness has disappeared. Treatment but twice weekly from now on.

February 6th. He feels splendidly; his bowels are regular. Discharged. He leaves in a few days for Mexico.

September, 1897. His bowels have continued regular, acting daily. He also informed me that on this trip, for the first time since he had been going to that country, he was free from attacks of malaria.

Case II.—June 9, 1897. M. J——, male, aged twenty-seven years, stoutly built young man; five feet eight inches high, weight one hundred and sixty pounds, clerk. He always enjoyed good health until two years ago, when he had an attack which was said to have been typhlitis. The physician who attended him employed, among other things, rectal injections, which brought away enormous quantities of fecal matter. After the lapse of some time he was able to be up and about. April 10, 1897, he had another attack, which, according to his statement, was in all respects like the first. He eats well and always has a good appetite. His bowels have been constipated since he was eight years old, when he began to work. He does not know how the condition became a habit. He has used purgatives regularly, and therefore is at a loss to account for the large accumulations evacuated as above mentioned. He was formerly much given to athletic exercises, riding a bicycle, jumping, etc., but since the attacks of typhlitis he does not ride the bicycle, and he has to be otherwise careful in his movements, as any unusual motion, as jumping off a car, will cause pain in the right inguinal region. Since the attacks above mentioned, he has had spells of bad breath. Occasionally he has headaches, not pains but rather a dulness, heaviness of the head.

Examination: Stomach normal. Abdomen: Inspection shows nothing abnormal; palpation reveals a dense, broad induration in the right inguinal region, extending from the right anterior superior spine of the ilium forward toward the umbilicus, eight centimetres in width, and downward and forward, following the curvature of the region to the linea alba, six centimetres in length. The part is not sensitive to light superficial palpation, but a more forcible stroke, with deeper pressure, will cause him to wince, showing tenderness.

I was rather in doubt whether anything could be done, but concluded to make the trial.

Treatment: Dietary regulations; hydriatic applications over the seat of induration; massage; electricity. Over the seat of the induration the massage was at first very light, just skimming over the surface and merely intended to stimulate the circulation and thus effect, if possible, an absorption of the exudate.

June 26th.—The bowels began to act spontaneously to-day. He had a large natural, spontaneous movement this morning.

September 16th.—The bowels are moving regularly every day. The induration in the groin has disappeared entirely.

He remained under treatment—that is, the mechanical applications were made at intervals of from three to ten days, until February 14, 1898, when he was discharged. His bowels have continued to act regularly. I saw him but lately, and he informed me that he is perfectly well and last summer took a long bicycle trip through the Eastern States.

Case III.—November 3, 1897. Mrs. W. C——, aged forty years, married; has had six children (easy labors); five feet five inches high; weight ordinarily between one hundred and fifty-five and one hundred and sixty-five pounds, now but one hundred and forty-five pounds; she has lost ten pounds lately. Her chief complaint is the constipation of her bowels. She has been troubled in this way for many years; to her best recollection, she has not had a spontaneous evacuation in the last fifteen years. It is only by means of cathartics or large injections that she succeeds in having a stool. She has pains in the abdomen after the injections, and there is a tendency to the development of piles. She cannot eat well; she fills up very quickly;

[1] "Clinical Medicine," Philadelphia.
[2] American Journal of the Medical Sciences, 1896.
[3] Roberts: "Urinary and Renal Disease."
[4] See "Constipation in Adults and Children," etc., by H. Illoway, M.D., page 262.

she feels very full and bloated, and is distressed until relieved by repeated eructations. She has been under treatment by one of our most eminent practitioners, who put her upon a diet which excluded all fruits and vegetables. Her meals are composed of an egg, a slice of toast, and a little tea for breakfast; a beefsteak, nothing more, for dinner; and supper same as breakfast. She does not sleep well; has pains in the abdomen and in the chest. For the last six months she has been troubled in her urinary organs; the urine is very red in color and burns in passing.

Examination revealed an atonic condition of the stomach (looked upon as secondary), and it was shown that she had hemorrhoids. The abdominal walls were of fair firmness and good panniculus.

The treatment instituted consisted: (*a*) In proper regulation of the diet. As it had been very viciously disarranged and as she had been upon this wrongly constructed diet for some years, it was necessary, in view of the atonic state of the stomach and the tendency to distention, to proceed carefully and accustom the digestive tract gradually to appropriate food and drink. It is not necessary to go into details here upon this point; they have been given *in extenso* in my book on constipation referred to. (*b*) Massage was given, with occasional applications of electricity and certain hydriatric measures, tending to arouse the intestinal tract out of its lethargy and to promote the better functioning of the various secreting organs of the intestinal tract.

December 6th. She is doing very nicely, and the bowels are acting regularly. She can eat much better; eats now carrots, turnips, beets, horseradish. Sponge cake with some jelly was allowed from to-day.

January 17th. She is doing very well. The mechanical applications are made but twice weekly now.

February 4th. She complains of diarrhœa; prescribed a mild astringent. Massage very light, mainly vibratory.

February 22d. Bowels moving regularly; discharges fair in quantity and normal in color (from inspection). She feels well generally. If not troubled otherwise, she is to return in four weeks and report.

April 22d. She reported very well; stomach acting well; can eat all kinds of food; bowels regular. Discharged.

Her bowels act regularly daily to this day, and if at long intervals, through any carelessness or inadvertence, she misses a day, her bowels soon right themselves, without the intervention of any drugs.

In all these cases the constipation was of more or less long standing, a number of years, and, nevertheless, in all relief came after a longer or shorter period of treatment. Besides this, however, there are other notable features. In the first case, with the relief from constipation came freedom from attacks of malaria; in the second case, with the removal of the pathological products and the restoration of the part to the normal, the individual was again able to take up active exercise and to move about freely at his pleasure, without the constant fear that a wrong step might cause suffering and even worse. In Case III., the very long time of the constipation is noteworthy, for, although it is set down as fifteen years, that is but an approximate figure. Her husband informed me that it was certainly eighteen years since his wife had had a movement without the aid of a pill or rectal injection.

The two following cases are remarkable for the rapidity with which complete recovery ensued:

Case IV. — May 1, 1898. — Annie C——, aged twenty-three years, domestic; very poor in flesh. She is a small eater. She has been constipated since her arrival in this country four years ago. When at home in Ireland, she would have a movement every second or third day, but here she can go any length of time and will not have a movement unless she takes a cathartic. She has been under treatment with various physicians, but her status has remained the same. Seeing no improvement and all her earnings being expended for physicians' fees and drug bills, and believing that a change of climate would effect a change in her bowels, her uncle determined to send her back to Ireland. Her mistress, a school acquaintance of mine, being decidedly loath to lose her, as she was a good and faithful girl, came to me and asked me to treat her, to which I agreed.

Examination, absolutely negative. The stomach was found normal both as to chemismus and motor function.

Treatment: Dietary directions, upon which I laid great stress here, as her diet had been very faulty; hydriatic applications, massage.

May 8th. She was roused this morning by a call of nature and had a large, well-moulded stool.

May 29th. Bowels continue regular. She was ordered to return in two weeks.

June 12th. The bowels act regularly and naturally every day. Discharged.

November 14th. She came in to say that her bowels have continued regular and she has not intermitted a day. She has grown much stouter and more developed.

Case V.—November 26, 1898.—Miss G. A——, aged twenty-four years; no occupation. Her father is a wealthy merchant. She complains of constipation. She has been constipated for a long time, and must always take some form of laxative drug to move her bowels. Her appetite is poor. She is very much troubled with headaches. The tongue is coated.

Examination: Inspection and palpation of abdomen disclose nothing abnormal.

Treatment: Dietary directions; hydriatic applications; massage.

After the first treatment, her bowels began to act naturally and regularly. A second treatment was given at the end of a week. The bowels continued to act regularly every day. No further treatment was given.

January 8th. She came in with a married sister who is under treatment for a chronic affection of the stomach. On inquiry, she said that her bowels had continued to act regularly without interruption and that her general health was greatly improved. All the morbid symptoms have disappeared.

In these two cases, and more especially in the last, I am confident that the dietary directions were the most important factor in bringing about so rapid a cure. I believe that these few cases, though many more both of adults and children could be cited, amply demonstrate that the mechanical methods are the treatment, and the only successful treatment, for this very troublesome disorder, which is responsible for so much physical discomfort and sometimes for grave disease.

1138 Madison Avenue.

The Surgical Treatment of Chronic Gastric Ulcer.—Dr. G. Mikulicz (*Arch. für klin. Chir.*, lv. [1], S. 84) gives the following general indications for operative interference in open, non-complicated gastric ulcer: (1) When symptoms develop that directly or indirectly threaten the life of the patient; such as severe hemorrhage, increasing emaciation, beginning purulent perigastritis, suspicions of carcinoma, etc. (2) When repeated courses of internal treatment produce no result, or when the benefit is of short duration, and the patient, on account of severe gastric disturbances (pain, vomiting, dyspepsia), is unable to attend to his work or to enjoy life.

INFECTION OF GUNSHOT WOUND OF THE LEG WITH THE BACILLUS AEROGENES CAPSULATUS—AMPUTATION—RECOVERY.[1]

By W. J. LOVE, M.D.,
LAFAYETTE, ALA.

WITH BACTERIOLOGICAL REPORT

By Prof. C. A. CARY,
AUBURN, ALA.

Since the classical researches of Welch and Nuttall in 1892 on the rapid development of a gas-producing bacillus in the blood-vessels after death, there has been abundant evidence that this bacillus plays an important rôle in many cases of death accompanied by emphysematous gangrene. The work of Dunham, Welch, Flexner, Fränkel, and others has shown that it is not after death only that the organism may infect the human body, but that under certain conditions ante-mortem infection takes place, and the infection is so destructive, rapid, and powerful that it offers a subject well worthy of study both to the surgeon and bacteriologist.

To Welch and Nuttall is due the credit of first isolating from the human body and cultivating in pure cultures this bacillus, to which they gave the name, "bacillus aerogenes capsulatus." As these gentlemen predicted, their studies have thrown much light on the subject of malignant œdema, air-embolism, emphysematous gangrene, and the "Schaumorgane" of the Germans—so called from the frothy foam found in the structures of the bodies dead from emphysematous gangrene, gaseous phlegmons, etc.

The following is a brief report of the case of Welch and Nuttall, with a description of the bacillus, its morphology and culture peculiarities, as published in the "Johns Hopkins Bulletin" for July and August, 1892. The patient was a man who died suddenly. The autopsy was performed eight hours after death, the weather being cool, while the body was still warm and before any of the usual post-mortem appearances had set in. The man had a large sacculated aneurism of the ascending aorta, chonic pulmonary tuberculosis, and acute miliary tuberculosis. He died suddenly after a severe hemorrhage through two ulcerated openings on the anterior thoracic wall caused by the aneurismal sac, but not soon enough afterward for the hemorrhage to have been the sole cause of his sudden death. A large bacillus was isolated in pure culture from the blood in the larger blood-vessels, from the blood in the cavities of the heart, from the liver, spleen, and kidneys. In all of these tissues were found quantities of gas. Cultures were made in different media from the heart blood, the aneurismal clots, liver, spleen, and kidneys. It grew in all the ordinary culture media, its development being accompanied by gas in great quantities. The following is a description of the bacillus (which I give complete, it being the first and most classical made, and differing very little from those given at later dates): A large bacillus, usually straight; but sometimes slightly curved or bent forms are seen; the ends are slightly rounded, or they may appear, especially adjacent ends, in pairs or short chains, as nearly or quite square cut, but this latter appearance is not so uniform as with the anthrax bacillus. One of its most important morphological features is a distinct capsule; is non-motile and does not form spores; is from three to six micromillimetres in length, and is about one-third as broad as long. It is strictly anaerobic. It stains well with aniline dyes, including Gram's method. Capsules may be seen when ordinarily stained, but are best brought out by glacial acetic acid and gentian violet as described by Dr. Welch. It grows best at a temperature of 35° to 37° C., but it grows slowly at ordinary room temperature. Capsules were demonstrated in bacilli obtained from the body and in animal cultures. In agar tubes it appears at the end of twenty-four hours as a pale, whitish, moist growth, accompanied by gas bubbles. The bacillus is capable of growth upon all the ordinary culture media, and produces gas wherever it grows. When injected subcutaneously it is pathogenic for mice, guinea-pigs, rabbits, and pigeons; the animals dying in from twenty-four to forty-eight hours. If the animal is killed shortly after an intravenous injection and left in a warm place, the bacillus develops rapidly, with an abundant formation of gas throughout the body. The gas is odorless and burns with a blue flame.

The very interesting question arises in connection with this case of Welch and Nuttall's as to the ante or post mortem infection with the bacillus under consideration, and what rôle it played in causing the death of the patient. As there were sufficient other causes present to bring about this result, the authors desired to express themselves with caution, yet they conclude that it was quite probable that the bacillus had through the ulcerated openings entered the aneurismal clots and effected growth in them, spreading thence through the medium of the circulation to other parts of the body, before death, making this a case of terminal infection with the bacillus aerogenes capsulatus.

Since this first description of the bacillus aerogenes capsulatus, which has proven an innovation to surgical bacteriology, many cases have been reported in which the organism has been isolated both ante and post mortem, with many experimentations on living animals. But to its morphology and culture peculiarities nothing has been added, except its spore production when grown in blood serum, occurring in the experiments of Dr. Dunham and published in the "Johns Hopkins Hospital Bulletin" for August, 1897.

In 1897, B. B. Lanier described a bacillus identical with that of Welch, except that it grew in the presence of oxygen, and to which he gave the name of bacillus aerogenes capsulatus No. 2. This peculiarity was also noticed by Dr. Cary in his study of my case (see bacteriological report in connection with this paper). Following Welch and Nuttall's publication were the four cases by Fränkel in 1893, in which he describes the causal relation between the bacillus phlegmonus emphysematosæ and gaseous phlegmons.

Goebel in 1895, in an article published in *Centralblatt für allgemeine Pathologie*, entitled "Ueber den Bacillus der Schaumorgane," details a case of papilloma of the bladder complicated with pyelo-nephritis, at the autopsy of which gas blebs were found in the heart, liver, spleen, adrenals, and stomach. From these he isolated a bacillus which he claims to be identical with the bacillus aerogenes capsulatus of Welch and Nuttall. He also identifies this bacillus with the bacillus phlegmonus emphysematosæ of Fränkel.

Graham, Stewart, and Baldwin in 1893 published a case having an interesting feature from an obstetrical point of view. The patient was a married woman, aged thirty-five years; she was suddenly seized with a chill shortly after a supposed criminal abortion, the chill lasting four hours, followed by severe pain throughout the pelvis, with a discharge of bright red blood from the uterus. She was seen at 1 P.M., four hours after the chill, at which time there were extreme restlessness and suffering. Morphine was given, and in three hours she was comfortable. In six hours she was emphysematous from head to foot, which state was soon followed by death. There was no post-mortem.

In September, 1897, Dr. Dobbins described a most interesting case from an obstetrical point of view, as

[1] Read before the Academy of Medicine, Columbus, Ga., February 17, 1899.

it is the first case on record from which the organism was isolated ante mortem. The woman had been in labor forty-eight hours before entering the hospital. There was a generally contracted pelvis with a large child and an impacted head. A frothy bloody fluid escaped from the vagina, and in this fluid the gas bacillus was detected in great numbers. It was also found in the fœtus and placenta. Shortly after death the body became rapidly emphysematous. No autopsy was made.

These two cases are cited, as they prove that this infection is of great importance to the obstetrician as well as to the surgeon.

Menge and Kronig, of Professor Zweifel's clinic in Leipsic, in their work on the "Bacteriology of the Female Genital Organs," attach great importance to infection with this bacillus. One of their cases was of such an interesting nature that I give it in detail: The woman was a primipara; after hard labor for several hours, in which the cord had become prolapsed, delivery was attempted by turning but failed; the woman's temperature began to rise rapidly, and the child was extracted by forceps. There was a foul-smelling discharge from the vagina, mixed with blood and meconium. After the placenta was delivered and the uterus was washed out with permanganate-of-potash solution, the woman's temperature fell to normal, and she left the hospital on the ninth day. The bacillus was found in the bad-smelling discharge and in the prolapsed portion of the cord; the placental end of the cord and the placenta were sterile. It is quite likely that the infection had entered the uterine cavity through the prolapsed cord, and had delivery been longer delayed there would have been general infection of the woman's body. There are many other cases having an obstetrical bearing, too numerous to mention in detail. There are one by P. Ernst and four by Lidenthal.

In January, 1896, Welch and Flexner published in the *Journal of Experimental Medicine* an unfinished article in which are reported twenty-three observations of this infection; Fränkel's four cases are included in this report. Not all of these cases, however, have a surgical bearing. Dr. Dunham has a series of five cases, published in 1897, all of which are surgical. Dr. Erdmann, of New York, publishes the report of an interesting case in the October number of the *Medical News*, 1897. The infection in this case occurred in compound fracture of the humerus, followed by rapidly spreading gangrene and death. In this article Dr. Erdmann makes a summary of all cases published by Welch and Flexner and by Dunham, having a surgical bearing, and from this I draw the following: There had been published up to that time a total number of sixteen surgical cases; twelve of these died; four recovered; fourteen of these were of mixed infection—six with the colon bacillus; eight with pus-producing germs; two were cases of pure infection. All cases that recovered were those of mixed infection and were treated by amputation. Dr. Erdmann concludes that "the use of antitoxic serum, or the infecting of cases of pure infection with the streptococcus, would be justifiable."

In studying the foregoing reports in connection with my case and the symptoms manifested in it, I deduce the following observations:

Infection with the bacillus aerogenes capsulatus produces a rapid toxæmia with a rapid breaking-down of the infected tissues and accumulation of gas in the same, rapidly spreading gangrene and death, unless very prompt and thorough means is used for the removal of the entire infected area. Amputation, when practicable, is always immediately indicated.

Very little or nothing is known of this organism in a natural state, though Welch and others express the opinion that its habitat is the soil, and it is frequently present in the intestines and in several instances has been found in connection with the colon bacillus, especially in wounds of the intestines or near the anus.

Wounds may be infected through instruments, the hands of the surgeons, from the intestinal tract, and in the way that ordinary infections usually occur. Dr. Halsted has had a case of gunshot wound in which the infection was carried in by the bullet. The symptoms usually begin with a chill followed by a rise of temperature to 102°, 103°, or 104° F., with delirium, great prostration, discoloration of the area around the wound, emphysema, and rapidly spreading gangrene. The indications for treatment are immediate amputation when practicable; when not, free incisions and the removal of all necrotic material, free and continuous irrigation and drainage.

In discussing Dr. Erdmann's case before the New York Academy of Medicine, Dr. E. K. Dunham expresses the following: "Infection with the bacillus aerogenes capsulatus differs from infection with the ordinary pyogenic cocci, in that it is incapable of growing in the presence of oxygen. It appears to me that advantage might be taken of this fact in contriving appropriate treatment in these cases." Dr. Dunham then recommends the methods first carried out by Dr. Halsted for the treatment of cases of this infection—free incisions, followed by full and continuous irrigation with hot water. Where more radical means, such as amputation, are impracticable, the above method would certainly be indicated, though nothing has as yet proved successful except amputation.

The table of surgical cases on the opposite page is copied from Dr. Erdmann's article, and I give it in full, as my case belongs strictly to that class.

The following is a report of my case:

On November 22, 1898, I was asked by the sheriff to visit a prisoner in jail, who had been wounded and was not doing well. The patient was a negro man, thirty-two years old, and weighed one hundred and ninety pounds. On examination, I found his right leg enormously swollen. He had a gunshot wound that had been received forty hours before from a forty-four calibre Colt's pistol, while he was in an intoxicated condition. The bullet had entered about three-fourths of an inch below the knee, on the outer side of the leg, ranging downward and forward; it made its exit six inches below on the front of the limb, slightly grazing the spine of the tibia. As before stated, the limb was enormously swollen throughout its entire circumference, but the swelling was most marked around the wound of exit. The skin all over the limb gave a crackling sensation peculiar to emphysema on pressure; a bloody, frothy-looking fluid exuded from the wound upon the slightest pressure, which bubbled with quite an audible sound. The wound of entrance was partially healed for at least an inch, and presented a healthy appearance. There was a peculiar, fetid, disagreeable odor about the limb, very noticeable several feet away. The man complained of severe pain and seemed to be in extreme prostration. His pulse was 135, very weak and irregular; temperature, 102.5° F.; respiration, 28. He had had syphilis two years ago and repeated attacks of gonorrhœa, and had always drank whiskey freely. The wound had been dressed by a physician shortly after it had been made, and he was then brought to the jail some fifteen or twenty miles away, and had remained quite comfortable for twenty-four hours afterward. He was then seized suddenly with a severe chill, which lasted several hours, after which the limb began to swell rapidly, with severe pain and nausea. The patient was at once removed to my operating-room and given a bath with hot water and plenty of soap. The limb was scrubbed with hot water and soap, then with hot bichloride solution followed by alcohol. He was then etherized by

my friend Dr. Grady, and I then made a free deep incision into the limb. Instead of finding it full of pus as I expected, there was only the escape of a frothy, brownish fluid, that bubbled with a noise that was distinctly audible several feet away. There was a horrible odor that filled the entire room. The muscles underneath the skin were soft, macerated, and presented a necrotic appearance. All the tissue seemed to be broken down for some distance around the wounded area. The bullet had struck the head of the fibula and comminuted it for two or three inches. The anterior tibial artery was torn near the wound of exit, and was black and gangrenous for two inches and filled with a soft, pulpy blood clot. There had been scarcely any hemorrhage into the wounded area. The entire area for several inches around and down to the tibia was scraped out, the wound being entirely cleansed of bone fragments and dead-looking material, and parts being scraped away until they bled freely—all the time keeping up active irrigation with hot water. The tibial artery was tied well above the necrotic portion. The irrigation had been kept up till all the hemorrhagic oozing had ceased; this lasted at least an hour after the anæsthetic was discontinued. The wound was then packed with sterilized iodoform gauze, and the patient was put to bed in fairly good condition. His pulse had gained in strength and volume and was only 100 to the minute; respiration, 20; temperature, 100° F.; and I felt that probably we might save the limb.

Smear preparations from the scrapings and from blood in the tibial artery, stained with methylene blue, eosin, and alcoholic fuchsin, showed a large straight bacillus with rounded ends in great numbers. This appearance, coupled with the gas and the clinical history, made me believe that we had to do with the bacillus of Welch and Nuttall, and later investigations proved this to be correct.

The next morning the patient presented the following condition: He had had a restless night; pulse, 130; respiration, 28; temperature, 102.5° F. There was severe pain in and around the knee; none below. Below the dressing the leg was much swollen, and emphysematous crackling was very evident all over the leg and foot except the plantar surface. No sensation could be felt in any part of the foot and for two or three inches above the ankle. Incisions into parts around the ankle and dorsum of the foot were not felt and exuded a frothy serum that sputtered with gas. He could not move his toes or foot. The parts above the knee were apparently in healthy condition. The man was made to understand that an immediate amputation was the only thing that could be done for him. This he refused for several hours, but finally consented, and I amputated at the apex of Scarpa's triangle, just twenty-four hours after seeing the patient. The anæsthesia lasted forty-five minutes, at the end of which the man's condition was very bad. He presented all the symptoms of extreme collapse—irregular pulse and weak, 135; respiration, 35; skin covered with cold perspiration. He received at this time one pint of decinormal salt solution and two ounces of whiskey per rectum. He had had during the operation two hypodermics containing $\frac{1}{60}$ gr. strychnine, $\frac{1}{100}$ gr. atropine, and $\frac{1}{100}$ gr. digitalin, each. One hour after operation, the skin began to show more warmth and the pulse more volume. He was given another pint of hot decinormal salt solution with three ounces of whiskey. In another hour he seemed to have almost recovered entirely from the shock and was in fairly good condition. He slept well during the night, and on the morning of the 24th his pulse was 108, full and strong; tem-

CASES REPORTED BY DRS. WELCH AND FLEXNER.

	Case of Dr.	Sex.	Injury.	Operation.	Result.	Pure.	Infection Mixed with—	Bacilli Found.	
								Ante mortem.	Post mortem.
I.	Halsted.....	M.	Gun-shot of knee.....	Amputation of thigh.	Recovered.	No.	Staphylococcus aureus and staphylococcus pyogenes.	Yes.	
II.	Halsted.....	M.	Compound fracture of leg.	Amputation of thigh.	Recovered.	No.	Staphylococcus albus ..	Yes.	
III.	Halsted.....	M.	Injury of hip and wound of rectum.	Extensive incisions.	Died	No.	Intestinal (?) bacilli and streptococci.	Yes.	
IV.	Tiffany.....	M.	Compound comminuted fracture of patella.	Incisions	Died	Yes.	.....	Not stated.....	Not stated.
V.	Tiffany.....	M.	Compound comminuted fracture of forearm.	Amputation of arm.	Recovered.	No.	Pyogenic cocci.....	Yes.....	Yes.
VI.	Mann.....	F.	Gangrene (?) of hand and forearm.	Amputation of arm.	Recovered.	No.	Streptococci	....	From the amputated arm.
VII.	Halsted.....	F.	Phlegmon of hand and forearm.	Amputation....	Died	No.	Streptococci and staphylococci.	None found before death.	Twenty-four hours after death.
XVII.	Halsted.....	M.	Catheterization for retention of urine, stricture, sepsis.	.....	Died	No.	Colon and streptococci .	Not examined.	Three-quarters of an hour after death.
XVIII.	Halsted.....	M.	Catheterization for enlarged prostate, retention.	... .	Died	No.	Colon and pyogenic....	Not examined.	Yes.
XII.	Kelly.....	F.	Strangulated umbilical hernia.	Operation	Died	No.	Colon and pyogenic....	Not examined.	Yes.

CASES REPORTED BY DR. E. K. DUNHAM.

	Case of Dr.	Sex.	Injury.	Operation.	Result.	Pure.	Infection Mixed with—	Bacilli Found.	
								Ante mortem.	Post mortem.
I.	Dennis	F.	Cellular infection about the lower jaw.	Incision	Died	No.	Pyogenic cocci..... ..	Yes.....	Yes.
II.	Erdmann....	M.	Scalp wound, compound fracture of right arm.	Free incision...	Died	No.	Pyogenic cocci..... ..	Yes.....	Not examined.
III.	Gouley	M.	External urethrotomy primarily, passage of sterile sound secondarily.	.....	Died	Yes.	....	Yes.....	Yes.
IV.	Hotchkiss....	M.	External urethrotomy primarily, passage of sterile sound secondarily.	..... .	Died	No.	Coli communis (?).....	Yes..... ...	Yes.
V.	Abbe.....	M.	Prostatic hypertrophy, catheterization.	Incision	Died	No.	Coli communis and streptococci.	Yes.....	Not stated.
I.	Bryant*.....	M.	Compound fracture of leg .	Incision, amputation.	Died	No.	Streptococci and staphylococci.	Yes.	

* Unpublished.

Total, 16 cases; 12 males, 4 females. Died, 12; recovered 4. Pure, 2. Infection mixed in 14; 6 with colon bacilli.

perature normal. On the afternoon of this day his temperature rose to 102° F., but went to normal next morning. There was no feature worthy of note after this until the morning of the sixth day. About 6 A.M. he had a slight chill, with nausea, followed by a rapid pulse and temperature 102.5° F. On removing the dressings I found the stump almost entirely healed. At the lower angle where a gauze drain had been kept in, there was a small accumulation of serum that ran out as the gauze was pulled away, leaving a small cavity between the lower corners of the flap. There was a slight frothy look to the serum and several bubbles appeared as it ran out. The cavity would have held about two ounces, the walls of which presented a grayish, unhealthy appearance. This was freely irrigated with hot water, scraped out, and cauterized with a solid stick of silver nitrate and packed with sterilized gauze. After this the pulse improved, the temperature returned to normal, the cavity rapidly filled, and the man made an uninterrupted recovery.

I regret exceedingly that the scrapings from the cavity, which I had carefully preserved, were thrown away by an attendant before they were examined microscopically, as it would have been a matter of much interest to have known whether the bacillus had invaded the stump.

The limb was sent to Dr. C. A. Cary's laboratory at Auburn, Ala., who furnished the report submitted herewith.

Report of Bacteriological Examination of Negro's Œdematous Leg (sent by Dr. W. J. Love, Lafayette, Ala.), by C. A. Cary, Auburn, Ala.—Smears from œdematous portions showed a micrococcus and a capsulated bacillus. Sections from the muscular tissues and stained by Gram's method showed the same bacillus. The morphology of the bacillus corresponds very closely to the bacillus aerogenes capsulatus of Welch. It is about two micromillimetres thick and three to five long; the free ends are always round; the attached ends in chains are usually square, but sometimes they are round. It occurs singly, in pairs, in clusters, and in chains; it shows a distinct capsule. It is motile. Upon none of the culture media in which or on which it grew did it form any spores. The bacillus takes up the aniline stains and holds the stain in Gram's method with great tenacity. It grew best in glucose bouillon at a temperature of 37° C. In the culture made directly from the leg it grew best in the deep layers of the bouillon, producing gas which collected on the surface in froth-like bubbles. After being transferred from one tube to another (allowing several days to elapse between transfers) in the third and fourth tubes it begins to grow best on the surface of the bouillon; it then becomes distinctly aerobic; the growth on the surface is white and flaky. The culture grew better in air than in the hydrogen or pyrogallic jar. Agar cultures grew slowly; early or original cultures grew best along the deep parts of the needle punctures; but after several transfers or generations, the bacillus grew best on the surface. The surface growth was never very extensive. In the water of condensation it grew better than in or upon the agar. In the water below and around potato cultures, the bacillus grew, producing considerable gas which appeared in froth along the sides of the potato plug; it did not grow well in the water of sweet-potato culture. There was very slight growth in milk, and it did not coagulate the casein or change litmus milk. It grows in Dunham's peptone solution, but does not form indol. In slant tubes of ordinary or Loeffler's blood serum, this bacillus grew only in the water of condensation. In the third and fourth generation cultures, it formed a thin film on the surface of the condensation water. In cultures thirty days old no spores were found.

This bacillus is no doubt anaerobic when pathogenic, and it readily becomes aerobic in artificial culture.

Tests upon animals: A guinea-pig was inoculated subcutaneously in the region of the back with about two cubic centimetres of sterilized water containing three loops of blood from the negro's leg. This produced a large, black, bloody spot under the skin around the point of inoculation; the hair in this area came out very easily. On the third day this pig was given a second inoculation from the water of a potato culture; three days after the pig died. No germs were found in the internal organs, but the bacilli were in the subcutis around the point of inoculation.

Pure cultures of this bacillus grow very slowly, if at all, in living tissues.

Injected two cubic centimetres of water from a potato culture into the jugular vein of a rabbit. The rabbit was left in room temperature for twenty-two hours, during which time its abdomen became greatly distended and there was considerable œdema beneath the skin. The gas from the abdominal cavity burned with a blue flame. There was also some gas in the muscular septa. The liver was greatly distended; large bubbles of gas were embedded in the liver and under its capsule. Small pieces of the liver floated in fifty-per-cent. alcohol. Sections of the liver stained by Gram's method showed great numbers of the bacilli lining the gas spaces of the liver. The bacilli were found in the blood from the heart, in the red-colored serum from the abdomen, in the subcutis, in the lungs and kidneys. Cultures made from the liver, heart, spleen, and kidneys were pure.

A black rat was inoculated subcutaneously. Three days after it died. The bacilli were found only at the point of inoculation in a small mass of leucocytes. The bacillus did not kill the rat.

It will be seen that the morphological characteristics of the bacillus in this case are almost identical with the description first given by Welch and Nuttall. In regard to its motility, Dr. Cary's observation differs from that of other observers, as he is the only one of whom I have knowledge who has noted this. In regard to its cultural peculiarities, Dr. Cary also differs from other observers (except Lanier) in finding that after several generations it grows best in the presence of oxygen and at the same time loses its pathogenic power.

I wish to take this opportunity of thanking Dr. Cary for the painstaking and thorough investigation he made for me in this case. I was exceedingly fortunate in having so expert a bacteriologist to make the investigation. I also wish to express thanks to Dr. Grady, of Lafayette, for the skilful manner in which he conducted the anæsthesia during the amputation, the man's condition being such that it required skill and caution in its administration. Also to Dr. Gaines for valuable assistance rendered during the operation.

Since writing the above I have read a long article in the *American Journal of the Medical Sciences* for February, 1899, by Dr. Charles Norris, of New York, reporting six cases in which the bacillus aerogenes capsulatus was isolated. In this publication Dr. Norris reports three cases that had not before appeared; one by Dr. Bryant that appeared in Dr. Erdmann's table of surgical cases, one reported by Dr. Larkin in 1898, and the other was one of Dr. Dunham's cases. Dr. Norris' experiments on animals are quite interesting, yet the "cultural and morphological characteristics" of the bacillus differ in no important feature from the description originally published by Welch and Nuttall. He illustrates by several cases the rôle the bacillus plays in terminal infections. His experiments upon the effect of toxins produced in artificial culture when injected into living animals shows that this bacillus, like many other pathogenic micro-organ-

isms, acts through chemical changes and products developed in its growth and proliferation. The animals experimented on were made very sick, with rise of temperature; none died. His experiments with the dead bacilli proved them to be non-pathogenic. Dr. Norris summarizes briefly on most cases previously published.

Progress of Medical Science.

Symptoms of Thyroidism Induced in a Nursing Infant through the Milk of the Mother Taking Thyroid Extract.—Having noticed in cases of myxœdema treated with thyroid extract that the breasts filled with rich milk, Bramwell (*Lancet*, March 18, 1899, p. 762) was led to use the extract in the case of a woman, thirty-four years old, suffering from exophthalmic goitre and nursing a six-months-old infant, with the result that symptoms of thyroidism appeared repeatedly in the infant.

Paralysis Agitans and Trauma.—The interesting question of how frequently paralysis agitans follows trauma has been in part answered by recent writers. Though this etiology is not strikingly frequent, it is noteworthy that very slight injuries may suffice to bring on symptoms, and this is important from the side of prophylaxis, since in elderly persons proper treatment of the injury may ward off such serious consequences. Krafft-Ebing (*Wiener klin. Woch.*, January 12th) has observed seven instances following injury out of a total of one hundred and ten, and he further mentions two out of forty-six seen by Eulenberg, and three out of nineteen observed by Heimann. One etiological factor which Krafft-Ebing says is often overlooked is over-exertion of particular parts of the body.

Electro-Therapeusis in the Treatment of Endometritis.—Dr. Kaplin-Lapina (*Gaz. Méd. de Strassbourg*) announces some of the results of this method of treating endometritis. The conclusions are as follows: (1) The most rapid and efficacious treatment of fungous endometritis and of that following the retention of the placenta is curettage, whether followed or not by the application of different intra-uterine antiseptics. (2) Catarrhal endometritis complicated with non-suppurative lesions of the adnexa and with a neuro-arthritic constitutional state is especially amenable to electric treatment, according to the method of Apostoli. (3) Locally the treatment of choice would be the intra-uterine chemical galvanocautery, repeated two or three times a week for from ten to fifteen weeks, with a progressively increasing dose. (4) The general electrical treatment will be static, high frequency or both combined, according to the relative preponderance of hysterical neurasthenia or arthritis.

Ureteral Catheterization and Ureteral Surgery.—Prof. James Israel (*Berliner klinische Wochenschrift*, 1899, Nos. 1 and 2) formulates his ideas as follows: (1) The most important question of renal surgery, the functional activity of the remaining kidney after a nephrectomy, cannot up to the present date be answered by the catheterization of the ureters alone. (2) The mere demonstration of disease of the second kidney is not sufficient to contraindicate a nephrectomy. (3) The absence of abnormal ingredients in a sample of urine taken from the second kidney does not prove conclusively the health, nor does it give any guarantee of the necessary functional activity, of that kidney after a nephrectomy; this absence does not of itself warrant the advisability of a nephrectomy. (4) Neither disease nor health, in an anatomical sense, of one kidney can in every case be demonstrated with certainty by means of catheterization of the ureters. (5) Sounding of the ureters does not give a positive conclusion as to the existence or the nature of an obstruction. (6) Microscopical demonstrations of blood in a sample of urine obtained by ureteral catheterization do not permit, when hemorrhagic secretion of the bladder coexists, of a positive conclusion as to whether the blood is derived from the kidney or from an injury to the ureter. (7) Neither catheterization of the ureters nor of the pelvis of the kidney is free from the dangers of infection.

Intubation and Antitoxin.—In the interesting paper which Johann v. Bokay read at the last meeting of the Gesellschaft der Kinderärzte in Lübeck, on the duration of intubation in cured diphtheria cases before and after the serum treatment, he gives a *résumé* of all reports bearing on the question, and then relates his own cases. The average duration of intubation in the latter, amounting to forty-four cases, was sixty-one hours, as against seventy-nine in the period before serum therapy was introduced. This indicates that antitoxin has reduced the average duration of intubation in cured cases about eighteen hours. In summing up his conclusions the following points are made: "1. The moment for final extubation is not confined within narrow limits—according to my experience, from one-quarter to three hundred and sixty hours. 2. The average duration of intubation in my hospital amounted to seventy-nine hours before the serum period, but during the serum period to only sixty-one hours; in my material, therefore, the serum therapy reduced the average length of intubation eighteen hours. 3. In consideration of the fact that in 16.2 per cent. of my cured cases the duration of intubation was more than one hundred and twenty hours, I cannot share the opinion of those authors who desire to advance the proposition that tracheotomy must be performed, for the avoidance of severe decubitus, if the patient is not finally extubated within five times twenty-four hours. I believe that no definite time can be appointed for secondary tracheotomy, and that the convincing presence of a severe decubitus indicates the bloody procedure, but fear of the appearance of decubitus is by no means an indication." The author's experience embraces seven hundred and sixty-three diphtheria cases with two hundred and sixty-eight recoveries, out of which there were ninety with forty-five recoveries since serum therapy came in.

The Pest in India from 1896 to 1898.—Dr. Kaschkadamon (*Deutsche Medizinal-Zeitung*, February 23d) is credited with the following conclusions: (1) The pest occurs in regions situated near the sea as well as in places widely separated therefrom; it occurs with the same severity in low and high places, independent of the character of the soil, the season, the temperature and the moisture of the air, and lasts for weeks, months, or years. (2) The beginning of the epidemic depends in a great degree upon the sanitary conditions which the bacillus finds. (3) The continuance of the epidemic depends upon the climatic conditions. (4) In all places the first cases are due to communication with infected regions. (5) The pest may remain latent for a long time, only to break out into an epidemic when favorable conditions arise. (6) Certain animals, such as rats, may serve as spreaders of the bubonic plague. (7) The infectiousness of the plague is very great in private houses with poor sanitary arrangements, but rather slight in well-regulated hospitals. (8) In private houses the contagion is carried, as a rule, indirectly, namely, by infected bed-

ding, dirty wash, etc.; in hospitals contagion is direct from patient to patient. (9) For infection it seems absolutely necessary that the contagion—that is, the infectious matter—be lodged directly in the blood by way of the skin or mucous membranes. (10) There are three forms of pest: (*a*) The bubonic pest in eighty-six per cent.; (*b*) the pulmonary pest in nine per cent.; (*c*) the abdominal pest in the remainder. (11) The period of incubation is two to twelve days. (12) The duration of the disease is from five to seven days. (13) In the clinical picture of the disease nervous symptoms are very prominent. (14) Infants, sucklings, as well as those who have passed the century mark are attacked. (15) The mortality in hospitals is fifty-six to seventy-two per cent.; in private houses, eighty-five per cent. (16) In the treatment of the disease two indications arise—namely, to bring the patients to the hospital and to feed and nurse them. (17) The serum treatment has thus far not given any results. (18) The prophylactic vaccination of Chawkin proved very efficacious. In ten thousand vaccinations it was found that the mortality in these patients was ninety-three per cent. less than in those not vaccinated. (19) In order to break the epidemic, strict isolation of the affected as well as the suspicious cases must be carried out and thorough disinfection enforced.

Operations on Syphilitics.—Dr. Michailow (*Deutsche Medizinal-Zeitung*, February 23d) says that within three years he has operated upon two hundred syphilitic individuals, mostly women, and has observed that in these patients there exists a certain diathesis which exerts an unfavorable influence upon the ultimate result of the operation; the diathesis consists especially in changes of the vascular system, morphological alterations in the quality of the blood, and specific changes in the skin itself. These changes naturally play an important part in the process of cure. The syphilitic diathesis lacks uniformity in the various organs and tissues, and is more marked in the gummatous stage. In operating upon syphilitic individuals, hemorrhage of the tissues, namely, in the gummatous stage, occurs very easily; even in extraction of teeth profuse hemorrhages may occur. In certain instances pigmented infiltration of the edges of the wound is observed, so that the latter are elevated above the skin surface. Primary intention, even with the most scrupulous asepsis, frequently fails, and even the healing of granulations is often slow and weak. The granulations are scarce, mostly in the stage of fatty degeneration, occasionally large, œdematous, and colorless. The wound gives off a profuse, stinking secretion, and its edges become atrophic. Elastic bandages or washing with carbolic acid easily lead to necrosis in the region of the wound, whereas the local application of warmth exerts a very favorable influence upon it. In the condylomatous stage the great development of scar tissue is frequently observed. Plastic operations are often without results in syphilitics. This syphilitic diathesis is very slight, at times not at all marked in persons who have a mild form of the disease or in those who have passed through it many years before, as well as in individuals who have been subjected to an energetic specific treatment. It must be accepted as a rule, however, to subject all syphilitics to a specific line of treatment before an operation is undertaken.

Etiology and Treatment of Varicosities.—Bennett (*Allgemeine medicinische Central-Zeitung*, February 25th) is credited with the following: The main etiological factor in the development of varicose veins are: congenital conditions, venous obstruction, physical exertion, and thrombi. The congenital varicosities must be considered as an abnormal local development of the venous system. Varicosities are caused by venous obstruction only when the latter is so extensive as to give rise to a weakness of the valves of the veins. Frequent and continued over-exertion also causes a dilatation of the vein valves, and thus varicosities. Venous thromboses are the most frequent cause of varicose veins. Such thromboses are particularly formed in those places where the movements of flexion and extension are carried out. The thrombosis extends to the deeper veins, and apart from this fragments are easily detached and give rise to pulmonary emboli. This varicosity is therefore to be looked upon as dangerous, even though spontaneous cure by retrogression of the thrombus is not infrequent. This form is also the only one in which operative intervention is absolutely indicated. The entire thrombosed vein should be excised; multiple ligatures of the individual varicosities are useless.

Measurements of Pain.—Arthur MacDonald, in an article read before the American Psychological Association, concluded as follows: (1) In general the sensibility to pain decreases as age increases. The left temple is more sensitive than the right. This accords with former experiments, that the left hand is more sensitive to pain than the right hand. There is an increase of obtuseness to pain from ages ten to eleven; then a decrease from eleven to twelve; then an increase from twelve to thirteen. From thirteen to seventeen, while the right temple increases in obtuseness, the left temple increases in acuteness. This is in the post-pubertal period. There is a general variation, which experiments on larger numbers might modify. (2) Girls in private schools, who are generally of wealthy parents, are much more sensitive to pain than girls in the public schools. It would appear that refinements and luxuries tend to increase sensitiveness to pain. The hardihood which the great majority must experience seems advantageous. This also accords with our previous measurements, that the non-laboring classes are more sensitive to pain than the laboring classes. (3) University women are more sensitive than washerwomen, but less sensitive than business women. There seems to be no necessary relation between intellectual development and pain sensitiveness. Obtuseness to pain seems to be due more to hardihood in early life. (4) Self-educated women who are not trained in universities are more sensitive than business women. Giving, then, the divisions in the order of their acuteness to the sense of pain, they would stand as follows: 1st, girls of the wealthy classes; 2d, self-educated women; 3d, business women; 4th, university women; 5th, washerwomen. The greater sensitiveness of self-educated women as compared with university women may be due to the overtaxing of the nervous system of the former in their unequal struggle after knowledge. (5) The girls in the public schools are more sensitive at all ages than the boys. This agrees with the results of our previous measurements, that women are more sensitive to pain than men. These measurements of least disagreeableness, or of threshold of pain, are approximate measurements of the combination of nerve, feeling, and idea.

Periodical Melancholia.—Dr. Paul Schenk (*Deutsche Medizinal-Zeitung*, March 6th) concludes as follows: (1) Periodical melancholia does not exist. (2) The vasomotor nervous system of the convolutions of the cerebrum is the pathological anatomical seat of melancholia. (3) The physiological basis of melancholia is an abnormal irritability of the vasomotors of the cerebral convolutions. This irritability may be congenital or acquired. (4) Hypochondria is very

likely a form of melancholia produced reflexly from the vasomotors of the abdomen. (5) There exists a daily and a semi-annual periodical oscillation of remittent melancholia. (6) The periodical daily oscillation of melancholia is a sequence of the periodical daily change of the body functions, particularly the blood pressure. (7) The periodical semi-annual oscillation of remittent melancholia is the result of an abnormal sensitiveness of the vasomotor system of melancholic subjects to variations of temperature.

Transmission of the Agglutinative Property in Typhoid Fever by Way of the Placenta.—MM. Mosse and Frenkel communicated a report on the above subject in which they drew the following conclusions: (1) The typhoidal agglutinative property can pass from the mother to the fœtus unaltered by way of the placenta; (2) this property is found in a full-time child when born of a mother who has suffered from typhoid fever during gestation; (3) more feeble from the beginning in the child than in the mother, it becomes progressively weaker after birth and appears to be a kind of passive loan arising from the filtration of agglutinative matters through the cellular barriers of the placenta; (4) the energy of the agglutinative powers in the mother and especially the length of time during which the agglutinative matters impregnate the placenta are important conditions of the transmission of the agglutinative powers from the mother to the child; and (5) the agglutinative powers of the mammary secretion as a rule are far weaker than those of the blood, but in some cases attain a considerable magnitude—*e.g.*, as much as one in one hundred. The same two conditions—namely, energy and duration—which obtain as to the transmission of agglutinative powers by way of the placenta without doubt exist with regard to the transmission from nurse to suckling.—*Lancet*, February 4th.

Distribution and Origin of Tuberculosis in Children.—Dr. Leonard G. Guthrie (*The Lancet*, February 4th) concludes as follows: (1) Thoracic tuberculosis in children is more common than abdominal in the proportion of three to two. (2) Tabes mesenterica as a cause of death in young children is practically unknown. (3) The preponderance of thoracic over abdominal tuberculosis is not necessarily and solely due to the direct entry of bacilli into the air passages. In addition to this mode of infection the lungs may be affected: (*a*) by bacilli entering the thoracic glands through the lymphatics of the pharynx, tonsils, and œsophagus above, and through the lymphatics of the intestines and the abdominal glands below; and (*b*) by the entry of bacilli through the thoracic ducts into the pulmonary circulation by way of the right heart. (4) Primary infection through the alimentary tract does not prove that food has been the sole source of evil. Therefore tuberculosis in children is not likely to be materially checked by purification of milk-supply alone. (5) The alleged increase of tuberculous meningitis of late years is probably due to pulmonary tuberculosis set up by severe epidemics of measles.

Re-Enforcement of the Bromides in Treating Epilepsy.—Prof. F. X. Dercum) *Medical Fortnightly*, February 1st) says: The treatment of epilepsy depends on a detailed study of the viscera and digestive functions of each individual patient. After this has been made and the diet regulated, digestive disturbances corrected, the skin made active, and exercise in the open air prescribed, comes the question of drugs. The bromides are the most efficient class of remedies, but often do better when varied by or associated with other drugs. Of the bromides themselves I prefer the bromide of ammonium as being the least depressing in its effects. Antipyrin associated with the bromides increases their activity. It will often be found that fifteen grains of the bromide combined with antipyrin will be as effective as thirty or thirty-five grains if used alone. I have seen no injurious effect following the use of antipyrin in this way. To help guard against the mental depression and eruption which may follow a long use of the bromides alone they may be combined with the various iodides with advantage. Trional and sulphonal have also been used during the last four years. Sulphonal is effective in preventing attacks of epilepsy at night. Five to twelve grains often causes a cessation of nocturnal seizures, and sometimes as a further result those during the day also. Another drug used with great success sometimes is antifebrin, given in doses of four to six grains after meals. This sometimes controls the attacks when all other remedies have failed. Then again in other cases it seems to have absolutely no effect. It is thought that the antifebrin acts as a germicide and thus prevents fermentation and is an antiseptic for the stomach. But why should its effects on the stomach and bowels influence epileptic attacks? It may influence the blood by clearing the alimentary canal of substances which if absorbed would vitiate it. It is known that when skatol and indol and other substances of like nature are plentiful in the system the attacks are more frequent. In this way constipation always favors the course of the disease. Gastro-intestinal atony also contributes its effects. These considerations give reasons for the frequent bathing, exercise, outdoor life, etc., which are so effectual in treating the disease, the excretion of these effete matters being thus aided.

Treatment of Cervical Endometritis.—M. Blondel (*Gaz. méd. de Strassbourg*, February 1st) says that in leucorrhœa of cervical origin the nature of the antiseptic employed is of small account compared with the importance of exterminating the microbe. The most effectual means of doing this is by washing the cervical canal with bicarbonate-of-soda solution; during this lavage there should be mechanical expression of the neck with the aid of the speculum. The glandular cul-de-sac should be emptied of its contents. This treatment has a very favorable influence on the patient. It goes without saying that we should have recourse to antiseptics in certain cases. The author recommends lactic acid, and M. Dalche is of the opinion that this drug gives good results in vaginal leucorrhœa.

Hysterical Scoliosis.—M. Houeix (*Gaz. hebd. des Sciences médicales*, January 29th) has endeavored to establish a differential diagnosis of this affection, and concludes as follows: (1) Forms of localized hysterical contraction exist, showing the vicious attitudes that simulate organic affections. (2) The diagnosis of hysterical scoliosis ought to be made by seeking carefully for the least stigmata. The mode of the beginning of the onset and the bruskness of the disappearance by hypnotic suggestion are powerful means of diagnosis. (3) The prognosis is grave in proportion to the gravity of the affection that causes the contraction. (4) Suggestion and hypnotism, together with hydrotherapy, are the chief curative agents; bromide of potassium ranks next.

Pulmonary Tuberculosis in Pregnancy and Accouchement.—M. Joseph Gibert (*Gaz. hebd. des Sciences médicales*, January 29th) arrives at the following conclusions: (1) Pregnancy does not influence the onset of pulmonary tuberculosis. (2) In the great majority of cases pregnancy aggravates the pre-existing pulmonary tuberculosis. Evidence of amelioration of the general condition and of the local

lesion in phthisical patients is very rare. (3) Pulmonary tuberculosis seems to hinder conception. (4) Dyspnœa and lack of appetite are rendered worse by the presence of phthisis. (5) It often brings on premature delivery or abortion. (6) It is perhaps a source of danger at the time of delivery. (7) Pulmonary tuberculosis in the father may perhaps cause abortion or premature delivery. (8) The proper course to be taken varies according to the period to which pregnancy has advanced. When it is sufficiently advanced accouchement ought not to be hastened, as it gives disastrous results. It is preferable to allow pregnancy to go to term. Intervention is not legitimate except in very rare cases in which the mother suffers greatly. In the majority of cases proper medication is the best course to be pursued. In the beginning of pregnancy the question of provocation of abortion may be considered.

Consequences of Symphyseotomy and Cæsarean Section.—M. Georges Abel (*Le Bulletin Médical*, February 11th) bases his observations on twenty-five symphyseotomies, in which one patient was operated upon twice, and fifty-three Cæsarean operations; among the latter eleven patients have submitted to the operation twice and four three times. The average length of time since the symphyseotomies were performed was three years and a half; and six and a half years for the Cæsarean sections. The duration of convalescence after symphyseotomy was from five weeks to ten months. In a general way convalescence was longer in proportion as the pelvic basin was narrower. In all the cases the symphysis preserves mobility of from one-half to three-fourths of a centimetre, but this does not seem to cause any inconvenience or to hinder the rapidity of recovery. The cure of the wound in the soft parts is more important. The cases that are regarded as unsuccessful are those in which the pain continues; this is usually caused by cicatricial shortening of the anterior wall of the vagina, which has the result of causing trouble in micturition and retroflexion of the uterus. The remote results are good, and all the women have recovered their ability to work. The cure following Cæsarean section is interfered with by the frequent absorption of the sutures of the uterus and by the formation of adhesions between the uterus and the abdominal wall. These adhesions cause pain at the menstrual epoch and especially during pregnancy. In one case Dr. Abel has noted rupture of the posterior wall of the uterus, which was very much tightened by the adherences of the uterus to the abdominal wall. Two analogous cases have been reported in medical literature, and it is certain that even after very careful suture of the uterine wall the cicatrix is liable to break. In eight cases there has been a hernia which necessitated laparotomy. Of the women who have submitted to the symphyseotomy fourteen have since become pregnant. Their pregnancies were normal, and in only one case was it necessary to perform a second symphyseotomy. In seven cases the women were delivered without aid. It is evident that symphyseotomy modifies the pelvis in such a way as to render subsequent accouchements easier. Repetition of Cæsarean section does not render the operation more dangerous, and causes no more inability to work than the first intervention.

Treatment of Tetanus by Intra-Cerebral Injection of Antitoxin.—Dr. P. Lereboullet (*Gaz. hebd. de Méd. et de Chir.*, February 12th) shows that experiments with tetanus antitoxin seem to indicate conclusively that the antitoxin introduced under the skin does not readily come in contact with the toxins in the nervous system. The serum is efficacious against a toxin introduced under the skin so long as it remains in the blood, but it is powerless against the poison when this has already penetrated to the nerve elements. To effect a cure it is necessary to preserve the vital portions of the medulla. The experiments of Roux and Borrel prove this statement. Twenty guinea-pigs were inoculated in the hind leg with a dose of tetanus poison, which would prove fatal in seventy hours; after eighteen hours all had rigidity of the leg; twenty-four hours later they all had tetanus; five succumbed in from seventy to seventy-seven hours; three of the guinea-pigs treated with subcutaneous injection of serum died in the same time; twelve treated with intracerebral injection twenty-four, twenty-eight, and thirty-two hours after the appearance of tetanic symptoms showed alleviation of those symptoms; contraction were limited to one or both hind legs an hour after intervention. From these experiments Roux and Borrel conclude "that a few drops of antitetanus serum in the brain will do more to cure tetanus than a large quantity introduced into the blood or under the skin. Antitoxin introduced into the brain protects the superior medulla when the inferior medulla is already affected by the poison, but it does not alter lesions already formed, the contractions established at the time of intervention persisting for a long time. Intracerebral injections do not save all animals having tetanus; if the superior portion of the medulla is poisoned, death cannot be avoided. Intracranial injections are efficacious at a later stage of the disease than other methods of injection." After describing the technique of the operation Lereboullet concludes that if these injections can so easily cure tetanus of external origin in animals after the appearance of the first symptoms, it is only a question of obtaining the same results in man, which is not always an easy thing to do. If the pulse and temperature remain moderate and the respiration is not too rapid, and if there is only contraction of the jaw and of the nape of the neck, with little or no difficulty in deglutition, cure is probable. It is not necessary to limit the treatment to one intracerebral injection. Subcutaneous injections may also be given, having in view the neutralization of the toxin as it forms at the infected point. This injection should be made after the operation and repeated for several days.

Surgical Treatment of Acute Infective Peritonitis.—Dr. Batigine (*Le Progrès Médical*, February 11th) urges greater care in operating, as this form of peritonitis follows abdominal operations in women entirely too often. He says we have combated cardiac weakness in collapse and dyspnœa, and we have sustained the strength of the patient by having recourse to serum, caffeine, purgatives, etc., which is all very good, but we have not attacked the cause. Direct treatment of the peritoneum does not give encouraging results; but this failure is partially due to the fact that intervention has always been too late. It is difficult to stop peritoneal infection, even in the beginning. The symptoms of post-operative infection are now thoroughly known, and we possess sufficient means to act rapidly in the beginning. Dr. Batigine opens the abdominal cavity sometimes by simply taking out the lower part of the suture, giving issue to a greater or less quantity of exudate, which often causes the disappearance of the most alarming symptoms. In cases of very acute intoxication, in which the modification of symptoms is extremely rapid and there are no pain and no localized tumefaction, it is necessary to open the abdominal cavity, drain, wash, and establish abdominal drainage through the vagina. This is the best method of making frequent and abundant lavages, especially with salt water, as the abdominal cavity is opened at its lowest point and it is easy to effect irrigation from above downward.

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THE PROGRESS OF THE SERUM TREATMENT OF TUBERCULOSIS.

DR. DAVIES, of Bristol, England, recently read a paper on the origin and development of bacteriology, in which he briefly traced the rise and progress of the germ theory of disease. He said that the science of bacteriology may be said to date from 1675, when Anthony van Leeuwenhoek, a linen draper, became interested in optics, learned the art of lens grinding, and managed to produce a lens with which he saw in rain water living motile animalcules, smaller than anything seen before. In 1683 he presented a thesis to the Royal Society in London, on a micro-organism in tartar from between the teeth. Marcus Antonius Plancus was the next investigator, and produced some valuable additions to the study of bacteriology; but it was not until Henle took up the question that the subject was appreciated at its full significance. Every year has added to our knowledge, and the advance made toward solving the mysteries involved in the origin of disease has within a comparatively short period been nothing less than phenomenal. Quoting from Dr. Davies' paper, the leading points in the development of bacteriological technique have been as follows: In 1854 the use of the cotton-wool plug filter (Schröder and von Dusch); sterilization of culture fluids by heat; discontinuous sterilization (Pasteur and Koch); 1877, Weigert's introduction of the aniline dyes for staining bacteria; 1881, Koch's introduction of solid culture media—plate methods. Between 1849 and 1863, Pattender and Davaine worked on the anthrax bacillus. Then came Pasteur's work on pébrine or silkworm disease. In 1873 Obermeier found the spirillum of relapsing fever. In 1880 Eberth and Koch observed independently the bacillus of typhoid, and in 1882 Koch published his discovery of the tubercle bacillus and Pasteur made his first communication on rabies. In 1884 Koch published his discovery of the cholera spirillum, and in the same year Loeffler described the diphtheria bacillus, and Nicolaier and Kitasato worked on the bacillus of tetanus. In 1892 the bacillus of influenza was discovered by Pfeiffer and Canon, and in 1894–96 Kitasato described the bacillus of plague then prevalent in Hong Kong. Although the origin of so many diseases has been shown to be bacterial, yet in the case of most of those in which an antitoxic serum has been also found and used, the treatment has hardly come up to the expectations formed of its efficacy. In no instance has failure been more conspicuous than in the serum treatment of tuberculosis. Koch by his discovery of the bacillus tuberculosis effected a complete change in the popular view regarding that disease, and when he later announced that he had also discovered its antitoxin, hopes were raised that at last the scourge might be eradicated. Of course the fact that these views were far too sanguine was soon made clear, and in the natural reaction of mind that followed a declining interest has been taken in the investigations of the workers who, undaunted by the first discouraging result, have ever since been plodding steadily on toward the desired goal. It cannot be asserted that their labors have as yet been attended by a large measure of success, or, indeed, that any definite advance has been made in the endeavor to produce a curative serum for tuberculosis. Nevertheless the fact that tuberculosis is not an actively infective disease should always be borne in mind, and that in consequence the difficulties in the way of finding thoroughly effective antitoxin are immensely increased.

The transference of immunity to tuberculosis was, as is pointed out by Dr. E. L. Trudeau and Dr. E. R. Baldwin, of the Saranac laboratory for the study of tuberculosis, successfully accomplished even earlier than the development of tetanus and diphtheria antitoxin. In 1888 Héricourt and Richet reported favorable results in transferring immunity to tuberculosis from dogs to rabbits by serum injections. Dr. Trudeau has been engaged in experiments on immunity to tuberculosis since 1891, and together with Dr. Baldwin since 1894, and the two have recently published a paper, treating of their studies with serums during the latter period. The studies in question have been entirely confined to such experimental proof of the presence of curative and antitoxic properties in serums as could be obtained by laboratory methods, and the results of four years' work in experiments upon four sheep, three asses, twelve fowls, eighteen rabbits, and four hundred and fifty guinea-pigs is as follows:

1. A sheep was injected intravenously with killed thymus cultures. The result was so unsatisfactory that the serum tests were not conclusive.

2. Chickens were inoculated intraperitoneally with mammalian tuberculosis. The serum revealed no germicidal or inhibitive action on the tubercle bacilli, nor favorable influence on the course of the disease in guinea-pigs.

3. A sheep was injected with tuberculin. The serum was wanting in germicidal, antitoxic, or curative effect, so far as tested.

4. A sheep was inoculated intravenously with non-virulent cultures. Cachexia followed, and the serum was therefore not used.

5. An ass was inoculated as in 4; it died from pulmonary embolism. The serum was not bactericidal to tubercle bacilli.

6. An ass was inoculated with virulent tubercle bacilli and treated with tuberculin. The serum showed

no germicidal nor curative but possibly some antitoxic effect.

7. An ass was inoculated with non-virulent tubercle bacilli and treated with various extracts of tubercle bacilli and dead bacilli. The serum showed no activity.

8. Rabbits were inoculated with non-virulent and virulent tubercle bacilli, and recovered. Their serum possibly conferred some protection in tuberculin poisoning and possibly prolonged the lives of treated guinea-pigs.

The chief lesson learned from these experiments is that none of the serums appeared to prevent local or general reaction from small doses of tuberculin, nor to influence the temperature of tuberculous animals. The progress made in researches having for their object the discovery of an antitoxin for tuberculosis, is compared with the rapid strides toward perfection taken by the antitoxins for diphtheria and tetanus—slow and disappointing. Every day, however, fresh knowledge is being gathered in this particular branch of science, and the deeper the insight gained into the subject of immunity and antitoxins generally, the brighter will the outlook appear for the discovery of a tuberculosis antitoxin which will effectually cure the disease.

THE PRINCE OF MODERN HORRIPILATORS.

We cheerfully bestow this title upon our countryman, Mr. Henry James, after having finished his story, "The Turn of the Screw." From a literary standpoint nothing better calculated to put the hair on end, and keep it there, has been done since Stevenson created "Dr. Jekyll and Mr. Hyde." In mentioning the latter we have no intention of comparing its horripilating capacity with the former, which must be awarded the laurel wreath. From an ethical and moral standpoint we can speak with no less unequivocalness, but we regret to say without approbation. We revert to the subject solely to deprecate the tendency of a certain class of modern novelists to delineate the uncanny sides of pathologicalness, especially morbid sexuality. Mr. James gave the admirers of the creator of Daisy Miller and the Europeans a great shock when he let them know What Maisie Knew, but with full appreciation of the wonderful insight and discernment into matters sexual of that youthful prodigy, her knowledge of these matters must have been insignificant compared to that of the unnamed heroine of "The Turning of the Screw." She was the youngest of several daughters of a country parson, a fluttered, anxious young girl of twenty, who had come up to London from a Hampshire vicarage to secure a position as governess to a pair of orphans. The portraiture of this, on first acquaintance, commonplace person is drawn in such limpid lines and wonderfully chaste and delicate hues that the feeling that overpowers one at the last page when he finds that, apparently unknown to herself, she has the spirit of those who murder for lust, is nothing less than calamitous. It may be that Mr. James has unintentionally depicted such a character. His latter-day themes have been mystical and psychological to a degree. But the delineation of the governess' character in this story reminds us forcibly of a feminine monster, the joint creation of Alfred de Musset and George Sand, named—but why mention the name of the most conspicuous contribution to the pornographic literature of France—who had to murder to satisfy her lust, and not a little of Jack-the-Ripper, even though she be fluttering, anxious, and coy. We trust that the distinguished author intended that other interpretations should be put upon the diseased emotions of his hallucinatory, hysterical heroine, who after seeing the ghost of a former valet of her master who had maintained illicit intercourse with her predecessor, to the full knowledge apparently of her tender charges, conceived the delusion that he had designs upon the boy, who had been dismissed from school on a nameless charge, "for the good of the school," reaching from the spirit world. Gradually there had been growing in her heart an unnamed feeling for the boy, and she resolved to possess him, ghost or no ghost. When she is about to carry her point she says, "What does he matter now, my own? What will he ever matter? I have you." "I caught him, I held him—it may be imagined with what passion." She held him so tightly that his little heart, dispossessed, had stopped. Perhaps we are doing Mr. James an injustice, but we absolve ourself of the intention of doing so. At its best the theme is a most pernicious one, and in no way redeemed by the supremely artistic and masterful handling.

THE BACTERIOLOGY OF TYPHUS FEVER.

There are a number of disorders that are manifestly infectious, but whose etiology has not yet, for various reasons, been determined. Among these is typhus fever, which no longer occurs with its former frequency, so that the opportunities for a study of its bacteriology are not numerous. Such investigation as has been made on the subject, however, has yielded conflicting results. Thoinot and Calmette have found in the blood of typhus patients organisms resembling in appearance human spermatozoa, but their observations have not been confirmed by those of others. Hlava, as well as Brannan and Cheesman (see the Medical Record, June 25, 1892), has described a bacillus in the blood; Lewaschew small motile bodies of varying shape; and Dubief and Bruhl a small, encapsulated, non-motile diplococcus. In a recent epidemic of typhus fever in Edinburgh, Balfour and Porter (*Edinburgh Medical Journal*, February, 1899, p. 141) isolated post mortem in seven fatal cases, and during life in all of fifteen acute cases, and in three of four convalescents a diplococcus presenting certain points of resemblance to that described by Dubief and Bruhl, as well as certain points of difference. The organism was apparently 2 μ in transverse diameter, unencapsulated and endowed with Brownian movement only. It stained well with carbol-

fuchsin and gentian violet and by Gram's method. In some instances it tended to occur in chains and in others in clusters, but generally it was found as a separate diplococcus. It grows rapidly in broth and in milk, coagulating the latter in from twenty-four to forty-eight hours. It is easily cultivated on agar, blood-serum, Loeffler's blood-serum, and potato. Colonies appear generally within three days, and liquefaction takes place in from five to eight days. Broth is rendered cloudy by cultures within twenty-four hours, but subsequently clears. There is no gas formation in glucose jelly. Growth and development take place best at a temperature of 37° C.

SCIENCE AND THE STATE.

ART and literature have always abounded in godfatherly patrons with purses, who have come to the aid of impecunious genius and linked their names with the sons of fame by sharing their fortunes; but science has struggled along on meagre salaries until the last half-century, when the man of wealth has awakened to the fact that there are more things in heaven and earth than he has dreamed of in his philosophy. Accordingly he has endowed laboratories and built halls of science for the profit of the youth of the land. But the spirit of science, the onward, eager, determined spirit that investigates and experiments and patiently deduces, has found few patrons in this country; and it is a fact worthy of comment that it is the State that has come to the rescue.

The action of the New York State commission in lunacy, in establishing a pathological institute for the investigation of abnormal as well as normal mental life, marked an epoch in the scientific study of the land, for now no longer is the problem simply the question of how to feed and clothe and house the irresponsible children of the public, but how to understand the causes of their disease from a many-viewed standpoint and how to help their mental condition. It cannot fail to be a source of pride to every scientific medical man in the State to turn over the pages of the last number of the *Archives of Neurology and Psycho-Pathology*, vol. i., No. 3, for it contains quite the best piece of modern research in general nerve-cell pathology that has appeared in this country, if not in any country.

"Studies in Ganglion Cells," by James Ewing, A.M., M.D., is the monograph to which the present issue of the *Archives* is devoted. It is a careful and exhaustive treatise on the pathological changes found in the ganglion cells of the brain and spinal cord in various diseases, as revealed by the Nissl method of investigation. The author's own work is supplemented by a review of the conclusions of other observers, and each step of progress is noted, so that it not only presents a valuable foundation for future detailed work along similar paths, but it lays down the lines of investigation which can be pursued with profit, and shows what methods fail. The correlation of the symptom-complexes and the structural changes is clearly brought out in many cases, thus making a strictly pathological treatise of interest and profit to the practising doctor. The plates that accompany the work are excellent, and are reproduced, as is the whole volume, in the choicest manner of modern bookmaking.

The same number of the *Archives* contains as a compliment to Dr. Ewing's work a "Bibliographical Contribution to the Cytology of the Nerve Cell," which forms a complete index by authors' names to all the work that has hitherto been done in this field of investigation.

The whole volume, of some four hundred and fifty pages, is a credit to the Institute, and it is therefore with a pardonable feeling of pride that we congratulate ourselves on having a State Commission that makes possible the publication and distribution of such an excellent piece of work.

News of the Week.

Philadelphia is considering the advisability of bringing suit against itself for poisoning its citizens with typhoid-germ water.

The Plague in South Africa.—Our correspondent in Pretoria, South African Republic, writes under date of February 27, 1899, that a supposed case of plague was recently reported at Middelberg, which is a town about six hours by rail east of Pretoria, on the main line to Delagoa Bay. Two physicians immediately went up to investigate. According to their report of the case the patient, a coolie, presented all the recognized signs and symptoms of bubonic plague. The blood was examined and showed, according to Dr. Gregory, a "fungus" much resembling the plague bacillus. The coolie died on the third day of his illness. Post-mortem examination revealed nothing further, but the case is still being investigated and the surroundings are being rigorously treated. A fact going much against the case being true plague is that Dr. Pettit, who made the post-mortem, cut himself, but up to ten days after showed no signs of the disease. Another case of the same nature was subsequently announced at Kaap Minden, which is higher up the line and nearer to the Portuguese boundary. This case also ended fatally. On microscopic examination of blood taken from the spleen, liver, and bubo of the first case, bacilli were found, having the shape of small oval rods, with rounded ends, easily stained and showing typical "pole staining"; but the bacilli were mobile and had flagella. Cultivations were made on agar-agar (they also grew easily on potato). A rat and a guinea-pig were inoculated. The first died after seventy-two hours, the second after eighty-six hours. Similar bacilli were found in their blood. Secondary cultures and inoculations were carried on, but up to the time of writing none of the animals inoculated with the second culture had died after an interval of over fourteen days. In conjunction with these two fatal cases it is interesting to note that for some weeks past several Europeans living along the Delagoa Bay

line, up to the Transvaal border, had been complaining of peculiar glandular swellings accompanied with depression. The glands usually affected were those in the neck, and occasionally those under the arms and groin also.

Bill to Improve Sweat-Shops.—Governor Roosevelt has signed the anti-sweat-shop bill, which provides that no room or apartment in any tenement or dwelling house, or in a building situated in the rear thereof, shall be used for the purpose of manufacturing, altering, repairing, or finishing therein clothing of any kind, purses, artificial flowers, feathers, cigars, cigarettes, or umbrellas, unless a license has been secured therefor from the State factory inspector. It is the duty of the latter, before granting a license, to see that the place where manufacturing is carried on is in a sanitary condition. This law does not apply to the manufacture of collars, cuffs, shirts, or shirt waists made of cotton or linen fabrics that are subjected to the laundering process before being offered for sale.

An Antitoxin Quarrel.—When Drs. Cosby and Biggs were before the Assembly committee recently they said that the New York health board once sold to the Chicago health board some diphtheria antitoxin of inferior strength at a reduced price. This statement is now flatly contradicted by the health commissioner of Chicago in the following precise terms: "No single vial of antitoxin was ever bought of or received from the New York health department by the Chicago health department, at any time or under any circumstances, at less than the published schedule price of the New York health department; every vial of antitoxin received from the New York department by the Chicago department during the past forty-one months —the entire period of our dealing with that establishment—has been furnished under guarantee that it was of standard strength and purity, and was so verified by repeated examinations in our own laboratory; there cannot be produced any letter or other correspondence which could give the slightest color of truth to the alleged assertion that this department ever bargained or trafficked for the refuse antitoxin of the New York health department or any other concern. Finally the unparalleled and indisputable record of more than four thousand cases of true diphtheria treated by the Chicago health department during forty-one consecutive months, and until recently chiefly with the New York antitoxin, with a mortality of less than 6.8 per cent.—the former mortality being 35 per cent.—is in itself a sufficient refutation of these alleged assertions of Drs. Cosby and Biggs." Evidently somebody is mistaken as to a question of fact.

The Red Cross.—It is proposed to erect in Washington a permanent home for the Red Cross, where its offices will be located. Stations are also to be established in several of the seaboard cities, where supplies in large quantities will be kept on hand, ready to be shipped wherever an emergency may arise in which they become needed. A commission will soon be despatched to the Philippines. In Havana a hospital is to be established for the use of civilians, especially Americans, who may be taken sick while in the city. On the advice of the President, the Red Cross has also decided to enlarge in other directions the scope of its work in Cuba. General Brooke, in January last, asked Secretary Alger for assistance in caring for the sick and suffering on the island, and at the latter's request Miss Barton and her staff will return to Cuba to resume the work of relief in which she was engaged at the outbreak of hostilities.

A Cruel Exhibition Stopped.—The Society for the Prevention of Cruelty to Children stopped the exhibition of children bicycle riders at the spring cycle show, held in this city last week. The youngest rider was a little girl about two years old, and the oldest was only nine years.

Adulterated Candy.—The board of health has instituted an examination of the candy sold to the public-school children of the city. Inspectors have been sent to visit all the candy shops near the public schools and to obtain samples of the candy sold there, in order to have them analyzed.

Cerebro-spinal Meningitis has been very prevalent in many parts of the country the past winter, numbers of the sufferers being recently discharged volunteers. In Washington there were thirty deaths during the last three weeks of March, the majority of the victims being adults. In only one instance were there two cases of the disease in the same family. In this case both of the patients were children.

The Pollution of the Passaic River.—Suit has been brought against the city authorities of Paterson, N. J., for $100,000 damages for polluting the Passaic River. This has been done, it is claimed, to such an extent that the drinking of the water has caused many cases of typhoid fever, and it has been found impossible to cut any ice in the river this winter. It was by a firm of ice-dealers that the suit was brought, and it is said that the present suit is but one of a number that will be instituted by riparian owners, who have suffered by the pollution of the Passaic.

The Antitoxin Bill Defeated.—The Collier antitoxin bill, repealing that section of the New York City charter which allows the sale of antitoxin by the city health department, was defeated in the Assembly on March 30th, by a vote of eighty-two noes to forty-seven ayes. The methods employed by some of the advocates of the bill, to which we recently referred in these columns, which antagonized many who were until then in favor of its passage, were doubtless in a measure responsible for its defeat. We hope next year to see a more manly fight and a victory for those who object to the drug business of the board of health.

A Healer in Paris.—A man named Edwards, who is said to be a regularly qualified physician, is posing in Paris as a mystic healer and is drawing large crowds of sufferers from supposedly incurable diseases. One of his patients is Loie Fuller, the shadow dancer, who is threatened with blindness and hopes the healer will save her sight. The man, who is about sixty years

old, says he was born in Rome, and practised medicine in Australia until he discovered accidentally his power to heal all diseases by drawing them out of the sufferer's body through the exertion of magnetic force. The worst of it is that his doors are besieged by throngs of well-to-do and even wealthy people who pay his large fees without a murmur, while scores and hundreds of well-educated and thoroughly qualified physicians in Paris do not know whence the morrow's food will come.

Dr. Howard Lilienthal has been appointed attending surgeon to Mt. Sinai Hospital, New York.

Dr. L. P. Barbour, recently of the medical faculty of the University of the South, has resigned his position and removed to Boulder, Col.

Dr. Orthmann will continue the post-graduate classes at Martin's clinic in Berlin, Dr. Martin himself having removed to Greifswald to take the chair of gynæcology in the university at that place.

The Ameer in Good Health.—According to the London *Times* the reports of the declining health of the Ameer of Afghanistan are unfounded. He has recently held a public durbar and was in excellent health.

The Ohio State Pediatric Society will hold its fifth annual meeting in Springfield on May 9th, the day before the annual meeting of the Ohio State Medical Society. The president is Dr. Dickson L. Moore, of Columbus, and the secretary Dr. D. S. Hanson, of Cleveland.

Plans for New Nassau Hospital.—At a meeting of the directors of the Nassau Hospital Association, held last week, the plans of the building committee for a new hospital building at Mineola, L. I., were approved. The hospital is at present located in a rented house at West Hempstead, where there are sixteen patients. The new building will cost about $25,000, and will accommodate fifty patients.

The Medical and Legal Relief Society of New York City was incorporated on March 27th by the Secretary of State in Albany. The objects of the society, as announced, are to provide medical and legal assistance for the poor and helpless; to be a centre of intercommunication between the various hospitals and dispensaries of the city of New York, and to give legal aid of all and every kind to those who are unable to employ counsel and who have been unjustly treated.

Dental Dispensaries in Chicago.—The Bureau of Associated Charities of Chicago has arranged to open a dental dispensary in each of its ten district offices, for the exclusive use of the poor. The object of the movement is to furnish dental service to the poor at the smallest possible expense. The charge for extracting teeth will be ten cents; for filling, fifteen to twenty-five cents. The dentists volunteer their services, and the material used is furnished at cost.

The Medical and Chirurgical Faculty of Maryland.—At the centennial meeting of this society, to be held in Baltimore, April 25th to 28th, a number of essays will be presented by visiting physicians. Those from New York City who have accepted invitations to present papers are Drs. Herman Knapp, E. G. Janeway, Samuel Alexander, A. Jacobi, and J. C. Edgar. Dr. Roswell Park, of Buffalo, will also read a communication on the parasitic nature of cancer.

Epidemic Cerebro-Spinal Meningitis is prevailing at Lancaster, Pa.

The Orthopedic Hospital and Infirmary for Nervous Diseases, Philadelphia, has been bequeathed $10,000 by the late Miss S. C. Blake, who died recently at Santa Barbara, Cal.

A Fierce Epidemic of Influenza.—It is reported from Vienna that there are twenty thousand cases of influenza in the city of Brunn, capital of the province of Moravia, Austria, and that the death rate is enormous.

Philadelphia Academy of Surgery.—At a meeting held April 3d, Dr. N. P. Dandridge, of Cincinnati, read a paper entitled, "A Comparison of the Merits of Suprapubic and Perineal Cystotomy," and the discussion was participated in by Dr. E. L. Keyes, of New York, Dr. Arthur T. Cabot, of Boston, Dr. W. W. Keen, and others.

The Medical Licensing Examinations.—The following is the report of the January medical licensing examinations of New York State, sent us through the courtesy of Dr. M. J. Lewi, secretary of the board: Total number of candidates, 123; successful candidates, 94, being 78.2 per cent.; unsuccessful candidates, 29, being 28.8 per cent.; passed with honor, 6; highest general average, 94.9 per cent.

Osteopathy in Nebraska.—An attempt was recently made to amend the medical practice law of Nebraska so as to permit the practice of osteopathy by men without medical education or knowledge. The bill amending the present law found many supporters in the State Senate, but was defeated by a vote of sixteen to twelve. This good result was brought about mainly by the exertions of a league for the defence of the interests of the medical practitioners of the State.

Treatment of Eye Diseases in Russia.—A "curatorium" for eye troubles exists in St. Petersburg which sends commissions through the country districts for the purpose of giving free treatment and advice to those among the peasantry who are suffering from affections of the eyes. The report for the year 1898 states that thirty-three of these ophthalmological expeditions were sent out during the year to various parts of the empire. On these commissions were 107 oculists and 17 students, who treated 53,828 cases of eye diseases and performed 16,029 operations.

Tetanus in the Prague Obstetrical Clinic.—For the past two years there has been at the obstetrical and gynæcological clinic of the Czech University of Prague a succession of cases of tetanus, many of which, despite the employment of tetanus antitoxin, resulted fatally. The disease extended in time to the

school for midwives, and recently has invaded the gynæcological clinic of the German University, although the greatest care has been constantly observed to prevent the occurrence. The presence of the disease has led to the temporary closing of the clinic.

The Rocky Mountain Inter-State Medical Association.—At the recent annual meeting of this society, the membership of which is made up of practitioners in Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming, the following officers were elected: *President*, Dr. Charles P. Hough, Salt Lake City, Utah; *First Vice-President*, Dr. Charles K. Cole, Helena, Mont.; *Second Vice-President*, Dr. Clayton Parkhill, Denver, Col.; *Treasurer*, Dr. E. Stuver, Fort Collins, Col.; *Recording Secretary*, Dr. S. C. Baldwin, Salt Lake City, Utah; *Corresponding Secretary*, Dr. S. D. Hopkins, Denver, Col.

Philadelphia Neurological Society.—At a stated meeting held March 27th Dr. B. Sachs, of New York, by invitation, presented a paper entitled "Erythromelalgia and Allied Conditions." He related the case of a tailor in whom there developed, in one leg, the pain and discoloration characteristic of the disease, together with gangrene, necessitating amputation, which was performed above the knee-joint and afforded relief. Careful histologic study disclosed evidences of neuritis and of endarteritis. In other cases Dr. Sachs had observed comparable symptoms, less intense and less characteristic, in conjunction with cardio-vascular disease.

A London Society for the Prevention of Cancer.—With a view to combat the growing public danger from the spread of cancerous diseases, it has been decided to form a society with the following objects: (1) The improvement of technical medical education. (2) Popular instruction in elementary health-laws bearing upon the prevention, amelioration, or cure of cancerous disease. (3) The institution of prizes for original essays or investigations. (4) The delivery of lectures by the most eminent scientists procurable. (5) The foundation of a special laboratory for cancer research. (6) Utilization of existing special hospitals for teaching purposes. (7) The promotion of parliamentary inquiry into the causes of the above mortality, and of any subsequent legislation thereby indicated. (8) Collection and publication of reliable statistics, with any further useful information. (9) The establishment of a cancer home for persons of limited means. It is understood that the society will endeavor to work on a truly scientific basis, guided by the soundest medical advice and authority. It will carefully avoid all leaning toward quackery, and will seek to collaborate with the most enlightened pioneers, within that profession, of medical reform.—*The Medical Times and Hospital Gazette.*

Famine and Pestilence in Russia.—A despatch to *The Sun* from St. Petersburg says that the terrible distress among the people in the famine-stricken districts, especially in Samara, continues. The Red Cross Society is giving great help, but its resources are inadequate to meet all the demands that are made on them. Thousands of persons are subsisting on garbage and water gruel or bread composed of chopped straw, bran, and a very small proportion of wheat. Typhus fever and scurvy are extremely prevalent and are constantly spreading. The damp and filthy hovels in which the peasants live promote disease. The position is as bad as it was in 1891–92, if not worse. The Society of Friends of Russian Freedom in London has issued an appeal for funds for the relief of the Russian famine sufferers.

The Sixth International Homœopathic Congress will be held in Paris in the summer of 1900. The exact date is not yet determined, but the meeting will occur some time between July 20th and August 19th.

American Academy of Medicine.—Three subjects are announced for set discussion at the meeting of this society in June next at Columbus. These are "Specialism in Medicine," "Advertising and the Medical Profession," and "The Medical Service of the Army and Navy."

The Medical Society of the State of North Carolina.—The forty-sixth annual meeting of this society will be held at Asheville, beginning Tuesday, May 30, 1899. The Pittman prize of $100 will be given for the best essay presented at this meeting. The president of the society is Dr. L. J. Picôt, of Littleton, and the secretary, Dr. George W. Pressby, of Charlotte.

The Cost of Nursing in Pittsburg.—At a recent meeting of the Alumnæ Association of the Allegheny General Hospital, which is the name of an organization of trained nurses in Pittsburg, a resolution was carried by a bare majority that the uniform price for nursing should be $20 a week, and that any member of the association violating the rule should be suspended for the first offence, and expelled for the second. Much opposition to the resolution has arisen, the argument being advanced that nursing the sick is a humane work, that the sick often are not able to pay more than $10 a week, that sometimes nursing has to be done gratuitously for the deserving poor, and that finally an arbitrary trades-union rule of this sort is contrary to the right of all to place whatever value upon their services they think fit. An endeavor will be made to rescind this rule at a subsequent meeting. To enforce a hard-and-fast regulation as to rates would deprive of assistance some families which most need it.

What Osteopathy Really Is.—We have previously given a definition of this new development of the healing art, but complaint has been made that the explanation did not explain. For the benefit of these captious critics we subjoin another definition given by A. T. Still, the revered originator of the thing, and who is evidently as deep a thinker and as great a therapeutist as he is a skilful wielder of language. Osteopathy, he says, is "that science which consists of such exact, exhaustive, and verifiable knowledge of the structure and functions of the human mechanism, anatomical, physiological, and psychological, as has made discov-

erable certain organic laws and remedial resources, within the body itself, by which nature under the scientific treatment peculiar to osteopathic practice, apart from all ordinary methods of extraneous, artificial, or medicinal stimulation, and in harmonious accord with its own mechanical principles, molecular activities, and metabolic processes, may recover from displacements, disorganizations, derangements, and consequent disease, and regain its normal equilibrium of form and function in health and strength."

Dr. Ellsworth S. Adams has been nominated for mayor of Beverly, N. J.

The Rivers Pollution Prevention Bill was read the second time in the British House of Commons on March 8th, and will probably shortly become law. The bill deals with the placing of solids, such as cinders and other matter, in streams, and it also abrogates the right to discharge liquids into a river, conferred by an old act upon persons who were in the habit of doing so at the time of its enactment.

Correction.—Dr. Philander A. Harris, of Newark, desires the publication of the following in connection with his remarks before the Section of Obstetrics, N. Y. Academy of Medicine, March 23d: "The so-called normal puerperium which exhibits an average temperature for two or three days of 99.5°–100°, or over, represents a mild form of septic infection of some sort. Physiological labor is a labor in which no vaginal examination or instrument or douche or washing is employed. It is usually followed or attended with a temporary rise of temperature which drops to or below normal within twenty-four hours and remains practically at 98.5° F."

Prevalence of Leprosy in the United States.—Dr. Prince A. Morrow, of 66 West Fortieth Street, New York City, is desirous of obtaining complete statistics of leprosy in this country, to be incorporated in a report on the "Prevalence of Leprosy in the United States." He respectfully requests any physician who has personal knowledge of any case or cases of leprosy to communicate the facts to him within the next thirty days. Such information will be duly appreciated, and, if desired, the name or any circumstance which would lead to the identification of the leper will be regarded as strictly confidential.

Skiascopy.—At a recent meeting of the Kansas City Ophthalmological Society Dr. J. W. Sherer read a paper on skiascopy. He recommended using the small plain mirror in a perfectly darkened room, the operator to be quite close to the patient. Dr. F. G. Murphy then exhibited a new model of a circular skiascope, in which the surgeon is able to keep any lens directly in front of either eye of the patient with perfect ease, no matter how much the patient may move about. The instrument is inexpensive, and contains thirty-five lenses. The light can be placed on either side of the patient. Either eye can be examined without moving the patient, by slightly shifting the instrument.

Medical Journal Consolidation.—The *Kansas City Medical Index* and the *Kansas City Lancet* have just come to an arrangement whereby these two journals will hereafter be published as one. Dr. John Punton, who has already demonstrated his ability as a medical journalist, assumes editorial charge, and associated with him are twelve of the leading practitioners of Kansas City.

Old Bottles in New Places.—In a recent issue of *The Lancet* there is pictured what is called "a new pattern of bottle," which has been introduced by a firm of West Smithfield. The bottle, or rather glass jar, with its air-tight stopper, has been in use in this country for a long time for putting up tomatoes and other canned vegetables, and is one of the most familiar objects on the shelves of grocers and provision dealers.

A Hospital for Tropical Diseases at Liverpool.—Professor Boyce, speaking in favor of establishing a hospital for tropical diseases at Liverpool, recently claimed that Liverpool is pre-eminently suited for the foundation of such an institution. The Liverpool medical officer of health reported that in 1897 there were 242 cases of malaria, 14 of beriberi, 30 of dysentery, 39 of tropical anæmia, and 1 of scurvy. The number of malarial cases last year was 294, and the number of cases increases from year to year.

The Study of Black-water Fever.—Dr. R. Koch being invited to take part in the opening of the new school of tropical diseases at Liverpool, wrote regretting his inability to be present. In the course of his letter, referring to black-water fever, he said that this is the most important disease in West Africa, but one which he was convinced can be easily prevented when the course and character of the disease become more familiar. "Up to the present," he said, "we have received, with few exceptions, no very satisfactory account of the disease, for practitioners in the tropics who have written concerning it give nothing more than anecdotary reports of no scientific value. It will be one of the most important duties of the new school to give medical men going out to the tropics a clear idea of the disease, and to impress on them how to make and collect scientific and useful observations." Dr. Koch, we learn, is about to start again to Africa to continue his study of malarial diseases. We trust he will return with greater knowledge and less certainty on the subject than he displayed after his first visit, when he announced with all the authority of a bacteriologist without clinical experience that the treatment of black-water fever with quinine must absolutely cease.

Medical Practice in Japan.—A determined effort was recently made to secure the passage of a bill by the Japanese Parliament, creating a medical association, membership in which should be regarded as essential to the license to practise medicine or surgery. The bill passed the lower house, but failed to pass the upper. Had it passed, it might have given foreigners desiring to practise medicine in Japan some trouble. As the law now stands, foreigners desiring to practise

medicine will be admitted to practice upon presenting their diplomas, provided the same are from colleges or licensing authorities recognized by the Japanese government.

The Missouri Medical Practice Law.—At a recent meeting of the Kansas City Academy of Medicine, Dr. S. C. James, a member of the Missouri State board of health, told the society some of the difficulties the physicians of the State had in trying to get a bill through the legislature regulating the practice of medicine. He said that the desk of every member of the legislature was filled every day with letters from quacks, asserting that they were members of the leading medical societies of the community in which they live, and claiming to voice the sentiments of all the leading physicians in denouncing the proposed medical law. The bill was defeated in the house, but the physicians of the State have hopes of still passing a bill, introduced in the senate, that is less radical.

Trinity Medical Alumni Association of Toronto.—The annual meeting of the Trinity Medical Alumni Association will be held in the theatre of the Normal School building, Toronto, on Wednesday, May 31, 1899. The programme of the meeting will include the names of men well known to the profession, from the United States as well as from Canada. The annual banquet will be held in the evening, at which the gold medal offered by the association for the thesis of most distinguished merit, written by a graduate of Trinity and read at the general meeting, will be presented to the winner. The papers, which are to be signed in *nom de plume*, the writer's name being sent sealed under separate cover, must be in the hands of the secretary, Dr. George Elliott, 129 John Street, Toronto, not later than May 31st next. They may be upon any subject pertaining to modern medical science.

Sixth International Otological Congress.—This congress is to be held in London, from August 8th to 12th, under the presidency of Dr. Urban Pritchard. The British organization committee, which numbers over seventy members from Great Britain and the colonies, has Mr. A. E. Cumberbatch for its treasurer, and Mr. Cresswell Baber for secretary-general. The meeting will be held at the examination hall of the Royal College of Physicians of London and Royal College of Surgeons of England, and the following details have been arranged: On Monday evening, August 7th, a preliminary reception will be held by the president-elect. On August 8th, 9th, 10th, and 11th, the congress will be in session, and on Saturday, August 12th, there will be an excursion for members and their lady friends. The official languages of the congress are English, French, German, and Italian. The subscription, to include a copy of the Transactions, is fixed at £1, to be paid to the treasurer, Mr. A. E. Cumberbatch, 80 Portland Place, London, W., before the opening of the congress. The subject chosen for special discussion is "Indications for Opening the Mastoid in Chronic Suppurative Otitis Media," which will be introduced by Drs. W. Macewen, of Glasgow; H. Knapp, of New York; Luc, of Paris; and Politzer, of Vienna. A museum of specimens and instruments relating to otology, shown by members, will be open during the meeting. Communications regarding the museum should be addressed to Mr. A. H. Cheatle, 117 Harley Street, London, W. Intending members of the congress are requested to send in their names to the secretary as soon as possible, and in any case not later than May 1st; titles of communications, together with a short abstract of the same, to be sent to the secretary by the same date. According to the regulations of the congress, no papers shall exceed fifteen minutes in reading; therefore all long communications must be read in abstract.

Major James W. Evans, of the Indian medical service, professor of pathology in the Calcutta Medical College, has died recently from the bubonic plague.

Dr. James B. Herron, said to have been the oldest physician in Allegheny County, Pa., died on March 17th, at the age of seventy-six years. In a previous notice the name was incorrectly given as Herman.

A Memorial to the Late Professor Kanthack.—The widow of the late Professor Kanthack, of Cambridge, is said to have been left with very slender means, and it is therefore proposed to raise a fund, the interest of which shall be devoted to her use during her life, while the capital amount can eventually be employed in founding some permanent memorial to Dr. Kanthack.

Obituary Notes.—Dr. William Vissman, of this city, died in Morristown, N. J., on March 29th, of nephritis. He was born in Louisville, Ky., in 1833, and was graduated in medicine from the Louisville Medical College and again in 1892 from the University of Berlin.—Dr. Edward Hilborne Ashwin, of Brooklyn, died recently after a long illness, at the age of fifty-four years. He was born at Bath, England, was brought to this country by his parents when he was four years old, entered the United States Naval Academy at Annapolis, and served as a midshipman at the outbreak of the civil war. He left the navy and became a school teacher in Chicago, and subsequently studied medicine, receiving his degree from the Long Island College Hospital in 1882.—Dr. George F. Entler died at his home at Oneonta, N. Y., on April 3d, at the age of forty-nine years. He was a graduate of the Jefferson Medical College in 1879, and ever since beginning practice had been surgeon for the Delaware and Hudson Railroad Company.—Dr. D. W. Bland died suddenly at Pottsville Pa., on March 28th. During the Civil War he was surgeon of the Ninety-Sixth Pennsylvania Infantry. He had been engaged in practice for nearly forty years.—Dr. M. J. Rhus died at Mt. Holly, N. J., on March 28th.—Dr. Henry A. M. Smith died at Gloucester City, N. J., on March 29th, at the age of fifty-nine years. He was graduated from Jefferson Medical College in 1864 and became a member of the surgical staff of the Military Hospital, subsequently locating in Gloucester City.

Reviews and Notices.

THE AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. NEWMAN DORLAND, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania, Fellow of the American Academy of Medicine, etc. Containing the pronunciation and definition of over 26,000 words of the terms used in medicine and kindred sciences, along with over sixty extensive tables. Philadelphia: W. B. Saunders. 1898.

THIS is the most recent of the pocket medical dictionaries which publishers are scattering over the country, and it appears to be about up to the average of merit of such works. The compiler was an assistant of Gould in the compilation of the latter's pocket dictionary. He appears to have recognized the faults in the other work, for he has avoided the worst of them in his own dictionary.

A PRIMER OF PSYCHOLOGY AND MENTAL DISEASE. For Use in Training-Schools for Attendants and Nurses and in Medical Classes. By C. B. BURR, M.D., Medical Director of Oak Grove Hospital for Nervous and Mental Diseases, Flint, Mich. Second edition, thoroughly revised. F. A. Davis Company. 1898.

IF simplicity is to be thought of as a virtue, then the present volume exemplifies it, for we have yet to see a book which treats of the subject matters of psychology, insanity, and the management of the insane in as childlike and brief a manner. We think that for a beginning volume for attendants and nurses in public or private asylums it may be recommended on the general plan of giving light pap to babes and sucklings. The diet here furnished is in the main good and wholesome.

DIE KAMERUN-KÜSTE. Studien zur Klimatologie, Physiologie und Pathologie in den Tropen. Von DR. FRIEDRICH PLEHN, Regierungsarzt beim Kaiserl. Gouvernement von Deutsch-Afrika; ehemaliger Regierungsarzt von Kamerun. Berlin: August Hirschwald. 1898.

IN these new times, when there is opening up before this country a future connected with the turbulent tropics, works on tropical medicine possess an interest which has become real and practical, instead of, as formerly, purely academic. The book before us, while dealing ostensibly with conditions prevalent in equatorial Africa, contains much of value that is equally applicable to tropical America or Asia. One hundred and fifty of the three hundred pages are devoted to malaria, and in the others the author treats of non-malarial tropical diseases, of the physical and climatological characteristics of the Cameroon, the acclimation of Europeans in the tropics, etc. The book is a welcome addition to the all too small literature of tropical medicine.

A MANUAL OF THE INJURIES AND SURGICAL DISEASES OF THE FACE, MOUTH, AND JAWS. By JOHN SAYRE MARSHALL, M.D. (Syra University), Formerly Professor of Dental Pathology and Oral Surgery and Emeritus Professor of Oral Surgery of the Dental Department of Northwestern University, etc. Philadelphia: The S. S. White Dental Manufacturing Company.

THE author of this rather pretentious work of over seven hundred octavo pages has had a definite object in view in preparing the material. This object has been to present to the student of dental surgery a text-book better suited to the requirements of the newer method of teaching than those based upon the older plans of didactic lectures. The needs of the medical student seeking a knowledge of these special branches have not been overlooked, and much pertaining to general surgery has been incorporated. Short chapters form a good feature of the work, and preparation for class-room recitations have been facilitated by a series of questions in the form of a review of the subject following each chapter. In this way the book makes self-quizzing or auto-examination a practical possibility. While, as one would naturally suppose, the greater space is taken up with dental diseases and surgical procedures in and about the mouth, the index covers a very wide range of subjects going well into general surgery. Two chapters on surgical bacteriology are followed by four on inflammation, so that it is only at the seventh chapter that we find abscess, discussed as the first special subject. There is so much of interest connected with diseases of the mouth region that a carefully prepared monograph on the subject is almost a necessity in any library making even moderate pretensions to completeness in covering the field of practical medicine. The present volume shows conscientious work based on practical experience, and is well calculated to supply both the dentist and the physician with the knowledge each should possess.

A PRACTICAL TREATISE ON THE SEXUAL DISORDERS OF MEN. By BUKK G. CARLETON, M.D., Genito-Urinary Surgeon and Specialist to the Metropolitan Hospital, and Polyclinic of the Metropolitan Hospital; Consulting Genito-Urinary Surgeon to the Hahnemann Hospital, etc. New York.

THIS work covers, in its one hundred and sixty-nine pages, the physical and mental manifestations of sexual disease as encountered in man and their treatment from a homœopathic standpoint. To facilitate prescribing, the greater part devoted to therapy is given up to a consideration of the symptomatology and adaptability of drugs which have been found of value. It is well pointed out by the author that the failure of a well-chosen remedy to give satisfactory results is often due to the neglect in considering the "congenital and pathological conditions present, which require hygienic or surgical treatment before the selected remedy will remove the morbific phenomena." The book is attractively bound, and there is a good index.

HANDBUCH DER SCHULHYGIENE, zum Gebrauche für Aerzte, Sanitätsbeamte, Lehrer, Schulvorstände und Techniker. Von DR. ADOLF BAGINSKY, Professor der Kinderheilkunde an der Universität Berlin, etc. Mit Unterstützung von OTTO JANKE, Lehrer an der Gemeindeschule in Berlin. 748 pages. Stuttgart: 1898.

THIS is the first volume of the new edition of this work. The one to follow will deal with the hygiene of instruction, and the effects of school life upon children. The thoroughness and indefatigable zeal with which the German mind enters upon and pursues a scientific subject is clearly displayed in this volume. It is most interesting and instructive, and gives an exhaustive survey of all that concerns schools, the selection of the sites for the buildings, the best kind of architecture, the ventilation, heating, and maintaining proper conditions, the lighting and seating of the rooms, and the kinds of desks and seats, all of which matters are copiously illustrated. The gymnasiums and playgrounds are also considered; in fact, everything that pertains to the school and its hygiene is placed before the reader, and cannot fail to enlighten and instruct.

THE TREATMENT OF WOUNDS. Its Principles and Practice, General and Special. By LEWIS S. PILCHER, A.M., M.D., Surgeon to the Methodist Episcopal Hospital in New York, etc. Illustrated. William Wood & Co., 1899.

THE present volume represents an enlarged, revised, and rewritten work published by the author in 1883, when the treatment of wounds was not so systematized as it is now, and really before the time when asepsis, rather than antisepsis, became our aim. The work is divided into two parts devoted to, first, the general and then the special treatment of wounds, and in the latter part the various kinds of wounds of different organs and structures, and their repair, are carefully gone into. The author has set out to write a comprehensive treatise upon his subject, and has, in consequence, been compelled to include much matter which to many may be trite. But the presence of it has rather added to than detracted from the value of the work, for it is thus made complete. The chapter upon the preparation of the operating-room and materials used at operations is well up to date, and more than this need not be said. The instructions for preparing a room in a private house are worth bearing in mind. The second half of the volume, devoted to wounds of special parts or regions, contains an interesting chapter upon the wounds of blood-vessels and their repair, and all that has been done in this connection recently is at least mentioned, notably the suture of arteries. There is a practical chapter upon the wounds of the intestine and their repair, and the important methods of suture are illustrated. The book forms a useful work of reference, and the expert may often find occasion to refer to it for information, in the midst of active surgical work.

Surgical Suggestions.

Carbolic-Acid Poisoning. — Dr. Comby calls attention (*Soc. méd. de Hôp. de Paris*, July 8, 1898) to the susceptibility of children to poisoning from the local application of weak carbolic-acid solutions. He records the case of a child, five years old, affected with otitis media, that developed a severe hæmaturia after ten days' use of a one-and-one-half-per-cent. solution of carbolic acid. The ear was syringed five or six times daily, and after the last washing five drops of carbolized glycerin was instilled.

Pott's Disease.—In a paper upon the immediate correction of deformities resulting from Pott's disease, Dr. Goldthwait (*Boston Medical and Surgical Journal*, No. 4, 1898) describes a simplified operation, carried out in a large number of cases, and an apparatus by which it is possible to accomplish correction without the necessity of many assistants, and which makes it possible to apply the jacket with marked hyperextension of the spine. Almost immediate recovery took place in five cases with paralysis.

Castration for Prostatic Hypertrophy.—The objection I urge is this: If the operation is commended generally by surgeons of good standing, soon we will hear of men being castrated for stone in the bladder, for chronic cystitis, and for malignant disease, because it is not always possible or easy to make a positive differential diagnosis between simple hypertrophy of the prostate and some of the conditions which simulate it so closely.—Dr. A. MacKinnon, *Canadian Practitioner*, October.

Tuberculosis of the Testicle.—The prostate plays a very important rôle in the etiology of tuberculosis of the testicle. It serves as a breeding-ground for the tubercle bacilli, where for a considerable length of time they can multiply, though remaining almost inactive and causing only slight disturbances. But under proper conditions these bacilli may, with or without participation of the urinary organs, proceed along the vas deferens and infect the testicle.—R. Koenig.

Chloroform Vapor.—When the vapor of chloroform comes in contact with a gas flame, it is decomposed, forming a poisonous product known as phosgen or chlor-carbonic oxide. According to Dr. Schumburg (*Hygien. Rundschau*, October 1, 1898), this substance is broken up in the blood into hydrochloric acid and carbon monoxide, the latter being the cause of death. Since chloroform vapor has a high specific gravity, phosgen is formed in greater quantity when the gas flame is not much higher than the point of exit of the chloroform vapor; therefore when artificial light is employed, the burner should be as high as possible above the operation-table. It is also important to have ventilators on the floor that will absorb the vapor.

Surgical Treatment of Cerebral Syphilis.—Friedländer and Schlesinger give the following indications for interference: (1) Evidences of tumor persisting after antisyphilitic treatment, when said tumor is easy of access and of slight circumference. (2) When phenomena are progressive, in spite of specific medication, the patient's life being threatened. (3) Jacksonian epilepsy after antisyphilitic treatment, even when tumor symptoms have disappeared. They also give two contraindications: (1) When there is evidence of implication of the base of the brain or cord. (2) When there is present either amyloid disease or great impairment of vital force.—*Medical Review of Reviews.*

Tuberculosis of the Bladder.—The male is more liable to the disease than the female, although the primary solitary tuberculous vesical lesion is probably more frequent in women. An important lesion noted in connection with tuberculosis of the bladder in whatever form it occurs, most marked, however, in the chronic form, is contraction and induration of the muscular wall. The diminution of the size of the cavity is often extraordinary. It will be an exceptional case indeed in which the bladder will retain as much as two ounces. So far as we are aware, no explanation has been offered for this phenomenon.—Dr. W. M. L. Coplin.

The two remedies which are most valued as antituberculous are guaiacol and creosote. I have frequently found much benefit derived from the use of guaiacol, beginning with three-drop doses, to be gradually increased to twenty drops, three times daily; to be continued without intermission over a long period of time. The principal urinary antiseptics which are indicated when the urine contains a large quantity of pus are salol, resorcin, beta-naphthol, betol, naphthalin, salicylic acid, boric acid, eucalyptus, ammonium benzoate, and methylene blue. I frequently employ with benefit the following combination:

℞ Codeinæ sulph ..... gr. v.
Salol ..... gr. c.
M. ft. capsulæ No. 20. Sig. One after meals.

Of late I have given methylene blue, in two-grain doses, in cases of pyuria, and find that it exerts a marked antiseptic effect. Benzoate of ammonium enjoys a great popularity for the relief of alkaline fermentation, but I have derived very little benefit from its employment. The best remedy for preventing bacterial decomposition of the urea, and thus rendering the urine alkaline, is one which has recently been brought to the notice of the profession by Dr. Arthur Nicolaier, of Göttingen: urotropin, which should be given in five-grain doses in capsules four times daily. One advantage of this remedy is that it can be employed without fear in cases in which there is interstitial nephritis. A combination from which I have often obtained good results is one composed of:

℞ Codeinæ hydrochlor.,
Ext. cannab. ind. ..... āā gr. v.
Guaiacol carb. ..... gr. c.
M. ft. capsulæ No. 20. Sig. One after meals.

Local treatment, such as injections and solutions, has not proven so beneficial to my mind as I had hoped. I have seen improvement follow instillation by means of a sterilized Keyes-Ultzmann syringe, a remedy suggested by Collin, who advises a twenty-per-cent. solution of the carbonate of guaiacol in sterilized olive oil, one or two grams being injected twice daily. The local use of iodoform in this condition has not been, as a rule, satisfactory, but I am certain that I have seen improvement follow the daily instillation of thirty minims of the following solution:

℞ Gum tragacanth ..... gr. xl.
Iodoform (sterilized) ..... gr. ccclx.
Sp. vini rect. ..... ♏ lxxx.
Aquæ destil. ..... f ʒ viij.

When the urine is loaded with pus and detritus much benefit is to be derived from irrigating the bladder twice daily with either a hot decinormal salt solution, a saturated solution of boric acid, or a teaspoonful of the salicylate of sodium in a pint of distilled water. For this purpose an instrument should not be introduced into the urethra or bladder, but the viscus should be filled after the method suggested by Valentine, *i.e.*, by hydrostatic pressure.—Dr. Orville Horwitz, *Journal of Cutaneous and Genito-Urinary Diseases*, December, 1898.

Society Reports.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 27, 1899.

S. O. VANDER POEL, M.D., PRESIDENT.

Presidency of the Health Board.—The society by a unanimous vote formally approved the bill now before the legislature making physicians eligible to the position of president of the New York board of health.

Gynæcological Surgery in Public or Charity Hospitals.—DR. HENRY C. COE read a paper with this title. He said that there was still a feeling among many gynæcologists that the best results were obtained only in special hospitals or in special gynæcological departments. The paper contained a report of the work in the third medical division of Bellevue Hospital in 1898, with the object of showing what might be accomplished amid unfavorable surroundings and on ignorant patients who were very commonly the victims of alcoholism and cardiac disease. The speaker sketched the many difficulties encountered owing to an insufficient number of nurses, the demands of large clinics, and the presence of septic cases which the house staff were compelled to treat in addition to their gynæcological work. It was his custom to place every one of his patients there on $\frac{1}{40}$ gr. of strychnine, three times daily, and to give them water freely. The presence of a moderate quantity of albumin in the urine, with granular and hyaline casts, was not looked upon as very important, provided the daily quantity of urine was sufficient. Alcohol was rarely given, either before or after operation. Ether was the anæsthetic preferred except in the presence of pulmonary complications, when chloroform was used. Schleich's mixture had been given a faithful trial, and had been abandoned for abdominal work. Owing to the requirements of the clinics it was not uncommon for patients to be under ether for two hours. It was a routine practice to administer a hypodermic injection of strychnine and an enema of saline solution before putting the patient on the operating-table. Very few of the cases met with in Bellevue Hospital were free from complications. When bacteriological examinations, conducted during the operation, had shown that the pus in suppurative cases was sterile, drainage had not been employed. Forty-six abdominal sections had been done with two deaths. Of this number, there were twelve abdominal hysterectomies and twenty-one cœliotomies for disease of the adnexa, two-thirds of the latter being complicated pus cases. In addition, there had been eight vaginal sections and sixty-three minor operations, with no deaths. The two deaths were avoidable, one being a clear case of septic infection from some defect in the technique. The other case had been hopelessly septic from the start, and the operation should not have been attempted, as the patient was already in collapse. This patient had lived three days after the operation. In one-fourth of the cases of abdominal section the patient had been in collapse during and after the operation, necessitating the use of saline solution, which had been invariably given hypodermatically while the patient was on the table. Obstinate vomiting had nearly proved fatal in one instance. Elevation of temperature, even in uncomplicated cases, had been so common as to lead to the inference that it was a peculiarity of Bellevue patients. Cardiac lesions had been noted in nine cases before operation and pulmonary lesions in four cases. There had been no cases of secondary hemorrhage. Three women who had had abdominal hysterectomy performed on them had gotten up during the night following the operation, had gone to the bathroom and drunk water freely; others had loosened their bandages and fingered the wounds. In over half of the cases stimulation with strychnine and saline infusion had been required during the first forty-eight hours after operation. Saline enemata had been used as a routine, and with good results. Wound infection had occurred in at least twenty per cent. of major operations. Doubtless the skin infection could be attributed largely to the custom of allowing students to make examinations just before the operation. The remote results of the operations had been as good as the average in spite of the unfavorable surroundings. In extenuation of the results, Dr. Coe said that it was not easy to do away with the traditions of hospitals, and the antiseptic conscience required more than one generation for its full development.

DR. E. H. GRANDIN said that, to his mind, there was no more need for special hospitals devoted to the diseases of women than for special hospitals devoted to any other special branch of surgery. His own experience among the indigent had led him fully to corroborate what had been stated in the paper. The teaching of the past had been, that atmospheric infection had much to do with deaths from septic infection, but we knew now that this could be almost entirely ruled out. When a woman was not septic at the time of operation, she should not become septic unless the operator, his assistants, or his technique was at fault. For his own work he had no trained nurses, and such nurses as he had and such internes as were at his disposal were compelled to attend medical and septic surgical cases also. In spite of these surroundings he had been able to keep the death-rate at about five per cent. in an unselected and desperate class of cases. In his private practice the unselected cases had yielded a mortality of about 3.75 per cent. The difference in these figures would seem to indicate very nearly the difference in the results that could be obtained under good and bad hospital surroundings. It had been stated that these poor people had a better resisting-power, but it was equally true that they usually put off treatment and operation longer than those among the better classes. The difference in the results obtained in hospitals without gynæcological departments and hospitals with such departments was probably to be explained by the superior diagnostic skill of the surgeon specially trained for this work over that possessed by the general surgeon.

DR. W. R. PRYOR emphasized the bad surroundings and the bad material at Bellevue Hospital. He did not believe that the greatest master of technique could as well control the many factors present in a general hospital as the simpler conditions found in special hospitals. If a gynæcologist in a general hospital could keep his assistants and his department separate from the general work of the hospital, he should get as good results as in a special hospital.

DR. J. RIDDLE GOFFE said that the results in a general hospital should be as good as in a special one, provided the departments, with their internes, were kept separate and distinct. He thought that in Charity Hospital he met with even a worse class of patients than were found at Bellevue Hospital.

DR. W. GILL WYLIE said that when he had begun gynæcological work in Bellevue Hospital eighteen years ago he had had a death-rate of ten per cent., but this had steadily diminished, so that for considerable periods of time there had been no mortality. He had done even more work in his private hospital, and on comparing the results of the two he had been led to conclude that the best results, both as regards saving of life and restoration of health, were obtained by those specially trained in the field of gynæcology.

For the past eleven years the death-rate in his private hospital, in unselected cases, had been under three per cent., and in some years there had been no deaths. The speaker then detailed his experience in certain out-of-town hospitals, where there were no conveniences, where the assistants were untrained, and the class of patients was exceptionally bad.

Dr. Joseph Brettauer spoke in commendation of the work done by Dr. Coe under the adverse conditions existing at Bellevue Hospital. He was of the opinion that it was not proper to operate upon non-septic cases immediately after operating upon a decidedly septic one. The farther removed the date of operation from the date of infection in pus cases the better the chance for cure, and hence he dissented from the opinion expressed by Dr. Grandin regarding the more desperate nature of the cases occurring among the poor, because of their habit of postponing as long as possible the time for seeking relief.

Dr. Coe closed the discussion. He said that the point raised by the last speaker concerning the diminished virulence of the pus in old suppurative cases would probably explain certain results that had hitherto puzzled him a good deal.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, March 23, 1899.

Brooks H. Wells, M.D., Chairman.

Uterine Fibroid.—Dr. J. A. Schmitt presented a mass of fibroids of the uterus removed from a woman in St. Francis' Hospital. He stated that even when the true pelvis was choked by a mass of these fibromata, it was always possible to lift the uterus sufficiently to allow of proper control of the uterine vessels.

Bilateral Pyosalpinx.—Dr. Schmitt also presented the specimens removed from a case of bilateral pyosalpinx, the result of an old gonorrhœa. He had not removed the uterus, in spite of extensive disease of the appendages, because he believed that by proper treatment the uterus, in this class of cases, could be restored to a comparatively healthy state.

Splenectomy for Leukæmia.—Dr. Hermann J. Boldt exhibited a large spleen that he had removed by operation in a case of leukæmia. He would not, however, recommend a repetition of this procedure in this class of cases, for, although splenectomy had yielded good results when done for traumatism, but few favorable results had been reported when this operation had been done for disease of this organ. His patient had died of exhaustion three days after the operation.

Dr. Boldt also presented a large fibromatous uterus, because of its enormous blood supply and numerous adhesions.

Ovarian Cyst with Twisting of the Pedicle.—Dr. H. N. Vineberg reported the following case because of its interest from the standpoint of diagnosis. The patient, a woman of fifty-two years, the mother of a large family, had had no serious pelvic disorder up to five years ago. Since that time she had suffered from a moderate degree of pain in the region of the ovary. When he had first seen her, she had had a rapid pulse, a temperature of over 102° F., and was vomiting. A doughy tumor could be detected, on palpation, in the median and right lower quadrants of the abdomen, and there was no distention or abdominal tenderness. His diagnosis had been twisting of the pedicle of an ovarian cyst, but as the consultant had insisted that the tumor was a soft myoma, and that the acute symptoms would all disappear after purgation, this plan had been first followed. It had resulted in only very temporary amelioration of the symptoms. The next day she had complained of pain referred to the midsternal region, and as a mass had suddenly developed in the left ovarian region, the other physician had acknowledged his error and had agreed to a laparotomy. This had disclosed a large dark cyst, and showed that the mass that had suddenly appeared in the left broad ligament was an infiltration with blood. The patient made a satisfactory recovery.

Hair-Pin Removed from the Bladder through Kelly's Cystoscope.—Dr. Vineberg reported a case in which, according to the woman's statement, a hair-pin had slipped into the bladder during her efforts to extract a Smith retroversion pessary. Examination with the cystoscope showed the hair-pin lying transversely in the fundus of the bladder, with a portion bent and apparently embedded in the mucosa. It was brought up against the end of the cystoscope with a tenaculum, and then, with the aid of an artery forceps, it had been removed. It measured two and one-half inches in length. He believed it had found its way into the bladder during masturbation.

Large Uterine Fibroma.—Dr. Ralph Waldo exhibited a large fibroid tumor of the uterus that he had just removed from a negress, forty years of age, because of the pressure symptoms that it had produced.

Ovarian Cyst and Fibroid Confused.—Dr. H. C. Coe exhibited a simple ovarian cyst which had been removed from a woman whose family physician had insisted that it was a cystic tumor, although three specialists had diagnosticated it as a fibroid.

Tuberculous Peritonitis.—Dr. Andrew F. Currier read a paper on this subject. He said that the percentage of spontaneous cures was probably far greater than in pulmonary tuberculosis, and that so many patients had been relieved, especially by surgical treatment, that it seemed proper to place tuberculous peritonitis in the category of diseases yielding frequently a favorable result. It was common, and singularly fatal, in poorly nourished children. In the early stages there was a more or less abundant deposit of miliary tubercles in the peritoneum. The peritoneum gradually became thickened until its appearance and consistence were not unlike those of sole-leather. There was often an accumulation of fluid in the abdomen. When the process was local, the tendency was toward recovery; when it was general, it usually terminated fatally, as in other diffused tuberculous processes. The symptoms were often vague and insignificant. If there was much ascites, there was usually but little pain; otherwise abdominal pain was an important symptom. Diarrhœa and tympanites were not infrequently present, and in the chronic form there was apt to be a slight febrile movement.

The medical treatment consisted in the use of such well-known restoratives as cod-liver oil, malt, iron, and creosote, together with proper attention to diet and the use of fresh air and sunlight. The beneficial results following the surgical treatment were now quite generally ascribed to the exposure of the peritoneum to air and light. Abdominal section was indicated in cases of general tuberculosis, and most authorities did not favor operation in the dry form of tuberculous peritonitis, but on the theory that abdominal section effected a cure by the incidental exposure of the peritoneum and the bacilli to air and light, Dr. Currier said that he could see no reason why these dry cases should not be treated surgically. When there was an accumulation of serum or pus in the abdominal cavity in these cases of tuberculous peritonitis, it should be evacuated by incision, and the cavity irrigated with several gallons of hot saline solution. He favored the use of a drainage tube for a few days, for the reason

that the access of air to the peritoneum was thought to be one of the factors in the cure. The mortality from this treatment was very slight, and there was a fair percentage of complete recoveries. Dr. Currier said that in one case of tuberculous peritonitis upon which he had performed abdominal section, the occurrence of a ventral hernia had given him an opportunity to inspect the peritoneum two or three years later, and he had been unable to find a trace of the former peritonitis.

Adjourned Discussion of Dr. Julius Rosenberg's Paper on "Puerperal Infection"; Definition and Etiology.—Dr. Paul F. Mundé opened the discussion by giving the following definition of puerperal infection, which, he said, though open to certain theoretical objections, he felt sure would be found practical and useful: "Puerperal infection means the introduction into the system of a parturient or puerperal woman, through her genital tract, of certain pathogenic germs—the staphylococci and streptococci—which, under favorable conditions, produce more or less dangerous, and even fatal, results." The speaker explained that other forms of infection of the puerperal woman, such as with the exanthemata, typhoid fever, erysipelas, tetanus, or diphtheria, could not properly be classed as puerperal infection or puerperal septicæmia. True puerperal infection might be local, general, or both. A woman might have a local staphylococcus infection—a sapræmia—or she might have a general infection—a septicæmia. A third variety was that known as pyæmia. One of the characteristics of true puerperal infection of the general type was the absence of local manifestations in spite of a rapid pulse, high fever, and other evidences that the system was saturated with toxins. In cases of septic endometritis, the prompt destruction of the local septic material was usually followed by recovery, but it should be kept well in mind that if the sharp curette was used in such cases there was great danger of opening up new channels of infection, and of converting the case from a local into a general infection.

Dr. Mundé said he doubted very much if true puerperal septicæmia ever resulted from infection with the colon bacillus. Mental worry *per se* could not be considered a cause of puerperal infection, although it was quite probable that prolonged mental depression, like anything else tending to lower the vitality, would predispose the system to infection. Under certain circumstances it seemed to him possible for auto-infection to occur. Thus, it was conceivable that the movements of the parturient woman in bed might, by the suction action of the vagina, cause the introduction into the genital tract of infective material. Again, the rupture of a pyosalpinx or ovarian abscess containing staphylococci might also give rise to puerperal infection.

Prophylaxis.—Dr. H. C. Coe said that prophylaxis in obstetrics was nothing more than surgical asepsis—in other words, the field of operation must be absolutely sterile, and everything coming in contact with it must likewise be sterile. Each obstetric case was really an aseptic operation, and there would not be any more uncertainty about the result than in aseptic surgery if obstetric practice were conducted with equal care and on the same well-known principles. It should be said, however, that while aseptic obstetrics was comparatively easy in hospitals, it was often very difficult to carry out in private, particularly by the general practitioner. Theoretically, if the external genitals were made perfectly sterile, as well as the hands of the examiner, sepsis should not occur, as cases of auto-infection were so very rare that their influence might be safely neglected. The same care should be taken in cleaning the hands before an obstetric examination as before an operation, and this rule should hold for every examination made. This meant that the examinations would be few, a matter of some importance in itself, though he did not take the extreme position of some who advocated an entire reliance on external palpation. In his own practice, the external genitals were thoroughly scrubbed and the patient kept on an obstetric pad all the time. When it was absolutely imperative that the general practitioner should go directly from a contagious or septic case, or from an autopsy, to the lying-in chamber, he should sterilize his hands just as carefully as if they were about to be introduced into the abdominal cavity.

Dr. S. Marx said that an increase in the temperature, or in the pulse rate only, should be looked upon with suspicion in every puerperal case. The pulse rate was a more important and reliable guide than the temperature during the puerperium; hence it was very desirable to note the normal rate of the pulse two or three times before the patient was confined. A mastitis or a slight lobulitis not infrequently gave rise to symptoms simulating those of puerperal sepsis. In examining a suspicious case, a thorough physical examination should always precede the local examination unless there was positive evidence excluding everything but a septic condition. In the same category with disturbances arising from mastitis belonged those arising from fissures of the nipples, or from torpid and overloaded bowels. Having excluded other causes, puerperal sepsis must be assumed, even though the local examination yielded a negative result. In making the differential diagnosis, it was well to have, as a working basis, a proper classification. He recognized two varieties of puerperal sepsis, local and general. Local sepsis was subdivided into sapræmia and septico-sapræmia, and general sepsis was subdivided into the lymphatic, the pyæmic or phlebitic, the septico-pyæmic cases, and the cases of acute virulent septicæmia. A careful inspection of the perineum was of the greatest assistance in arriving at the diagnosis. It was wise, in all these cases, to remove all sutures, even though there was no tumefaction, because there often was a deep accumulation entirely out of sight. In the cases that he had seen there had quite commonly been no fetid lochial discharge. The rapid pulse, the low temperature, and the general depression of the patient were the chief points of reliance in making the diagnosis of general puerperal septicæmia. A positive diagnosis could be made only by finding the streptococci in the blood, and this examination should never be omitted at the present time when it could be done so easily and cheaply. In the phlebitic or pyæmic form, one would note the enlarged and tender uterus, the irregular fluctuations in the temperature, the great and disproportionate rapidity of the pulse, and the great prostration of the patient. The puerperium had a decided modifying influence on other infectious processes, such as typhoid fever, and rendered the diagnosis exceptionally difficult when such affections occurred as complications of the puerperal state. Malaria in the puerperium he believed was extremely rare, and could, in practice, be almost always excluded unless it occurred ten days or more after delivery in a woman who had had previous typical attacks of malaria, and in whom the plasmodium was found in the blood. Late septic infection was rare: it was nearly always a continuation or an exacerbation of an early infection that had previously escaped notice. In the true cases of late sepsis there was a mild sapræmia between the tenth and fourteenth days, the patient having been well up to this time. The cause of this late development would be found in swelling of the tissues about the internal os with consequent occlusion and retention and decomposition of the lochia. The diagnosis could be made by noting the sudden suppression of the lochia, the enlarged, tender, ante-

flexed uterus, the subfebrile temperature and rapid pulse, and the gush of foul lochia which followed the introduction of the examining finger beyond the internal os.

General Treatment.—Dr. H. McM. Painter said that he could see no good reason why a woman suffering from puerperal sepsis should not be allowed as much nutritious food as her stomach could take care of. Their experience in typhoid fever and pneumonia had made physicians inclined to give too little food to these septic cases. The presence of fever was not sufficient ground for withholding food, as forced feeding was used in tuberculosis; moreover, his own experience had thoroughly convinced him of the great importance of pushing the alimentation as far as possible in cases of puerperal infection. Aside from the condition of the pulse, these patients seemed to be benefited by a small quantity of alcohol, and consequently he favored the preparations of beef containing a fair quantity of alcohol. Unless the pulse distinctly indicated the necessity for cardiac stimulation, this small quantity of alcohol would ordinarily be sufficient. An old but excellent means of improving the contractile power of the uterus after delivery, and in this way indirectly guarding against puerperal infection, was the internal administration of a combination of ergot, digitalis, and quinine. A very common condition in cases of puerperal sepsis was a flabby, retroverted uterus, with an accumulation of lochia, and certainly these drugs secured better uterine contraction, and facilitated drainage from the uterus. The digitalis simply improved the general circulation, and quinine when given in small doses was a valuable general tonic. In addition to the measures already recommended, it should not be forgotten that the patient's condition would be distinctly benefited by plenty of fresh air and sunlight.

The Serum Treatment.—He was sure that there were many cases of puerperal septicæmia which were due to other micro-organisms than the streptococcus, and hence in these cases no benefit could be expected from antistreptococcic serum. Moreover, this serum was unstable and often unreliable, and could not be expected to be of benefit if administered after the streptococci had gained access to the general circulation in any considerable number. The pulse rate would be found a better guide to the prognosis than the temperature. Antipyretic drugs, even when used in very moderate doses, caused the greatest prostration in puerperal septicæmia, and should, therefore, be studiously avoided. If reduction of the temperature was absolutely demanded, it could be best done by baths, by an intrauterine douche at 80° F., or by prolonged lavage of the rectum.

Surgical Treatment.—Dr. H. J. Boldt said that the surgical treatment of puerperal infection was limited to the cases of local sepsis. The curette should not be used in ordinary cases of septic endometritis. When the sepsis was due to retained tissue, the curette might be allowed in careful and expert hands, but he personally preferred the finger for such cases. When the tubes were distended with pus, they should be emptied surgically. He could confirm what had been said by the previous speakers regarding the grave significance of a small, rapid, and compressible pulse.

Dr. Philander A. Harris objected to Dr. Mundé's definition of puerperal infection. It was safe to assume that all rises of temperature in puerperal cases after the first twenty-four hours were due to some form of infection, and of the forty-four cases occurring in the Johns Hopkins Hospital, and reported by Dr. J. W. Williams, in which the temperature reached 101° F., staphylococci had been present in three, streptococci in eight, the colon bacilli in six, and gonococci in two. He thought internal examinations in obstetric cases should be dispensed with as far as possible, and that instead of relying on douches, which had been proved to be harmful, the accoucheur should content himself with securing surgical cleanliness of the external genitals and of his own fingers.

Dr. W. Evelyn Porter referred to the old treatment by early, frequent, and persistent irrigation of the uterine cavity as worthy of more general adoption.

An Up-to-date Aseptic Confinement.—Dr. A. Ernest Gallant, in order to show the extremes to which some go in their enthusiasm over aseptic midwifery, described the elaborate preparations which a certain physician had made in anticipation of his wife's confinement. Three months before the expected time he began his preparations by having a hard-wood flooring laid in the third story of his house, the walls, ceiling, and doors enamelled, glass knobs put on the doors, and new furniture, of the hospital type, installed. A new set of instruments was purchased, and a gas-stove and fish kettle provided for their proper sterilization when required. The pads, eye-wipes, tape, absorbent, and other material for dressings were sterilized and delivered at the house in sealed packages. Just before the confinement, the sheets, towels, gowns, and clothes to be worn by the patient were sterilized by exposure to steam for two hours, and the room, furniture, and utensils were disinfected with formalin gas. The patient herself was prepared as for a vaginal operation. The nurses wore cotton gloves, and the obstetrician rubber gloves. Owing to premature rupture of the membranes the labor was instrumental, but the patient had a satisfactory convalescence.

Dr. Rosenberg closed the discussion. He said that he had purposely avoided the use of the term "puerperal fever" in his paper, because it usually conveyed the erroneous impression that puerperal infection was a disease, like typhoid fever or malaria, due to specific micro-organisms. Modern investigation, he thought, had conclusively demonstrated that various types of micro-organisms might produce a puerperal infection having all the characteristics of what had formerly been described as "puerperal fever." There were on record a number of cases in which colon bacilli, bacteria of putrefaction, and certain unidentified micro-organisms had produced virulent puerperal infection. He could not, therefore, accept Dr. Mundé's definition, which, if correct, would necessitate an appeal to the bacteriologist in every case in order to make a final diagnosis, and while this was being done the patient would probably die. There was a wide difference between the conditions under which an operation was performed and those ordinarily met with at a confinement. In the first place, an operation rarely lasted much more than an hour, while a confinement commonly occupied twenty-four hours or more. If the conditions were to be kept the same in both classes of cases, it would be necessary for the obstetrician absolutely to control the field of operation, and exclude all sources of infection for over twenty times the period demanded of the operating surgeon. Bnt this was not all, for many women were compelled to urinate or defecate at short intervals during confinement, thus greatly adding to the difficulties of the situation. A woman in ordinary health was capable of taking care of the few bacteria normally present in her genital tract, but she succumbed to puerperal infection because new crops of micro-organisms had been introduced, usually by unclean fingers or instruments. To practise safe and aseptic obstetrics, he contended that it was sufficient to insure sterilization of the fingers and instruments. If this was done thoroughly before each examination, but few examinations could be made without the obstetrician's hands protesting against so much scrubbing and disinfection. This alone would keep the number of internal examinations within

proper bounds. The pulse, as had been already stated, was far more important than the temperature in determining both the diagnosis and prognosis. A rapid and small pulse was indicative of marked shock, and this was usually the result of toxins taken into the general circulation. It had been experimentally proved that infection was less likely to occur, or to be disseminated, if the uterus remained contracted; hence he favored the administration of ergot, but he would give it in much larger doses than had been recommended—one teaspoonful of ergotol every two or three hours until good contraction had been established, and then in smaller doses to maintain good tonicity in the uterus. Antipyretic drugs were certainly most pernicious in cases of puerperal infection. Cold baths were far better for reducing the temperature, and they had the additional advantage of stimulating the nervous system at the same time. The great difficulty in dealing with the serum treatment of puerperal infection was that most of these cases were examples of mixed infection. From a study of the published cases of hysterectomy for puerperal sepsis he had come to the conclusion that most of those patients would probably have recovered without this operation. In cases of septic endometritis the finger should be preferred to the curette for the removal of decomposing fragments of tissue. In these cases, the curette had been proved to be a dangerous instrument even in the hands of experts. Continuous intra-uterine irrigation had been in vogue some years ago, but he believed had been abandoned by most obstetricians. The method of Credé of impregnating the system with silver salts was worthy of further study and research. The chief object of his paper had been to point out the fact that puerperal infection was due to other micro-organisms than staphylococci and streptococci.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PARLIAMENTARY—TROPICAL MEDICINE—SEAMAN'S HOSPITAL, RESIGNATION OF STAFF—SURGERY OF CYSTS—OBSTETRICAL SOCIETY'S ADDRESS—MYELOPATHIC ALBUMOSURIA—PROFESSIONAL SECRECY—MIDDLESEX HOSPITAL SCHOOL—ANTIVIVISECTION MOVE—DEATHS OF SIR D. GALTON AND DR. WILSHIRE.

LONDON, March 17, 1899.

IN Parliament the tuberculosis question has been postponed. The returns for 1898 as to the new rules concerning venereal diseases in India were said to show a further decrease, but the statistics are not yet complete. The proposal to raise the flash-point of petroleum was rejected, and the Government is to introduce a bill dealing with lamps. Other little bills, on contaminated oysters, on the sale of carbolic acid, and on food and drugs, are to be brought forward if time permits. The vote for the London School of Tropical Medicine was obtained by Mr. Chamberlain, who promised that candidates from other efficient schools such as the new one in Liverpool and that of King's College would have preference, but after selection even they would have to undergo a further two-months' course at his new school in connection with the Dreadnought Hospital. He said the Government also proposed to supplement the commission of the Royal Society on Malaria.

In connection with this I hear that the medical staff of the Dreadnought have resigned their appointments. You will remember I lately informed you of the discourtesy they had met with from the committee in not consulting them as to the proposal to establish the hospital school at the Branch. No doubt, as usual, others will jump into their shoes, for lay committees know there is no medical union in such matters.

On Friday evening a good deal of the time of the Clinical Society was spent in discussing the treatment of cysts. Mr. Bertram Robinson described a case of hydatid cysts in the upper lobe of the right lung and liver in a boy of six years. He removed both, that of the liver in June and that of the lung in August, 1898. The lad did well and went to a convalescent home in September. It was remarked that there was danger of such a patient developing tuberculosis, but Mr. Robinson said that up to two months ago he had remained perfectly well. The operations were not without difficulty—the cyst membrane was removed in both cases with drainage subsequently. Mr. Barker next related a case of pancreatic cyst in a boy of fourteen on whom he operated in 1897 by incision and drainage. He did well, left the hospital in two months, and there has been no return of the trouble. Mr. A. Doran said he quite agreed that the best treatment for pancreatic cyst was incision and drainage. He also pointed out some of the dangers and difficulties that may be met with, and said sometimes the nature of the cyst cannot be diagnosed till the end of the operation. The risks are, in fact, so great that several operators have admitted that they would not have undertaken to operate if they had known them beforehand. Bearing in mind the good results of drainage it is unnecessary to run such risks.

The president (Mr. Langton) concurred in the view that drainage is the proper course. He mentioned a case in which he had operated when hemorrhage into the substance of the pancreas had been found, but the patient did well for three years, when he was taken ill and died. It was found at the post-mortem that the portal vein had become so constricted in the scar tissue that practically there was no circulation through the hepatic area. Mr. Lane mentioned that in one case he found a pancreatic cyst consisting of three separate cysts. This is interesting, as the operation was successful, for such a result is exceptional in multilocular pancreatic cysts.

Mr. Alban Doran opened his year of presidency at the Obstetrical Society with an inaugural address touching on several interesting questions. He said the society from its foundation had always been interested in gynæcology—now an established specialty which has rendered service to surgery. If uterine therapeutics and minor gynæcology had been associated with abuses, so had medicine and surgery. Gynæcological surgery must be judged on general surgical grounds, and good operating is not always good surgery. Vaginal hysterectomy for cancer he thought good surgery as compared with the operative treatment of cancer generally; ovariotomy had proved the key to peritoneal surgery. Draining and flushing were intimately associated, the latter being related in turn to transfusion as now understood. A successful operation for disease of the appendages due to inflammation might be very bad surgery, or it might be questionable or else very good. Exploratory incision was often needed in chronic cases and sometimes freeing of ovaries and tubes from adhesions is necessary. Sometimes only one ovary and tube required ablation, but bilateral suppuration of obstructed tubes required removal of both. Bad results were mostly due to the pedicle—often very unhealthy. In reporting a series of these cases a long after-history should be given—a point often omitted by foreign operators, one of whom reported eight cases within six weeks. They seem also too ready to remove the uterus with the diseased appendages. One had done this over five hundred times in a very few years,

although he lived in a small capital. His record of mortality was low, but no reliable after-histories were given. Recovery in such cases is no proof of the necessity of removal: in bad cases in which operation was good surgery the results were not always so satisfactory.

Mr. Doran joined in the condemnation, now generally adopted, of ovariotomy for neuroses. He also noticed that many abuses occurred in the field of uterine displacements, and thought their pathology was obscure, while certain operations did not overcome the morbid condition connected with flexion or version. Patient clinical research he held to be the sheet anchor of the gynæcological surgeon. Surgical proceedings were justifiable only when clinical research had shown that there was something to be removed or rectified by an operation.

Myelopathic albumosuria is the name proposed by Drs. Bradshaw and Warrington for a rare case which they described to the Medico-Chirurgical Society on Tuesday. Albumose was present in the urine and persisted until death took place. Shortly before the end there were indications of softening of the ribs and sternum, and at the post-mortem multiple myelomata were found. This appears to be the first case in which these associated conditions were diagnosed during life and verified after death. Previous cases have been recorded, but were found to be so only post-mortem. It was suggested that such cases might be less rare than supposed and would be likely to be found in surgical wards.

A memorandum has been prepared by the legal adviser of the Medical Council on the subject of professional secrecy. Government requested the opinion of the Council, as the Russian ambassador had asked for information. It seems we are less protected in this respect than you are; in fact, we have no privilege in the matter. Cases are cited in the memorandum which show that a medical man must, if required in court, answer questions material to an issue before the court. But something would depend on the judge who might require a witness to make statements which he could be justified in making only in a court of law.

On Wednesday there was a brilliant *conversazione* to inaugurate the new buildings of the Middlesex Hospital school. Bacteriology and skiagraphy bulked largely in the exhibits. Professor Ramsay and Dr. Travers showed spectra of the newly discovered elements, neon, krypton, and zenon.

The antivivisectionists are advertising for funds to establish a new hospital to be carried on in accordance with their views. "No vivisectionists on the staff, no vivisection in its school, no experiments on patients"—such the programme. A lord and lady promise £50 and £10 conditionally. Not much to establish another hospital and school!

Sir D. Galton died on the 10th in his seventy-eighth year. He retained his great interest in sanitary science and engineering to the last. Though not a medical man, his labors have been of great service to the profession, especially to the sanitarians. He received many honors, such as D.C.L., LL.D., and F.R.S. He was president of the British Association for the Advancement of Science in 1895.

The death is also announced of Dr. W. H. Wilshire, formerly physician to Charing Cross Hospital, aged eighty-three years. He was an able physician, a ripe scholar, and careful teacher. He had been retired for many years, but is kindly remembered by his numerous students.

Basedow's Disease.—Good results were obtained by ligature of the third thyroid artery, followed by subsequent ligature of the fourth.—KOCHER.

ASELLI'S WORK ON THE LACTEALS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I trust you will kindly permit me to add a few remarks to the proceedings in the New York Academy of Medicine which refer to Gasparo Aselli's book on the lacteals, of 1627, which was lately deposited in the Academy's library.

Ludwig Thoulant ("Gesch. u. Bibliogr. der anat. Abbildung," Leipzig, 1852) says on page 88 in connection with that book: "A copy of this extremely rare original edition, which is far superior to later editions, is in the possession of the library of the University of Leipzig." Heinrich Haeser ("Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten," 2 Band, 1881, page 273) has the following notice in regard to the first edition of this remarkable book: "It is one of the greatest literary rarities. A copy is in the possession of the University library of Leipzig. The University library of Breslau owns a defective copy, which contains the plates and their explanations only."

Both authors agree in the appreciation of the superiority of this first edition of Gasparo Aselli's book over those of 1628 and 1640, and in giving the impression that the work is nearly extinct. This at least was the impression I gathered from reading the above quotations; and it was the same impression which induced me to present a copy of the book to the New York Academy of Medicine as "one of the two existing perfect copies."

It was donated to our library by an honorary, formerly resident, fellow of the Academy, Dr. Lothar Voss, of Berleberg, Germany.

I have since learned, first by a published letter of Dr. Austin Flint, that there is a perfect copy of the first edition in the library of the surgeon-general's office, at Washington, D. C. You will find it mentioned in the "Index-Catalogue of the Library of the Surgeon-General's Office, United States Army," second series, vol. i., 1896, page 716. The first volume of the first series contains only the edition of 1640.

I also learn from Dr. P. S. Conner, of Cincinnati, Ohio, that he is in possession of a perfect copy of the same edition.

Thus it certainly exists in our country in three copies, at least. A. JACOBI, M.D.

MEDICAL MATTERS IN SOUTH AFRICA.

(From our Special Correspondent.)

PRETORIA, TRANSVAAL, February 4, 1899.

IN answer to the invitations of the Transvaal Government, the adjoining states have sent medical representatives to Pretoria, in order to hold a conference to discuss and recommend ways and means of co-operation against the introduction of bubonic plague into South Africa. Rumors had from time to time been afloat that the disease was actually in Lorenzo-Marques; it had also been reported that large numbers of rats had been dying there. It is now authoritatively stated that Lorenzo-Marques has not had any cases.

The conference held its first meeting on Monday. The Honorable Dr. Atwater (who is also a cabinet minister at the Cape), together with Dr. Gregory, represented the Cape Colony; Dr. Hyslop represented Natal; Dr. Ramsbottom, the Orange Free State; Dr. Martens, the Mozambique-Portuguese possessions, and Dr. Lingbeek with Dr. Gordon Messum, the Transvaal. The public and press were excluded, as the discussions might have brought in political points.

Dr. Gordon Messum was elected president. As a basis, the five states were to be taken as one area; the inland states taking a share in contributing toward a

mutual fund for carrying out the regulations recommended to be taken along the seacoasts.

It was resolved that quarantine regulations should be adopted with ships coming from infected places, the quarantine period being put at twelve days after convalescence or removal of the last case from on board. This is two days longer than the Venice convention of 1897 advocates.

It is interesting to note that this is the first time on record that the five states or countries of South Africa have come together with a wish to act in unison on medical matters.

Speaking of medical matters brings me back to the trouble we have here in dealing with the admission of medical practitioners holding American degrees. Our rule is that all American degrees, to be accepted, must represent a compulsory course of four years. Our medical board finds it almost impossible to get a correct list of the qualifying bodies with their respective curricula.

Miss Abbott, otherwise known as the "Little Georgia Magnet," is here, and intends, if her medical adviser will allow, giving an exhibition of her alleged powers shortly. She has been laid up for some time with ilio-femoral thrombosis. It was thought that the severe suffering through which the little lady had had to go might have had an injurious effect upon the wonderful "power" she is credited with possessing and exercising.

NEURASTHENIA.

To the Editor of the Medical Record.

SIR: An analysis of neurasthenic conditions, coming from such a keen observer and lucid delineator as Dr. Collins, has been suggestively interesting to me. It is unnecessary to say that his paper and that of his associate, Dr. Phillips, in the last issue of the MEDICAL RECORD is of great merit and ought to do much in enlightening a host in the profession, who even yet have no adequate conception of what it is to be a neurasthenic. With over five hundred individual histories of neurasthenia, I find in almost all the sad lament of a condition that, professionally, has been either unrecognized or unappreciated. So far as I can make out from the statements of patients, from conversations with physicians, and from books, these histories that are so important and interesting are still far from being estimated at their true value. A considerable number of my own cases have been physicians, and their experience in this regard has been uniformly the same as their lay fellow-sufferers. It was only the other day that I was called a short distance from town to see a physician suffering from one of the most aggravated forms of the disease that I have ever encountered.

Although he looked very well, he had not been able to leave his bed for months. So profoundly had heart control been impaired that an attempt to get up and walk or any emotion would set this organ in most tumultuous action; and yet, because he looked so well, and finding no evidence of organic disease—physician after physician lacking this deeper insight into the understanding of mankind, as Dr. Collins well puts it—assured him that his symptoms were mostly imaginary and unreal. Indeed one philistine told him that "he would get right up and go about his business if he died for it."

No patient under the old *régime* of bleeding and calomel had more to contend against than had this unfortunate. Much has been written about neurasthenia, but not too much. As a suffering physician once said to me, "they give a fellow no chance, because they won't acknowledge that he has a disease," and therefore I say, what is needed is the reiteration of just such experiences from authoritative sources. I am in the main heartily in accord with the suggestions of the authors of the paper, but in one respect my experience seems to be quite different. Their statistics show that forty-five per cent. of the cases were those of women, and yet in my own records of over five hundred cases I cannot find fifty that by any possible interpretation or analysis could be classed as neurasthenics. There were plenty of hysterical symptoms and innumerable nervous disturbances, but comparatively few neurasthenics. These statistics do not include the large number of women treated during the ten years of my connection as electro-therapeutist at the Woman's Hospital. I there found many cases of hysteria of a mild form and dreadfully nervous women, but, as in private practice, few cases of neurasthenia. I am surprised and interested in the large number of cases of neurasthenia found in dispensary practice. My own observation in the past along this line had led me to believe that neurasthenia was comparatively rare among the poor and unintellectual classes. Perhaps, however, this discrepancy might be partially explained by differences of opinion as to the chacteristics that contribute to make up a case of true neurasthenia. However this may be, this paper cannot fail to emphasize the necessity of recognizing the fact that there exists a special and very important and very frequent entity termed a neurasthenic, and that the physician who acquires an intelligent and comprehensive recognition of this fact "will be immeasurably more successful in aiding his patient to recovery than he who is devoid of it and at the same time master of physiology and materia medica."

A. D. ROCKWELL, M.D.

25 EAST FORTY-FOURTH STREET, March 24, 1899.

ARMY AND STATE EXAMINATIONS.

To the Editor of the Medical Record.

SIR: We note with surprise and regret an article in your edition of March 18th in regard to the bill now before the legislature of the State allowing physicians who served in a professional capacity in New York regiments in the late war with Spain to register without taking the State examination.

We cannot believe that a medical journal with the deservedly high reputation of the MEDICAL RECORD would willingly lend itself to further an effort on the part of a few individuals to evade the law which was enacted to protect the community from incompetent medical men, and we feel, therefore, that the article in question must have been accepted through some oversight, and we hope, in justice to the medical profession as well as to the community at large, that you will take steps to overcome the influence the article mentioned must have had, appearing as it did as the official utterance of the editor of a paper so highly respected as the MEDICAL RECORD.

You say that after admission into the regular or volunteer army there should be no question as to professional ability, and as a general statement this is true; but there are colleges in this country where the requirements necessary to graduation are perhaps as great as those for entrance into the army, whose graduates cannot be admitted to practise medicine in this State until they have taken the State examination. Then, too, if men could pass the examination necessary to enter the army within the last few months, and the army examination is as severe as the State examination, why should they hesitate to take the latter? It is, we believe, an admitted fact that the usual army examination was not required when the Government was looking for

surgeons in the late war. This being the case, it is quite possible that some of these surgeons were not up to the standard of the usual army surgeon, and consequently their position in the army was no guaranty of fitness.

Again, when the war with Spain was declared and the New York regiments needed medical officers, it is a fact that there were ten applicants for every vacancy, and it was the opinion of the surgeon-general, and of Governor Black as well, that only registered physicians should be appointed to these positions. Through influence of some sort the wishes of the authorities were disregarded, and men who would not be considered competent, not having the State certificate of proficiency, to practise in this State among civilians, were thought competent—if, perchance, any thought was given to the subject—to practise on our soldiers in the field. Is any comment on this injustice to our soldiers necessary? Is it a convincing argument that because non-registered physicians were thought to be good enough for the soldiers they are good enough for civilians?

There can be no excuse for the fact that even one non-registered physician went to the front as the medical officer of a New York regiment, for there were many registered physicians ready and anxious for the position, and we hope and believe the State of New York is not in fault for the fact that the registered men were not selected.

The State owes to these non-registered physicians the same respect it owes to its soldiers generally, but not more. Does the State design conferring any special privileges on its soldiers which other citizens do not possess, when the possession of those privileges ordinarily necessitates compliance with certain laws? Let us not advocate exemption. The medical profession will itself raise a fund to pay the examination fees if that is the objection to complying with the law. The State might even remit it; but if these men are not competent to take the examination, then they are not competent to practise medicine. There ought not to be a physician in the State of New York who could not, in a very short time, prepare himself for the theoretical part of the State examination, and if these few men, for whose benefit this bill was introduced, cannot pass the required examination, it is not just to the community that they be allowed to practise.

The medical profession of this State is proud of its standard of requirements, which offers the surest protection the public health can possess, and we hope it may never be lowered, and that there may be no evasion of it. Year after year since the enactment of the present medical laws we have had one or more bills to exempt somebody from these laws' provisions, and at the close of each legislative session we have congratulated ourselves that they (the laws) were still intact. We believe this year will not be an exception, and we trust that among those to whom we offer thanks for standing for the right we may still number the MEDICAL RECORD.

FRANK VAN FLEET, M.D.,

Chairman of the Committee on Legislation of the Medical Society of the State of New York.

NEW YORK CITY.

[Our correspondent does not need to be reminded that the MEDICAL RECORD has always been an advocate of State examinations for license, and that it is not likely now to change its course. The particular article to which reference is made was written for the purpose of claiming an equality of requirements for army examinations as compared with State examinations. If the young medical men who have complained did not submit to such an examination, of course their case falls to the ground, and they should procure their license from the State in the regular way.—ED.]

New Instruments.

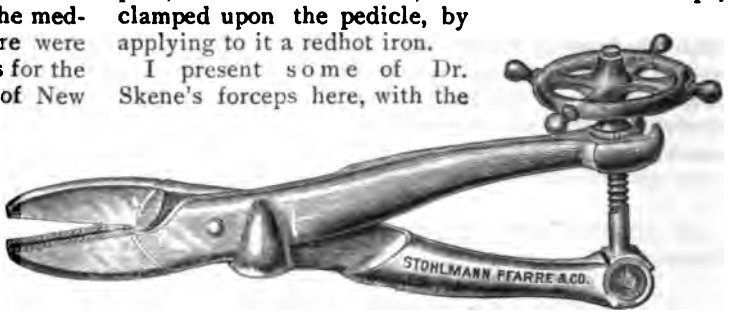
TUFFIER'S ANGIOTRIBE, WITH THE REPORT OF A CASE.[1]

BY CLEMENT CLEVELAND, M.D.

NEW YORK.

ABOUT two years ago Dr. Skene published a short paper on the use of the electric clamp in surgery. Upon reading the article I became very much impressed with the importance of his invention, and at once provided myself with these clamps, and have been constantly using them ever since. Dr. Skene was led to the use of the heat produced by electricity from his knowledge of Dr. Keith's practice of years ago in the treatment of the pedicle in ovariotomy. Dr. Keith's plan, as I understand it, was to heat the forceps, clamped upon the pedicle, by applying to it a redhot iron.

I present some of Dr. Skene's forceps here, with the



protectors he employs to prevent the extension of the heat to the surrounding tissues. They have been so thoroughly described by Dr. Skene himself that it is unnecessary for me to add anything further. The plan he employs in their application is as follows: They are lightly clamped upon the part to be affected. The current is then turned on, six to seven amperes being used. At the end of half a minute they are compressed to their utmost capacity. At the end of two and a half minutes the current is turned off, the part to be removed is cut away, and the clamp is then removed. Dr. Skene has found that it is advisable to apply vaseline to the inner surface of the clamp blades, to prevent their adhering to the tissues on being removed. He clamps the forceps but lightly for half a minute in the beginning, for the purpose of thoroughly heating the tissues before the full grip of the forceps is applied.

I have had these instruments in constant use, and have never had secondary hemorrhage nor an accident of any kind. I have never injured a ureter, and do not believe it possible to do so when the clamp is properly applied. The heat extends only for about a line beyond the instrument. It is never proposed to burn or char the tissues, but merely to desiccate them. For this purpose the temperature is carried to 198° or 200° F. In my work at the hospital the street current is employed, modified and controlled by a transformer, so that it is possible to determine the amount of heat employed at any moment. In private practice I have made use of a Byrnes' battery or a storage battery.

Dr. Skene claims for the use of electric clamps not only complete hæmostasis, but an antiseptic and aseptic effect, and, moreover, devitalization or killing of the nerves in the stump, and, as a result, no danger of secondary hemorrhage, no danger of secondary infection from the stumps, as sometimes follows the use of the ligature, and also a diminution, to the minimum, of pain, which usually follows the use of the ligature

[1] Read before the Practitioners' Society, January 13, 1899.

or clamp. All these claims I have verified in my own work, which has been quite extensive during the past year and a half.

The emancipation from the use of the ligature, either of silk or of catgut, and from the use of the clamp, has afforded me during this time the keenest satisfaction; in fact, I have been so completely satisfied with the electric clamp that I have felt there was nothing to be desired. Last Monday, January 9th, however, Dr. Appert, a friend and *confrère* of Professor Tuffier, of Paris, brought me one of Tuffier's angiotribes. This I have brought to show to the society, though I suppose many of you may have seen or heard of it, and some of you possibly used it. The purpose of the instrument is to secure an immense pressure, and Tuffier asserts that by it he gains a pressure of three thousand pounds.

I had at my clinic that afternoon a case of double tubo-ovarian abscess, with a large septic uterus. The vagina was capacious, so it was a favorable case for the exhibition of the instrument. The method of operation was as follows: The anterior incision across the cervix was made by the electric knife. The bladder was then separated from the cervix up to the vesico-uterine fold of the peritoneum. The posterior incision was then made by the electric knife, and the tissues were thoroughly separated by the finger into Douglas' pouch. The incision was then made complete round the cervix by severing the vagina at the sides of the cervix with the electric knife. The cervix was then grasped at either side of the external os by two traction forceps, and divided longitudinally up to the junction of the cervix with the body. The left half of the cervix was then drawn down and to the right, while the angiotribe was applied to the lower section of the left broad ligament. The pressure of the forceps was then applied to its utmost capacity of three thousand pounds, for the period of two minutes. The left portion of the cervix was then cut away from the forceps and the instrument removed. Not the slightest bleeding followed, showing that the vessels had been so completely crushed that their inner walls were thoroughly glued together. The same was done upon the right side. No bleeding followed. I then opened into the abdominal cavity anteriorly, and proceeded with the bisection of the uterus until it was completed. I found, upon passing my finger into the pelvic cavity, the abscess of the tube and ovary of the left side. With some difficulty these were dug out from their bed of adhesions and drawn out. The angiotribe was then applied to the upper section of the broad ligament of the left side, back of the diseased tube and ovary, for the same period of two minutes. Then the left half of the uterus was cut away and the instrument removed, and no blood followed. The same process was repeated on the other side, with a similar result. The pelvic cavity and vagina were then packed with gauze in the usual way, and the patient was put to bed. In this case, as following the use of the electric clamps in vaginal hysterectomy, there was the minimum amount of pain and not the slightest hemorrhage. The patient is making an uneventful recovery, with scarcely an elevation of temperature above the normal.

This instrument looks rather bulky and unnecessarily heavy, and it is possible that a lighter one would serve our purpose equally well. It is to be supposed, however, that Tuffier, who doubtless has studied this question most carefully in all its details, has produced an instrument exactly suitable to the purpose for which it was designed. It is not clear to my mind, however, that a pressure of three thousand pounds is needed, but experimentation would very soon determine this point to a nicety. Tuffier reports a series of twenty-seven successful vaginal hysterectomies with this instrument, and, since the publication of his pamphlet, I understand he has had quite a number more.

From my experience with the instrument I am satisfied that it is as far in advance of the electric clamp, which it puts entirely in the shade, as the electric clamp is in advance of the ligature and the ordinary hæmostatic clamp. In the matter of expense—not so much in the first cost, but in the use of supplementary appliances and electricity necessary for the use of the Skene clamp—there is a marked difference. There is gain of time in its use, as other work in the operation can be proceeded with during the two minutes required for its application. It must, I believe, produce a complete revolution in pelvic surgery and mark an era in our surgical work.

The first instrument for this purpose was devised by Doyen of Paris and used by him in 1897. He reported a number of successful cases following its use. After him Thumim, assistant in Landau's clinic, in Berlin, devised an instrument for this same purpose, by which he claimed he could get greater pressure, and reported a series of thirty-one cases.

This instrument of Tuffier was devised by him in 1898. I have seen drawings of both Doyen's and Thumim's instrument, and, to my judgment, this instrument of Tuffier will give far greater pressure than either.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 1, 1899:

	Cases.	Deaths.
Tuberculosis	251	156
Typhoid fever	8	6
Scarlet fever	173	16
Measles	259	12
Diphtheria	175	36
Laryngeal diphtheria (croup)	22	8
Cerebro-spinal meningitis	0	11
Chicken-pox	27	0
Smallpox	1	0

Duties of a Medical Inspector.—Col. Charles R. Greenleaf, assistant surgeon-general, United States army, has received the following instructions from Surgeon-General Sternberg on the occasion of his recent appointment as medical inspector: "In the discharge of your duties as medical inspector of the army, you are expected to report to me upon the sanitary condition and wants of troops in the field, at military posts, and in general hospitals, and as regards the skill, efficiency, and conduct of officers, enlisted men, and civilian employees connected with the medical department. You will see that existing orders and regulations relating to the medical department are complied with, and that all prescribed reports and returns are promptly made and forwarded when due. You will examine into the quality, quantity, and condition of medical and hospital supplies, reporting any failure upon the part of responsible medical officers to make proper requisitions and any deficiencies found due to failure on the part of supply officers promptly to fill approved requisitions. You will ascertain what diseases are most prevalent in the camps visited by you, and will inquire into the cause of such prevalence and the steps which have been taken for the prevention or arrest of any infectious diseases which may exist, indicating verbally or in writing to the responsible medical officers such additional measures or precautions as may be requisite. When sanitary reforms requiring the sanction and co-operation of military

authorities are urgently demanded, you will report at once, in writing, to the officer commanding the military department, corps, division, or camp, calling his attention to the facts and recommending such measures as you consider necessary for the relief of insanitary conditions existing. A duplicate of such report should be forwarded to the surgeon-general of the army. You will ascertain whether medical supplies are properly used and with a due regard to economy; whether any additional articles not now included in our supply tables are necessary for the treatment of the sick; whether the equipment of regimental hospitals is such as is contemplated by recent orders; whether cases of infectious diseases or of soldiers seriously ill are improperly retained in regimental hospitals; whether division hospitals are fully equipped as regards supplies, medical officers, and attendants properly to care for the sick of the command to which they belong; and whether contract surgeons have been examined as prescribed by recent orders. You will give special attention to diet kitchens, and see that they are equipped for providing the sick with suitable light diet. You will ascertain whether a proper use is made of the fund provided for the purchase of suitable articles of diet for the sick, as prescribed in General Orders No. 116, and whether the commissary department has on hand for sale such articles as are necessary. You will also inquire as to the sufficiency of tents, ambulances, and other articles furnished by the quartermaster's department. You will report any abuses or deficiencies existing to the commanding general of the department, corps, division, camp, or military post, sending a duplicate of this report to the surgeon-general of the army. You will also report upon the professional competence, attention to duty, and general qualifications of medical officers, calling the attention of the surgeon-general to those who deserve especial commendation and also to those who are considered incompetent or for any reason undesirable members of the medical department. You should give special attention to the efficiency of the hospital corps, reporting whether proper discipline is maintained and proper instruction given in all that pertains to the duties of enlisted men of that corps."

The Development of the Child.—Dr. Nathan Oppenheim, in his book on "The Development of the Child," writes: "As soon as one looks at a baby's brain, one is able immediately to see why he cannot walk like an adult, for, outside of the microscopical changes, the cerebellum, where the function of coördination is seated, is relatively much smaller than the cerebrum. In addition, one sometimes finds primitive conditions in this part, which show that development must bridge over a great chasm before useful functions exist in a normal state. Thus one may mention the median occipital fossa noted by Lombroso in connection with the hypertrophy of the vermis of the cerebellum, which sometimes occurs in the very young human being. This condition regularly occurs in the lower apes. For similar reasons one would conclude that useful and reliable sight comes to the child more slowly than is commonly believed. Just as in walking the loose and unregulated movements of the legs become rarer and rarer, so the ability to see clearly, to understand the meaning of distance, to grasp the idea of the third dimension in space, has a very gradual, even slower growth. In the real sense of the term, the child for some weeks does not see at all, and for a long time he sees very imperfectly. His first distinctions are merely those of light and darkness, then the warm colors, and finally the colder ones, with their various shades. Professor Preyer, wishing to get positive information on this subject, trained his young child by daily practice in discriminating between the various colors. When the child was almost two and one-half years old, although he could pick out, with fairly good accuracy, such strongly marked hues as red, yellow, and black, nevertheless he seemed absolutely unable to distinguish green, blue, gray, and orange. And even in the fourth year he failed to recognize the difference between blue and gray. This case is all the more impressive because the child had a special training, as well as environments, which naturally would be productive of good results. But one cannot easily abolish the limitations of nature."

White or Brown Bread the More Nutritious.—Dr. Andrew Wilson remarks in the *Illustrated London News:* "I observe that the oft-debated question of the relative merits of white and brown bread has again been brought to notice by the publication of a memoir on the subject by Dr. Lauder Brunton and Dr. Tunnicliffe. These gentlemen have been making researches into the bread question, and have come to the conclusion that, on the whole, white bread is more nutritious than the brown variety. The latter has its merits, of course. It tends to remove the torpidity of the digestive system which too often occurs in persons of sedentary habits, and supplies also mineral matters—especially phosphate of lime—needed for bone-building. But the white bread also supplies mineral items, and as regards fat it is said to afford a larger proportion of this important food than the brown bread. The great point our investigators lay stress on, however, is the importance of judging the value of a food by a physiological rather than by a purely chemical criterion. It is one thing to say that any food shows under analysis a large proportion of this or that nutriment, and quite another thing to assert that it can be easily assimilated, or, in other words, that its nutrients can be easily obtained by the body for the ultimate purpose of nourishment. White bread overtops the brown in this latter respect, and so we may rest content to know that in the ordinary loaf we have a typical enough representative of the staff of life.

An Italian Professor on Vaccination.—Dr. Bizzozero, in a lecture given recently at Rome, made an able speech in favor of vaccination and one which has produced a deep impression. He said, as reported in *The Lancet*, that Germany stands alone in fulfilling in great measure the demands of hygiene, having in consequence of the calamitous smallpox epidemic of 1870–71 enacted the law of 1874, which "makes vaccination obligatory in the first year of life and revaccination obligatory at the tenth year." What was the result? With a population of 50,000,000, having in 1871 lost 143,000 lives by smallpox, she found by her law of 1874 the mortality diminished so rapidly that to-day the disease numbers only 116 victims a year. These cases, moreover, occur almost exclusively on her frontier. If it were true, Professor Bizzozero went on to say, that a good vaccination does not protect from smallpox, we ought to find in smallpox epidemics that the disease diffuses itself in the well-vaccinated no less than in the non-vaccinated countries. But it is not so. In 1870–71, during the Franco-German war, the two peoples interpenetrated each other, the German having its civil population vaccinated optionally, but its army completely revaccinated, while the French (population and army alike) were vaccinated perfunctorily. Both were attacked by smallpox; but the French army numbered 23,000 deaths by it, while the German army had only 278; and in the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been revaccinated, had not a single case.

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Original Articles.

CASES OF SCIATIC AND BRACHIAL NEURITIS AND NEURALGIA—TREATMENT AND CURE BY ELECTRO-STATIC CURRENTS.

BY WILLIAM J. MORTON, M.D.,
NEW YORK.
Cases compiled from records by W. B. SNOW, M.D.

IN 1893 I published in the *Post-Graduate* some cases and views relating to the treatment of neuralgia and neuritis by means of static electricity. Since that time, almost without exception, I have continued to treat neuritis (as well as the various types of neuralgia) in no other manner, and since then I have also greatly enhanced the efficacy of the treatment by improvements in the method of electrostatic application, referred to later on. I believe that a great advance in the treatment of these diseases is made by employing the electrostatic currents, and for this reason I now present a brief report of individual cases and a general summary of eighty cases that have been treated in this manner. The cases here referred to I believe to be distinctively neuritis. Cases of neuralgia in the sense of a functional sensory neurosis have been excluded, as well as cases of neuritis other than of the sciatic and brachial regions, since the number would be unwieldy, or the deductions drawn less conspicuous.

Many cases of pain in one arm or one leg, with no local tender spots on pressure, present themselves, which are, no doubt, as Oppenheim has pointed out from an analysis of one hundred and eighty-nine cases, a neurosis and are associated with neurasthenia or hypochondriasis. These cases have been excluded, although more numerous than those distinctively of neuritis. Such cases yield promptly to electrostatic currents directed to the cure of the constitutional condition. It is true, the diagnosis between a neuralgia and a neuritis, especially one of a chronic type, is not always and in all cases an easy one; but, on the other hand, many cases leave no doubt in the mind as to their neuritic character; while again it is certainly true that many so-called neuralgias are, in fact, cases of neuritis. At all events, it is here no question of entering into a pathological discussion, but merely a question of a clinical symptom picture, and of a specific cure of the disease, whether it be called a neuritis or a neuralgia.

Eighty cases are here presented, either in detail or by synopsis and tabulation. This number includes cases of neuritis treated both in private practice and at my clinic at the Post-Graduate Medical School and Hospital during a given period. They are not selected cases, but include nearly all of the cases of brachial and sciatic neuritis treated. The cases indicated as "relieved, but ultimate history not available," were all in dispensary patients, whose records show that they recovered up to a point that enabled them again to go to work; had they not been cured they would probably have returned.

And here a word in general as to the method of treatment. In no case was any medicine employed. Electricity was the therapeutic agency. But many doubt if electricity will accomplish a cure. And Gowers,[1] while admitting some value in electricity for chronic forms, says it "has little influence during the acute stage."

In regard to the first objection, I would observe that success depends upon what one means by "electricity." It is a common remark of a patient, "Oh, I have taken electricity, and it did me no good." This remark is undoubtedly true; for it is also equally true that the real and beneficent action of electricity as a therapeutic agency has been almost stultified by the ignoramus and the charlatan. The former, indeed, does the most harm, for without adequate knowledge he trifles with the subject. When he should be an oiler in the dynamo-room he essays to run the machinery and utilize its product. Hence the patient's remark.

As to galvanism and faradism in these cases, I prefer electrostatic currents, and this not alone in neuralgia and neuritis, but also in a large sum total of diseases which may be properly treated by electricity. I must here say that the often-repeated remark, that "the static current does not penetrate the human system," is unworthy of serious attention. Electrostatic currents penetrate more deeply, more thoroughly, and more universally than does any other form of current. To maintain the contrary is to ignore electrical physics and the demonstrable proofs of physiological experiment. It is, for instance, demonstrable that each and every striped muscle of a living human being may be caused to contract by a "static current." How may this be if "the static current does not penetrate the human body"? These muscles are beneath the surface, and some of them are quite in the centre of the human being. Or, if one grasp the handle of an electrode conveying an electrostatic current of the type here referred to, one cannot let go the grasp.

I have long employed the spark "applied to the sore spots" as the best general treatment, but of late the specific electrical method which I prefer is one of currents derivable from a powerful influence machine, sometimes called a static machine. And this refers not to sparks, but to a new order of currents fully described previously and again recently in a communication to the Société Française d'Électrothérapie of Paris.[2] The patient is not included in any circuit, but is connected with prime conductor of the machine and subjected, in a manner absolutely painless to himself, to powerful electric surgings.

In regard to the second objection, I would remark that the treatment I here advocate is applied to the most acute cases, and with immediate relief from pain. The invariable report in such cases is that the patient that very night slept without the usual doses of narcotics, whiskey, etc., and from that moment progressed to a cure. In fact, the more acute the case the more urgent the electric treatment, and the more immediate the relief and cure.

[1] "Diseases of the Nervous System," vol. i., p. 71.

[2] "Courants dérivés des appareils Électro-Statiques," Bulletin Officiel de la Société Française d'Électrotherapie, Janvier et Février, 1899.

See also The New York Electrical Engineer, March 2, 1899.

The "rest cure" by splints or by lying in bed, so warmly advocated for these cases, is, if electrostatic currents are employed, absolutely unessential. I have seen several cases (among them Case VI.) in which the rest cure (enforced immobility by splints, etc.) has been followed by extensive adhesions which have crippled the joint for life. I instruct patients to avoid undue volitional movements of the affected member or members, but in no case do I render the limb immobile by splints, plaster bandage, or even an arm sling. Touching the question of adhesions, Dr. J. Crawford Renton has recently pointed out, in an article in the *British Medical Journal* (November 5, 1898), their comparative frequency, the result, probably, of a perineuritis, and has given eight illustrative cases of sciatic pain in which the removal of wide adhesions by surgical operation produced complete recovery.

In regard to the usually accepted prognosis, in the cases here treated of, Dr. Gowers' remark may be accepted as expressing the average opinion, namely: "Except in its most trifling degree, brachial neuritis is a tedious malady; the duration of every severe case is to be measured by months, and often more than a year elapses before the patient is free from pain." The remark applies equally, of course, to sciatic neuritis.

Case I.—December 6, 1898. Lieut. J. C. F——. This case is reported as an average example of the ordinary form of brachial neuritis and its treatment by electrostatic currents. During the recent Spanish war he was much exposed to cold on a torpedo-boat, the *Porter*. Ten years ago this patient had been under my treatment for a very severe attack of sciatic neuritis. He is neither gouty nor rheumatic. The present attack of brachial neuritis came on at 3:30 A.M. in the night of November 24, 1898. He waked up, thinking he had a cramp in the region of the right scapula. A dull aching pain quickly developed throughout the shoulder and down the arm. Soon the arm "felt asleep" and also the thumb and index finger. The rest of the night he suffered intense pain, and from that date to the present one this suffering has continued. The pain is like that of a severe toothache. It is most intense at night, especially from 3:30 A.M. until after daylight, but the pain also continues all day. He has been unable to get into any position where the arm does not ache. The spot of most intense pain—a spot which aches acutely whenever he arises from the recumbent position—is just below the humeral insertion of the deltoid muscle. For relief he has been taking powders of sulphonal every three hours night and day and morphine at night, and is now largely under the narcotic influence of both drugs. As the patient entered the office his facial appearance expressed great suffering; he held the right arm rigidly fixed and extended downward in a straight line, carefully protecting it against jarring movements by grasping the right hand with the left. There were five spots very painful to the slightest pressure, two in the scapular region, one in front of the shoulder, one at the insertion of the deltoid, and one at the ulnar notch. Also pressure upon the main nerve trunks of the arm causes much pain. Since the onset of the attack (twelve days) he has been able neither to rest nor to sleep except in one special attitude, namely, flat upon his back with the arm extended alongside of his body.

Treatment: Although the patient was suffering most acutely, the electrostatic treatment was immediately applied during fifteen minutes to all of the sensitive points of the shoulder and arm and to all the nerve trunks. Upon the cessation of the treatment, the patient, to his surprise, found he had free movement of the arm in all directions, and swung it about, even above his head, to demonstrate this fact. He said, furthermore, that he had no more pain.

December 7, 1898.—To-day he reports that the pain stayed away until the afternoon, when it came back, but was very bearable, and for the first time he could spend the afternoon up, walking about. Usually he had lain flat on his back all the afternoon. The modification of pain the patient describes by saying that the arm felt yesterday like an arm sore after throwing a base-ball. A mere slight ache only was present. He went to bed, was perfectly comfortable, and went to sleep. He waked up as usual at 3:30 (the same time as the attack began) and had to get up and use heat, but he was up only ten minutes, and went to bed and slept the rest of the night. The numbness of the index finger has disappeared, and he can now feel things with the finger. This morning the arm ached again, but he can use it freely and put on his clothes.

December 8th. The report is good—no pain at all, the arm felt merely heavy. This morning there was a slight return of throbbing and aching for about one hour.

December 9th. There was some dull ache last night, due to three hours' chill at a launching; but the pain was not sharp, as before, in character. After treatment he had no pain, and there was free movement of the arm.

December 10th. He had one half-hour's dull ache; he slept four hours steadily.

December 12th. At 3:30 he had pain for a little while, and to-day the arm was perfectly comfortable.

On December 15th, 16th, 17th, and 20th the treatment was repeated; the arm and shoulder were constantly improving, and the patient was suffering scarcely any pain at all.

The patient's last treatment was on January 6th, just four weeks from the time of beginning, and, in response to an inquiry of January 20th, he writes: "I am all right again, and have been busy attending to my proper business and trying to catch up with back work. I am entirely clear of the trouble; in fact, if I had not had it, I would not know what the slight occasional pain in the shoulder-blade and the numb end of my finger mean."

Case II.—May 8th. William M. R——, aged forty-five years, physician. Owing to anxiety, the patient lost twenty-seven pounds last month. He never was subject to rheumatism. He has not been sick for twenty-five years. This attack was due to grippe about one month ago. During a snowstorm he swept off the sidewalk, got very warm, and felt a "crick" in his back. This was on April 3d. The next morning he noticed a severe pain across the back, of a lancinating, shooting, dull, exacerbating character, extending throughout the hip, the knee, and calf. Soon he had cramps in the gastrocnemius and in the flexor group of the thigh. The worst pain was upon rotating the leg. The leg felt cold, he had extreme itching, drawing, and various subjective sensations in it. The leg was so cold that, even when it was covered with blankets, he frequently asked if it had not become uncovered. The tendon reflex was abolished. There were extremely sensitive spots at the trochanteric notch, beneath the knee, over the branches of the peroneal nerve, even to the ankle, and over the superficial regions of the posterior tibial nerve, as well as the anterior tibial and the musculo-cutaneous. Symptoms of locomotor ataxia were excluded. The patient is taking half a grain of morphine daily and large doses of whiskey. He walks lame, with great caution, and suffers most at night.

Treatment: Electrostatic, twenty minutes. The patient had already experienced a great variety of severe treatments for his sciatica before coming to me, including medicines, capsicum, and mustard, and a fly-blister, five inches square, over the sciatic notch.

May 9th. He reports that he did not have more

than two cramps in place of twenty-five to thirty on the previous night; that he reduced the amount of morphine one-half; that he slept nearly all night; that he walks better; the numbness on the outer side of his thigh is gone; that he can turn in bed better; that he suffered no pain at all to-day, and is exceedingly grateful for the relief.

May 10th. He had no cramps at all, nor tenderness or soreness, except from the knee to the ankle, nor pain in walking except on severe jar. He perspires very freely about half an hour after each treatment; he says the sweat trickles off him for several hours. After treatment he walks better; the legs are less stiff, with no tenderness or pain.

May 11th. Great improvement.

May 12. Yesterday he slept with the window open; waked up with pain and throbbing in the ischiatic notch, extending down the leg. The entire skin of the leg was extraordinarily hyperæsthetic.

May 13th. He walked six blocks to his office.

Three treatments only followed, until May 24th, when, owing to having slept that night with the sciatic leg underneath, he had a slight relapse. It was noticed, at this time, that a treatment at the sciatic notch set up a thrilling sensation in the nerve, which could be felt even to the toes.

May 28th and 30th. The treatment was continued; still some general pain and suffering.

June 1st, 3d, and 4th. Treatment continued.

June 13th. Steady improvement. Last night, for the first time, he was entirely free from itching.

July 5th, 6th, and 7th. The patient received his last treatment, and reported that he considered himself entirely well, with the possible exception of a slight dull sore feeling about the middle of the tibia.

Case III.—Mrs. W. J. E——, aged forty-nine years. The left arm and shoulder are numb, heavy, tired, and ache nearly all the time, but are worse in the evening. The hand feels "as if going to sleep"; the ring and little fingers are sore and have a dull ache; she rubs them often for relief; the aching comes on every night during sleep, and she often wakes up, feeling that the arm is "perfectly dead." This condition has existed for a year. There are painful spots on the deltoid humeral insertion and in front of the shoulder. She has frequently a pronation twitching movement of the forearm.

Ten treatments were given, extending over a period of four weeks; the patient reports the arm as perfectly well.

Case IV.—B. P. D——, aged fifty-five years. One week ago pain began in the left arm and shoulder; couldn't sleep at night, except for cat-naps of two or three hours; no position afforded relief; the shoulder was more comfortable when he was standing up at night than when lying down. For seventy-two hours there was one continuous ache; the movement of the arm was restricted, so that he could not raise it, couldn't shave himself, and couldn't even get his thumb up to his cheek.

Seven treatments were given, extending over a period of eleven days. The patient reports that he is well.

Case V.—Mrs. B——, aged sixty years. She has been subject all her life, more or less, to attacks of sciatic pain in both legs. For several months she has had settled, gnawing, dull, aching pain in the right leg and hip, which wakes her up about two o'clock and lasts until the morning. She takes all sorts of remedies. She has a "Morton toe," and is subject also to intercostal and axillary neural pains.

The patient had sixteen treatments, extending over a period of four weeks. She reports that she sleeps through the entire night without pain; that she is taking no medicine for relief; that she feels lighter and more active in her legs—in short, that, having "suffered all summer the torments of the lower regions," she now feels perfectly free from pain.

Case VI.—E. S. N——, merchant, aged sixty-two years, came to the office on November 9th with the following history: Five months ago he was attacked with a dull, aching pain in left shoulder, at about the tip of the acromion process, with general pain in the joint on movement. The treatment to date had been rest, applied heat and cautery, without improvement of his condition.

Present condition: (1) Suffers pain about shoulder and upper arm. Will go to sleep at night, but is awakened by the severe pain. (2) Motion is restricted by adhesions. He cannot put his hand behind his back, nor to the top of his head, nor raise his arm to a right angle with the body. All movements cause severe pain. (3) There is decided wasting of the deltoid muscle. (4) There are marked crepitus on rotation and spasmodic contraction of all muscles about the shoulder.

Treatment: Long sparks and friction.

November 10th. The pain was relieved by the treatment and has not returned. The arm is still painful on motion.

November 12th. The patient is much relieved. He put on his overcoat without pain for the first time this season. Takes treatment now every second day.

November 21st. Improvement is progressive. He is able to put his hand on the top of his head.

December 2d. He has had no pain whatever for more than a week. There are adhesions, probably tendinous, which are the result of the rest treatment during the active inflammatory condition.

December 12th. The patient took treatment to date, without return of pain, and was entirely cured, except for the adhesions which still exist.

Case VII.—January 18th. Mrs. M. K——, aged forty-five years. Her family history is good; previous history good; she has had no rheumatism. Her present illness began last spring with a sudden attack of severe pain in the right axilla, which soon involved the whole shoulder, arm, and scapular region. The pain was so severe for two months that she could not sleep at night. From the beginning to this day her arm and hand have been swollen, painful on motion, and absolutely useless. She can now raise the arm only to a straight line with the shoulder, and that with a painful effort. The hand is somewhat flexed and useless; she can straighten only the forefinger, nor can she close the hand with the utmost effort. The hand and arm are swollen, cold to touch, mottled in appearance, and sensitive to pressure, most markedly over the large nerve trunks; at times the hand feels numb and has tingling to the end of the fingers.

Treatment: Long sparks and rubbing. The first treatment gave great relief. The patient was able to move the arm freely without pain.

January 20th. The patient has been very comfortable since the treatment and is able to use the arm a little.

January 23d. The patient is greatly encouraged. She was able this morning to pin her skirt for the first time since she was attacked. She suffers little pain now on motion, the swelling is less marked, and the surface begins to look natural. Substituted surging currents to-day for sparks. The relief obtained from the treatment was very marked. She said she felt absolutely no pain on moving the arm, but the arm feels weak and heavy.

This is a typical case of neuritis, which received the attention of two able physicians for upward of eight months, who prescribed rest, diet, and internal treatment, without success, while three electrostatic treatments gave great relief, and established a process of reconstruction which enables her to use her arm nearly if not quite as well as ever.

CASE VIII.—E. W——, nurse, right sciatica of five months' duration. Sensitive points: middle of thigh, popliteal space, calf of leg, behind external malleolus. Pain constant; difficulty in getting up and down; knee jerk exaggerated; impaired nutrition; the patient is thin and worn-looking. April 27th to May 13th, seven treatments; improved nutrition; gain in weight; pain gone; free movement.

CASE IX.—McW——, clerk, double sciatica of four years' duration. Onset sudden, worse in right leg; there is constant pain, worse before storms and in rainy weather. December 21st to February 5th, seven treatments were given. Recovered; able to stand at work all day. November 23d, he presented himself for another trouble; no return of the sciatica.

CASE X.—D. D——, painter, right sciatica of six weeks' standing. Painful points: sciatic notch, middle of thigh, and below head of fibula; the leg is held stiffly in walking and slightly flexed; extreme pain, worse on movement; he was taking opium. Twenty-one treatments; discharged recovered.

CASE XI.—A. H——, clerk, double sciatica of nine months' duration. Left at first, then right. Pain: sacrum, sciatic notch, popliteal space, and to foot; he cannot sleep; knee jerk is scarcely evocable in left leg. December 14th to March 2d, thirteen treatments. The pain was markedly relieved after five treatments; after six, he was able to sleep until 5 A.M. and to go to work. After nine, he was at work all day, standing from morning until night. Recovered.

CASE XII.—B. M——, driver of ice-wagon, right sciatica of nine months' duration; he has great pain, could not sleep; impaired nutrition; worn and anxious countenance; impaired mobility; he walked with great difficulty. October 9th to December 14th, twenty-eight treatments were given; he now has no pain; walks well; improved nutrition; gain in weight; he is able to go to work.

CASE XIII.—S. B——, right sciatica of six months' standing. Pain: sore on pressure at popliteal space; he has difficult locomotion and impaired mobility; walks with cane only. August 31st to November 6th, sixteen treatments. He now walks without a cane; he has no pain or soreness.

CASE XIV.—Mrs. S. S—— has had double chronic sciatica four and a half years. The onset was sudden, involving the back and left leg, then right leg; she has been in hospitals and taking medicine and galvanism off and on ever since. Pain: cramps. She has shortening; walks only with cane; she could not get on or off the insulated platform without help. October 28th to December 30th (fourteen months), seventy-eight treatments. She now gets on and off the platform without help; walks everywhere indoors without a cane; there are no pain and no cramps.

CASE XV.—February 7th. M. G——, aged fifty-two years. Seven months ago he had a chill, followed by severe pain in the region of the right shoulder, not in joint. Later on the pain became dull in character. He cannot raise his arm to the level of the shoulder. The arm is weak, and there is developed a characteristic neuritis. Treatment three times per week.

February 9th. He can raise his arm slightly from the body.

February 11th. There is very little pain; the movement is about as last time.

February 18th. He can touch his hand to his face for the first time since he was first attacked.

March 9th. Steady improvement; he can now put his hand on top of his head.

CASE XVI.—October 20th. L. F——, aged 62 years, hod-carrier. He has suffered for eight months with pains in both shoulders and left hand.

Treatment: Long sparks to affected parts and general treatment.

October 26th. He is feeling better.

October 28th. He has slight pain all the time in the arm. He is stronger, but still cannot lift much.

November 13th. He has severe pain over the left shoulder blade.

November 20th. The arm is growing daily stronger and the pain is diminishing.

November 30th. He has had great pain in the left arm during the last four days.

December 4th. He has severe pain in the shoulder and arm.

January 4th. He is always better the day of treatment for a few hours only.

This patient disappeared, and the result of treatment is not known.

CASE XVII.—January 4th. A. W——, housewife, aged thirty-four years. The attack began five years ago, but has been worse during the last two months. She has dull pain in both arms, worse at night; all the fingers and thumbs on both hands become numb and tingle.

Treatment: Rubbing; sparks.

January 8th. The patient is very much better; less numbness in arms.

January 11th. She continues to improve.

February 12th. She is very much improved, and did not return for treatment.

CASE XVIII.—December 21st. P. Q——, carpenter, aged fifty-six years. Five years ago he noticed that he could not hold a hammer well; this was always worse in cold weather. He had no swelling or pain at first, but was growing steadily weaker. He has pain now in the right arm and in the shoulder, with numbness and tingling. At times he cannot raise the arm. There is also marked atrophy of the muscles of the hand.

Treatment: Rubbing sparks, long sparks, and general treatment.

December 29th. The arm is stronger and does not numb so easily; there is also less tingling.

February 1st. About the same.

February 26th. The right arm is stronger, with less pain. The treatment relieves for four or five days.

CASE XIX.—February 10th. M. N. M——, nurse, aged forty-four years. One year ago she had a sudden attack of pain in the shoulders and legs. Her limbs were stiff, and later her hands were numb. When she wakes in the morning, the hands are numb; she has also tingling and prickling through the arms and fingers. She has the same in her limbs, but not so marked.

Treatment: Rubbing sparks to arms and legs and general treatment by sparks.

February 12th. Noted improvement.

February 24th. The arms are very much improved and feel stronger, also less pain in shoulders. Cured.

CASE XX.—December 18th. J. B——, boatman, aged forty-eight years. Four months ago he first noticed pain in the region of the left knee. He has pain now from thigh to knee; the left side is numb, goes to sleep, feels cold and heavy; he seems to drag it around with him.

Treatment: Long sparks.

December 20th. Since treatment the leg is stronger, feels less numb, and he can walk better.

January 13, 1897. He has been to sea and unable to take treatment. The leg is atrophied and weak. It began to get worse two months ago.

January 22d. The leg is stronger.

February 15th. General improvement continues.

February 24th. Improvement very marked.

April 19th. The leg is much stronger. He can stand on it all day.

CASE XXI.—March 25th. J. H——, aged forty-eight years. He began seven months ago to have a

severe pain in the urethra and perineum, lasting a few minutes, and followed by a loss of power of the right side for twenty seconds, after which his foot felt as if asleep. Since then he has had pains, sharp and severe, all over. The pain in the shoulder is severe ever since the attack. He has lost strength. His hands feel as if asleep and stiff. He has at times tried to work, and afterward could not touch the flesh on account of the pain it caused.

Treatment: Sparks.

April 8th. There was no change in condition.

April 20th. He feels stronger and can use his arms better, and the numbness in the feet is less marked.

April 27th. The right side is about normal, and the left much improved.

CASE XXII.—E. M——, housewife, aged fifty-nine years; traumatic neuritis of left arm. On November 8th she fell and dislocated her left shoulder. Since the accident she has constant pain throughout the whole arm; the small and ring fingers are semiflexed. There is normal motion of the shoulder-joint. There is some atrophy of the muscles of the hand, which she cannot close.

Treatment: Spray and rubbing sparks.

November 17th. After the last treatment she could move her arm better, but has about the same amount of pain.

December 22d. She has less pain and more strength in the third finger.

January 12th. The pain has disappeared, and she can now close her hand normally.

CASE XXIII.—March 25th. K. S——, housewife, aged fifty years. She began one year ago to have in her left shoulder severe and aching pains running down to the elbow, relieved at times by liniments and rubbing. About six months ago her arm began to grow thin (probably atrophy). Her husband rubbed the arm, and it has again grown to normal size. The arm is now always cold. Raising the arm causes pain. There is no swelling, and she has no history of rheumatism.

Treatment: Sparks.

April 11th. She can raise her arm to her head.

April 13th. The patient is very much improved.

CASE XXIV.—February 7th. S. F——, aged thirty-four years, brass polisher. Six months ago he was attacked with sciatica, which has persisted ever since; he also has pain in the back.

Treatment: Sparks.

March 4th. There has been marked improvement under treatment three times per week.

March 9th. He is very much improved since last treatment, and is completely relieved. He did not return for treatment.

CASE XXV.—E. D. J——, aged sixty-nine years, had brachial neuritis. Three months ago he was taken with severe pains in the shoulder and forearm. He has been under medical treatment ever since, without benefit.

October 17th. Treatment: Sparks and friction to the arm and over the brachial plexus three times each week.

October 19th. After the first treatment he was able to sleep all night without pain. The arm feels heavy and numb, but there is no pain.

October 22d. Last night he had return of pain, which was severe for two hours.

October 24th. Last night the arm was tender, but on the preceding night it was comfortable.

October 29th. He has been entirely free from pain for the past forty-eight hours.

November 2d. There has been no return of pain since October 27th, and the patient considers himself cured.

CASE XXVI.—G. L——, aged thirty years, watchman; bilateral sciatica. His previous health was good. He began ten months ago to have a dragging feeling in left leg, which has grown steadily worse, until now there are frequent attacks in the opposite leg. The pain is continuous and severe. Cautery and blisters have been used without effect. His weight has been reduced from two hundred and ten to one hundred and eighty-nine pounds.

October 29th. First treatment: Sparks to back and limbs. The treatment gave complete relief.

November 5th. After the past two treatments the pain returned after two hours.

November 12th. The pain returns after the patient goes to bed and when he sits down.

November 14th. After the last treatment he was free from pain for eight hours.

November 16th. Treatment relieved the pain for ten hours.

November 19th. He has had little pain since the last treatment (seventy-two hours).

November 26th. For two days he has had but little pain, but a feeling of soreness.

November 28th. He has experienced great relief since last treatment, and is much pleased.

December 7th. He has less pain than since he was attacked, and is so well that he considers himself cured.

CASE XXVII.—December 16th. W. H——, aged forty-three years, fireman; sciatica. Fifteen days ago, on rising, he had in the right hip and thigh a severe sharp pain, which to-day shoots down to the knee. He has great difficulty in getting out of bed. There is tenderness on pressure.

Treatment: Sparks general and local.

December 20th. The patient is much relieved, and has had but little pain. Treatment gave complete relief, and the pains did not return. The cure was complete after two treatments.

CASE XXVIII.—March 2d. J. S——, aged forty-six years, tailor; sciatica. He has had occasional attacks of sciatica during the past ten years. He was taken one week ago with severe pain in the right and left leg.

Treatment: Sparks to both limbs.

March 6th. He was free from pain for five hours after the last treatment.

March 19th. He was completely relieved by the last treatment, and did not return for further treatment.

CASE XXIX.—September 22d. R. F——, laborer, aged sixty-four years; of temperate habits; sciatica. Nine years ago trouble began with occasional sharp, darting pains in the left gluteal region. After about one year the pains extended along the course of the sciatic nerve to the nerves of the leg and foot. He was compelled to have his shoes so made that no pressure came upon the instep, owing to hyperæsthesia of the surface. At no time was there any evidence of disease of the muscles or bones of the part, but the pain and suffering were at times severe. During the past four years he has had shifting pains in the right side also, and about three months ago he began to have pains of the same character in the arms and shoulders. On examination, marked atrophy of the gluteal muscles and the muscles of the thigh of the left side was found, but there was no evidence of any joint disease. There is a marked lateral curvature of the lumbar vertebræ, with shortening of the left limb. He walks with difficulty, and his countenance is anxious and drawn, evidencing a long period of suffering.

Treatment: Static sparks, local and general, three times per week. He was very much relieved by the first treatment.

September 29th. He is feeling much better, especially his arms.

October 7th. He has no pain at all, except in his left hip, which is also much better.

October 24th. He now suffers no pain whatever;

except for the stiffness and spinal curvature, he would think himself well.

October 28th. He feels a little more stiffness in the limb; says there is no pain.

November 9th. He is improving steadily; the muscles are becoming stronger; and, using his own expression, he is "limbering up."

November 21st. He is feeling well. Before treatment he ran up two flights of stairs, to show how well he was. He has now had no pains for several weeks. Cured.

Case XXX.—October 21st. Mrs. B——, aged forty, housewife. She began one month ago to have pain in the right shoulder extending down the arm. The pain is at times very severe. She has pains also in the right leg.

Treatment: Sparks, local and general.

November 2d. My patient has now had six treatments, and is much improved. The pains have left the leg, and she can now raise and use the arm freely, with slight pain.

November 9th. She is much improved; will now come but once weekly for treatment.

November 16th. She has had no pain since the last treatment, and considers herself cured.

Case XXXI.—October 3d. Mrs. J. B——, aged forty-eight years, housewife; brachial neuritis. Was taken on July 1st with pains in the right arm and shoulder, and has grown steadily worse. During the past three weeks the whole arm has been swollen and tender; the hand is also stiff. She cannot raise the arm to the level of the shoulder without causing great pain. The pain is worse at night; it is so severe that she cannot sleep.

Treatment: Static sparks, general and local. The first treatment gave great relief; she could put her hand upon her head after treatment.

October 5th. She slept almost all night after the first treatment.

October 16th. She is much improved, but suffers still at times.

October 24th. She still suffers somewhat. Same treatment.

October 28th. She has had little pain since the last treatment.

November 3d and 7th. After giving sparks, gave "electrostatic surgings" to relieve the uncomfortable sensation and stiffness of the hand.

November 9th. The patient is cured.

Case XXXII.—October 19th. K. K——, aged forty years, single, bookfolder; has neuritis in right arm and hand. For the past three weeks she has had pain and swelling in the right hand and arm.

Treatment: Static sparks. After treatment the pain and stiffness were relieved.

October 21st. The hand is much better.

October 26th. She can raise her arm with much less pain.

November 2d. The pain is gone, but the hand is still swollen.

November 16th. She is working considerably. Her hand still swells, especially after working.

November 23d. Return to work aggravates the condition, and the patient is advised to rest from active use of the hand. The patient did not return, and it was concluded that she was cured.

Case XXXIII.—September 16th. B. M——, aged fifty-six years, house painter. He had an attack of heat stroke in youth, after which he suffered much from headache. A few years later he had an attack of "paralysis agitans" which was relieved by treatment; twenty years ago he suffered from lead poisoning (chronic). He has not used alcohol or tobacco for twenty years. Three weeks ago, while bathing, he had an attack of severe pain, continuous in character, in the right arm and shoulder, and the right side of the chest and back. The knee jerk is normal; he has still some agitation or tremor of hands.

Treatment: Static sparks.

September 27th. He has had relief from pain for about eighteen hours after treatment.

September 30th. About the same.

October 7th. He has considerable pain in the right breast, but is feeling generally better.

November 4th. He was getting well, but discontinued treatment, and has been getting worse.

November 15th. There is less numbness in the arms.

November 20th. He can use his arms with but little pain.

November 22d. He has some pain in the right shoulder and forearm.

December 6th. He can lie on each shoulder without pain.

February 21st. The patient is steadily improving.

March 4th. He has a severe attack of pain in the right pectoral region and back; the arms continue better.

April 23d. He is very much better; has but slight pain in the right pectoral region and shoulder.

May 8th. He has some pain in the right shoulder, right pectoral region, and arm.

May 14th. He has pain in the right shoulder and head.

May 20th. He had some pain in the forearms during the night.

October 26th. He is feeling quite well. It will be observed that this patient was irregular in taking treatment, and the date of cure was protracted. It is also to be observed that he always returned when there was an exacerbation of symptoms.

Case XXXIV.—May 24th. C. L——, female, aged sixty-one years. An attack of neuritis of the right arm began one year ago, and has pained her a great deal ever since. As treatment, sparks were given, with local and general electrization, three times each week.

June 17th. The patient is much improved, and uses her hand.

June 21st. The pain is all gone, and she can use the hand as well as ever. Cured.

Case XXXV.—March 12th. S. W——, engineer, aged forty years. Two weeks ago he was attacked with pain and partial loss of power up and down the right arm.

March 15th. There is not much improvement in motion, but the pain is much relieved.

March 22d. He can raise his arm to the normal extent, and is very much pleased; he still has pain at the top of the shoulder on motion.

March 25th. He has slight pain at the top of the shoulder, but considers himself about cured.

Case XXXVI.—October 31st. F. T——, aged fifty-one, housewife. Eighteen months ago she began to have a slight loss of power in the right arm and hand. At first she used to awaken from sleep, feeling the arm numb, and later on the pain increased, and she began also to have pain in the palm of the hand and tingling in the hand and arm.

Treatment: Sparks.

November 2d. She is feeling very much better, and has no numbness or tingling if she lies upon the arm at night. She has a dull "grumbling" pain along the ulnar side of the arm, usually about once each day, for a short time. The arm is very weak, as is evidenced by her lifting a light object.

November 5th. She can comb her hair without the arm going to sleep, and it seems stronger.

November 12th. She reports that she is well.

Case XXXVII.—February 18th. J. H. R——, carpenter, aged fifty years. Four months ago he wrenched

his left arm and struck his shoulder. The next morning he could not lift the arm, and has not been able to use it since. He cannot raise the arm to his head. He has a great deal of pain at night, so that he cannot sleep. There is some pain also during the day. A traumatic neuritis became established.

Treatment: Sparks, general treatment and to the arm.

February 20th. He had a good deal of relief from pain after the first treatment, and slept well at night. He can put his hand upon his head.

March 1st. The treatment last time entirely relieved the pain, but it returned the following day in the arm and shoulder.

March 3d. The treatment relieves the pain for several hours, when it returns "with all its fury."

Treatment gave relief.

March 25th. He is improving rapidly.

April 1st. Went to work to-day for the first time since he was attacked, and suffered very little pain.

April 8th. He is still at work, and considers himself well.

CASE XXXVII.—J. M——, teamster, aged forty-five years. He called for the first time on February 8th. Five weeks ago he had an accident, and dislocated the right elbow. The joint is now somewhat stiff, causing pain when moved; there are loss of power and traumatic neuritis. The arm is also swelled considerably and sensitive to pressure.

Treatment: Sparks to the entire surface three times each week.

February 20th. The pain in the upper part of the arm and at sensitive nerve points is much less; the swelling at the elbow is about the same.

March 6th. He is very much better; he can lean on the elbow, and has little pain.

March 12th. He is still improving.

March 18th. The patient is very much better, practically cured, and did not return for treatment.

The details of further cases are omitted, but are included in the following synopsis:

SYNOPSIS OF CASES OF NEURITIS.

Neuritis.	Number of Cases.	Average Duration of Treatment, Days.	Maximum Duration of Treatment, Days.	Minimum Duration of Treatment, Days.	Immediate Relief from Pain.	Known to be Cured.	Relieved of Pain and Believed to be Cured, but Cases Lost Sight of.	Treatment Exclusively Electrostatic.
Sciatic.....	39	32	78	4	39	32	7	39
Axillary and brachial.....	41	22	42	5	41	25	16	41
Total.....	80	..	..	..	..	57	23	80

Conclusions: (1) The pain of neuritis is temporarily relieved from the first treatment, and the case is totally relieved and cured in a minimum duration of time.

(2) The immobility and fixation of joints and limbs at once disappear unless due to prior adhesions.

(3) The more acute the case, the more urgent immediate electric treatment and the more speedy the relief and cure.

(4) An acute case is debarred from becoming a chronic case.

(5) Immobility by splints or plaster bandages is superfluous and sometimes harmful by promoting adhesions.

(6) High potential currents, of the type here referred to, produce a sedative effect upon tissue, viz., upon muscle, nerve, and any contractile tissue, produce vasomotor dilatation, and constitute the most effective curative treatment of neuritis.

HEMORRHAGIC APOPLEXY—ITS ETIOLOGY, PATHOLOGICAL ANATOMY, PROGNOSIS, AND TREATMENT.[1]

BY GEORGE E. McLAUGHLIN, M.D.,
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MR. PRESIDENT AND GENTLEMEN: There is probably no other condition of the human body in which the physician feels himself so helpless as that of cerebral hemorrhage. A *bête noire*, if you will, to the practitioner, it is necessarily therefore a disease to which, as a rule, few of us are inclined to give much careful study. It is with this understanding that I purpose to-night to lead you into a few of the paths and by-ways of apoplexy. I believe it to be true that common and frequently observed morbid conditions are those about which errors become current, and in regard to apoplexy I believe that many writers have based their statements upon somewhat venerable records.

Etiology.—From recent statistics I find that one-third of the cases observed were in females, and that the special apoplectic age was between forty and fifty years. These statistics also show that three-fourths of all cases of adult apoplexy occur between thirty and sixty years, and excluding syphilitic cases we find the most serious decade between fifty and sixty years. Finally at seventy apoplexy is little to be apprehended.

In one hundred reported non-fatal cases a distinct history of syphilis was found in thirty-six. In four the attack was due to the puerperium, in one it followed typhoid fever, in five the patients were painters, in one there was Bright's disease, in five severe cardiac trouble, in five the patients were drivers and heavy drinkers, and in ten others exposure and heavy drinking were characteristic features. So far about two-thirds of the cases have been enumerated, one of these thirds being syphilitic. The fact that syphilis causes one-third of the deaths from apoplexy was first brought out by Dr. Charles L. Dana, of New York, whose statistics I quote, and I believe it is now generally recognized. Attacks due to syphilis occur earlier than the others, from twenty to forty years being most frequent, and they occur more often relatively in women. In this manner about two-thirds of the cases are accounted for by syphilis, heart disease, Bright's disease, excessive exposure and intemperance, or chronic alcoholism.

The remaining one-third of the cases are those mostly of intracranial hemorrhage, the exciting causes being heavy eating with insufficient exercise, and a tendency to arterial disease due to gouty or rheumatic diathesis.

Living as we do in the present time under better sanitary laws, more of us live to reach the apoplectic age. Also the gradual lessening of mortality due to acute infectious diseases increases the proportionate number of deaths due to disease of the arterial system. The increased opportunities for indulgence in luxurious living and excessive eating and drinking tend to impair the condition of the arteries and so produce arterial sclerosis. All these existing conditions explain to us the growth and greater frequency of cerebral hemorrhage.

Some misapprehension seems to prevail as to the exciting causes. We all know of its frequency after an alcoholic debauch, but on the other hand I find but very few attacks take place, as is generally supposed, during some especial mental or bodily strain. In a number of reported cases I find one case occurred at stool, one during coitus, two during great mental excitement, and two after an epileptic fit. Conversely, of forty-one cases recorded, thirteen occurred at night as the patient was retiring or during sleep. The

[1] Read before the Practitioners' Club of Jersey City, N. J., January 10, 1899.

greater number of attacks are during the morning or evening, few occurring during the middle of the day. Heredity certainly exerts some amount of influence in the production of apoplexy, but this influence is more of a tendency toward arterial disease than a direct inheritance of apoplexy.

Pathological Anatomy.—The lesions causing hemorrhagic apoplexy are almost invariably in the cerebral arteries, the most common cause of hemorrhage being periarteritis with the production of miliary aneurisms, the rupture of which gives rise to the hemorrhage. These aneurisms occur most frequently on the central arteries, but also on the smaller branches of the cortical vessels. On section of the brain substance they appear as small dark bodies, about as large as a pin's head. According to Charcot they are most frequent in the central ganglia. They are almost invariably found after the fortieth year.

Endarteritis and periarteritis most commonly lead to apoplexy by the production of the miliary or coarse aneurism, but in some cases we find nothing but diffuse degeneration of the cerebral vessels, so that we must conclude that spontaneous rupture is possible without the formation of aneurism. The hemorrhage may be of three kinds—meningeal, cerebral, or ventricular. The meningeal may be between the membranes and the bone, or between the membranes themselves, the chief cause being fracture of the skull, in which the blood comes from the lacerated meningeal vessel. A special form of this hemorrhage is found in the new-born, due to injury received incident to birth.

Intra-cerebral hemorrhage confined to the white matter is rare. More commonly we find it near the corpus striatum. Possibly it may be limited to the lenticular body and internal capsule, or it may break the centrum ovale or burst into the lateral ventricle. It may also occur locally in the crura or pons, while it is not uncommon in the cerebellum.

Ventricular hemorrhage seldom comes from the vessels of the plexuses or of the walls. It may occur in early life, even during birth. In adults it is usually caused by rupture in the neighborhood of the caudate nucleus. Sometimes the clot is found in one ventricle, sometimes in both lateral ventricles, or it may pass into the third ventricle and thence through the aqueduct of Sylvius into the fourth ventricle, thus forming a complete mould, in blood, of the entire ventricular system. As a general rule the farther away the blood-vessel is from the circle of Willis, the less frequently do ruptures occur. Cortical hemorrhages are usually small unless they are near a fissure, when they may extend along it and so attain to a considerable size.

In conditions associated with Bright's disease, or infectious fevers, there are often found, instead of a distinct clot of blood, a number of minute capillary hemorrhages into the white substance or basal ganglia, associated with softening. This condition has been called red softening. In connection with this form of hemorrhage the vessels at the base of the brain are hard and rigid, standing wide open when cut, owing to atheromatous changes.

If the patient does not succumb to the apoplectic attack, certain reparative processes take place. The blood coagulates and the serum separates and becomes absorbed at about the end of two weeks. In the interval a fibrinous wall is built up and a cyst develops. This cyst gradually contracts, and if the hemorrhage was small there is finally left only a cicatrix.

Prognosis.—The prognosis of intracranial hemorrhage depends upon the seat and size of the lesion. Recovery from cortical hemorrhage may be complete without any contracture, especially so if the hemorrhage follows an injury, instead of disease of the vessels. However, infantile meningeal hemorrhage may produce idiocy. Taking cerebral hemorrhage as a whole, recovery takes place in about fifty to sixty-five per cent. of the first attack, twenty per cent. recovering from the second attack, and very few from the third. The third day seems to be the generally acknowledged turning-point. Apoplexies with a profound loss of consciousness lasting for three days are almost unexceptionally fatal. If the temperature, instead of falling by the third day, rises, the outlook is unfavorable. Even that prince of physicians, Hippocrates, recognized the bad import of a rise in temperature, for he writes on apoplexy, "They die in seven days or less if fever sets in."

A sudden development of coma or convulsions in a patient who has been doing fairly well indicates extension of the hemorrhage, and is therefore a dangerous symptom. Cheyne-Stokes respiration is also an extremely bad sign. An existing Bright's disease is a complication to be feared, and if pneumonia develops, incident to the apoplexy, the patient dies.

From statistics, and from the opinions of authorities on the subject, cerebral hemorrhages are rarely repeated, and it seems in many cases as though the rupture of the artery changed the vital conditions, as it certainly does the personal habits, so that the apoplexy puts a check upon the activity of the patient and so enforces a regular and quiet life, thus exercising a conservative influence and tending to prolong the patient's existence.

And just here it is of importance to note that the temperature is of value both in diagnosis and prognosis. It should be taken in both axillæ. In embolism and thrombosis there is hardly any rise the first days and the thermometer registers alike on both sides of the body, while in hemorrhage the temperature is a degree to a degree and a half higher on the hemiplegic side. The rise in temperature is more rapid in cerebral hemorrhage than in acute softening due to thrombosis or embolism. In the former it rises two or three degrees perhaps one or two days after the attack, while in the latter it rises about one degree in this time.

Treatment.—I believe it to be exceptional in intracranial hemorrhage for prodomes to have existed. Occasionally there may be a slight headache, vertigo, or a sense of fulness in the head, as the patient may afterward tell you. If we are aware of these warnings, when atheroma exists, it is most important to heed them. Rest, vascular sedatives, nitroglycerin, enemata, will modify the arterial tension and tend to avert rupture.

In a patient who is plethoric, who has atheromatous arteries, and who may have given these warnings, I believe bleeding to be of service. It is extremely doubtful, however, if venesection is of any service after rupture has taken place.

In most cases we are not called until after the rupture has occurred, and then the treatment divides itself into two forms—the medicinal and non-medicinal. For the former the use of ergot is of more than doubtful advantage. Aconite may sometimes be used beneficially for controlling a too forcible cardiac action. If the patient can swallow, one of the best procedures, I believe, is the administration of a mixture of potassium bromide and iodide, and continuing this for several days, then dropping the bromide and giving the iodide in increasing doses. I am decidedly opposed to the practice of giving, during the early stage at least, croton oil or any drastic purgative. It exposes the patient to the danger of making violent exertions at a time when rest is the great desideratum, and is, to say the least, filthy. The same objections apply to blistering.

The non-medicinal treatment I believe to be of the greatest importance, and the physician in attendance should ever have for his watchword, rest, absolute rest.

We know of no way to stop the bleeding, and it is likely to happen in the great proportion of cases. The intracranial pressure tends to check the hemorrhage. The ruptured artery or aneurism is small as a rule, and soon occluded. How careful, therefore, we should be to prevent, in every known way, the dislodgement of the clot, and how necessary the absolute rest is for this purpose! Recovery more or less complete will take place if the hemorrhage is moderate, and not in a vital part of the brain, provided the clot remain in its first position. Sometimes the clot is forced down from its original position either by exertion or by gravity, and what was a comparatively harmless condition becomes one of grave import, for it may tear its way through the soft brain tissue and do irreparable injury to some more important structure. The track of such a clot is often seen post mortem.

This fact again impresses one with the importance of rest, and, if the attack occurs indoors, the patient should be kept where he lies for at least the first twenty-four hours. The bladder should not be neglected, but the urine should be drawn, if necessary, at regular intervals. The throat should be kept free from mucus and the mouth sweet and clean.

Lastly, the ice-cap is possibly of some use in allaying restlessness and comforting the patient.

Often, I believe, apoplexy is handled in a somewhat mischievous manner. Realizing the futility of any active treatment, we are too apt to yield to the wishes or suggestions of the family. If I have therefore impressed upon you the importance of a simple and rational treatment in this condition, the writer of this paper will have been rewarded.

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THYROID FEEDING AS AN AID IN THE DEVELOPMENT OF BACKWARD CHILDREN.

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The object of this paper is to call attention to the importance of thyroid feeding as an aid in the development of backward children. The first one, so far as I know, to refer to this subject was Dr. Draper, in a discussion on sporadic cretinism at the annual meeting of the British Medical Association in 1896. He reports two cases of what he calls semi-cretinism which improved under thyroid treatment. In the *British Medical Journal* of March 5, 1898, Dr. Clement Dukes reports a case of this nature thus treated with marked benefit, and the subject is occasionally alluded to in the medical journals of this country and abroad. But the question of priority is of little importance, for any one who has had an opportunity to witness the marvellous results of thyroid feeding in cretinism cannot but feel that the same treatment may prove equally beneficial in less aggravated cases. The credit, then, of teaching us the importance of thyroid feeding as an aid in the improvement of backward children belongs altogether to those brilliant investigators who by experimental pathology first demonstrated the nature of myxœdema and pointed out the rational mode of its treatment.

Cretinism is a condition of complete degeneracy which has for its pathological basis a total absence of thyroid secretion. In backward children a greater or lesser number of the same stigmata of degeneration are observed as we find in cretinism, with the difference that they are less defined, less marked; and the inference that these stigmata of degeneracy in backward children depend upon a similar pathological basis, namely, an insufficient supply of thyroid secretion, would seem to be justified, and this conclusion gains additional support from the circumstance that thyroid feeding in children who remain behind in development is followed by similar results as in cretins.

The study of the growth and development of children is exceedingly interesting and fascinating, and it is surprising how differently it proceeds in different children. Some acquire mental and somatic capabilities early, others late, and yet they generally attain a normal condition in every respect as they grow older. All this is greatly influenced by inherited tendencies, feeding and nursing during infancy, diseases of childhood, etc. One child acquires the faculty of walking and talking much earlier than another one, and yet perfect development usually results in both cases. It is even doubtful whether an unusually early acquirement of these faculties promises the most perfect development. The anterior fontanelle will be found in some children closed and obliterated at the eleventh month, in some cases as late as the twenty-sixth month, without necessarily denoting anything abnormal so far as the general development of the children is concerned. Then, too, the anterior fontanelle varies greatly in different children; in some children when a year or more of age we shall find it larger than in others a few days old. For months there may be no effort at closure, at other times a large fontanelle is completely obliterated in a comparatively short time. (It is probable that closure of the anterior fontanelle at about the second year best insures the development of a large and healthy brain.) A similar irregularity is observed as to the time of the eruption of teeth. I have a record of a child in whom two teeth were observed when it was two months of age, and I have seen another child fourteen months old without a single tooth; both grew up and became strong and healthy children.

Although there is no standard of an ideal and perfect development in children, and although there are many variations within the normal, a close observer will readily detect any grave deviation from the normal, and any such deviation will usually closely resemble some of the stigmata of cretinism.

It is certainly surprising, and somewhat disappointing, that the exact function of the thyroid gland, in spite of the amount of attention which has been given it in recent years by a large number of competent investigators, should remain undetermined. In fact, the greatest differences of opinion prevail, and the results of experimental research are as varied.

Munk and Exner believe that the thyroid body is an unimportant organ, and that death and tetanus resulting after incision are not due to the ablation of the gland, but to the operation. In the animals which survive they find no grave disturbances. It is difficult to understand how such recognized authorities should arrive at such conclusions, and one is led to believe that in their experiments they either failed to remove all the accessory thyroid glands, or that they reported on the condition of the thyroidectomized animals too early, before all the thyroid juice stored in the system had been exhausted. Gley, Moussu, Vasalle, Generali, and Rouxeau (see abstracts of their contributions in the *Year Book of Medicine and Surgery* for 1898) found that the integrity of the internal and external parathyroid glands will prevent symptoms characteristic of complete thyroidectomy, even when the thyroid body proper has been excised. Kocher calls attention to the observation that cretins, in whom symptoms indicative of the athyroidal state do not appear before the sixth month, inherit this condition from the father, whereas, if the condition is transmitted by the mother, infantile cretinism results. A cretin, therefore, without a functionating thyroid body, may for from six to twelve months attain a fair or almost normal degree of development, and not show any symptoms of a thyroidless condition, because the

organism retains for such a length of time the thyroid secretion transmitted to it through the blood of the mother. Only after this supply is exhausted do symptoms of cretinism appear. These observations teach that investigators should report on the condition of thyroidectomized animals only when considerable time after the operation has elapsed. But, if it is true that animals after the complete excision of the thyroid body and all the accessory glands remain healthy for an indefinite time, we are forced to assume that some other gland or glands can in part assume the function of the thyroid after its removal. Other observers attribute to the thyroid the function of increasing the excretion of phosphoric acid, nitrogen, and chlorine, while others think its hæmatopoietic function the most important, and that it increases materially the oxidizing power of the blood (Perry, Whitney, and others). Notkine claims that the function of the gland is to counteract a poisonous substance, thyroproteid, by storing it up and rendering it harmless. The removal of the salts of iodine from the blood, and their conversion in the gland into an animal iodine compound, which is well borne by the tissues and indispensable to them, is believed to be its special work by De Cyon, Magnus-Levy, and others. But whether the function of the thyroid gland is to protect the system against auto-intoxication by neutralizing noxious substances in the system resulting from normal metabolism, or whether its office is the manufacture of substances *sui generis* which are indispensable to the proper nutrition of all the tissues of the body, the clinician who carefully observes the results of thyroid feeding in selected cases can arrive at but one conclusion,—that is, that the thyroid gland is indeed essential to the economy, that it has a remarkable influence on general nutrition, and that it is one of the main centres regulating normal metabolism.

The studies and researches of Brown-Séquard, Oliver, Schaeffer, Horsley, Schiff, Murray, and a large number of other observers unmistakably point to the glandular elements of the organism as the creators of the forces controlling metabolism. Every gland, no doubt, has its special work. The excision of the testicles in the young does not seriously interfere with the general development, but the sexual element, mental as well as physical, remains undeveloped, showing that these glands have an internal secretion essential to the complete development of the individual. Disorganization, which results in arrest of function, of such small glands as the pituitary bodies, is probably responsible for the grave symptom-complex called acromegaly. And it is more than probable that, of all these glandular structures, the thyroid is most important in maintaining metabolic processes of the organism, and hence that disturbances of its function are followed by the gravest disorders of nutrition.

This brings us to the consideration of the etiology of diseases of the thyroid body. Gross lesions of the gland, such as injuries, cancer, syphilis, calcareous infiltration, sclerotic disorganization, actinomycosis, etc., which completely disorganize the glandular structure, will result in arrest of function, and, if the accessory glands are also involved, will result in the production of characteristic symptoms. Much more difficult of explanation are the causes operating in the production of congenital cretinism and cretinoid conditions in general. As to the parental causes of cretinism, consanguineous marriages, drunkenness, tuberculosis, syphilis, advanced age of mother, etc., have been considered; yet they probably do not play an important rôle, but simply tend to lower the vitality and the resisting-power to disease in the offspring. Faulty inheritance, poor and injudicious feeding and nursing, wretched surroundings, exhausting diseases in the child might act as predisposing causes, but only as such. There is, however, a very close connection existing between goitre and cretinism and cretinoid conditions, for, as has been generally observed, goitrous parents in goitrous districts quite frequently beget cretins. Then, too, both diseases depend upon the same cause, namely, an inadequacy of thyroid secretion; and the enlargement of the thyroid gland is probably only compensatory in character, the result of an extra effort on the part of the gland to supply the system with sufficient normal secretion. This, of course, has reference to the parenchymatous enlargement of the thyroid gland only. The subject of the causation of goitre has been extensively studied in districts where goitre is rampant, by careful and experienced observers. Peculiar geological conditions of the soil in these districts, excess of starchy food, snow-water or glacier-water ingested before it has become thoroughly aerated, water having an excess of magnesia or lime, the carrying of weights on the head when ascending mountains, etc., have been thought of as causes; but if they play any rôle in the production of goitre, they probably do so only by rendering the system more receptive for the specific exciting cause of that affection. Kocher, who has exceptional opportunities for the study of the subject, believes that an excess of organic matter in the water will produce goitre in the adult and cretinism in the offspring of goitrous parents, and that by boiling the water, in districts where goitre is endemic, goitre and cretinism can be prevented. It would seem, however, that the organic matter referred to must be something *sui generis*. E. E. Waters, in the *British Medical Journal* of September 11, 1897, from an examination of a large number of cases, arrives at the conclusion that the exciting cause of goitre is an organism, probably of the amœba type, possessing a predilection for the thyroid gland. It is only fair to add here, that as early as 1894 or 1895 Ashmead, of New York, hinted at the possibility of a microbic origin of goitre. It is probable that the direct causation of diseases of the thyroid gland resulting in an arrest of secretion, excepting grosser lesions already referred to, is a specific germ possessing a special affinity for the thyroid body, and that this germ or its secretion causes disorganization of the glandular tissue and arrest of function. Why this invasion by these micro-organisms should at times result in complete loss of function, and at other times in only a partial arrest of the same, is difficult to conceive, though we might assume that the power of resistance in some is greater than in others, or that in some cases the accessory thyroid glands escape involvement.

But whatever may be the direct causation of the disorganization of the thyroid which superinduces total or partial arrest of function of that organ, the results to the organism are grave in the extreme and in direct proportion to the extent of impairment of function. When the secretion is completely suppressed, cretinism or myxœdema and complete arrest of the metabolic processes are certain to result. And in overcoming this condition of affairs, medicine for once rises above empiricism and advances to the dignity of an exact science. We supply the organism with what is lacking; we feed these patients healthy thyroid glands obtained from lower animals, and the results secured emphasize the *rationale* of such treatment. We note at once a revival, so to speak, of the dormant metabolic forces and a return to a normal condition. And if the treatment is undertaken early, ere growth and development have been held in abeyance for too long a time, a complete cure will result. When the treatment is undertaken in cretins under two or three years of age, we may reasonably expect a perfect cure; when undertaken between three years and eight years of age, the results of thyroid feeding will still be very gratifying, though such children will probably

always remain backward; they will, however, grow up and generally become fairly useful members of society; if resorted to after the eighth year thyroid feeding is still productive of good, but these patients will always remain considerably below par. The amount of improvement resulting, therefore, will depend entirely upon the time when treatment is resorted to after the appearance of the first evidences of cretinism. Myxœdema occurring in the adult, after the organism has arrived at maturity, is, according to all reports, usually readily overcome by judicious and timely thyroid medication.

As has already been referred to, the symptoms of semi-cretinism are those of cretinism, but less marked. In more definitely describing the symptoms of a cretinoid condition, or semi-cretinism, I shall follow the systematic plan of Dr. Holt,[1] who divides them into anatomical, physiological, and psychical defects. Among the anatomical defects we would count a stunted condition of the frame, an abnormally large head, retarded closure of the anterior fontanelle, meagre growth of coarse hair, sunken base of the nose, and wide separation of the eyebrows; defects of the bones of the face and palate, a short, thick neck, a small thyroid body or goitrous enlargement or disorganization of the same; late eruption of the teeth and bad, defective teeth; defects about the extremities, particularly curvatures of the bones; a coarse, unpliable, and myxœdematous condition of the skin; lordosis, a persistent, prominent abdomen, and umbilical hernia, etc. Physiological defects would comprise a persistent low temperature, late or imperfect acquirement of the capabilities of walking and talking, delayed puberty, etc. Psychical defects include apathy, dulness, feeble-mindedness, and imbecility. Of these, a large head, a heavy and dull expression, coarse, scant and dry hair, presence of a dirty scum on the scalp which cannot be removed by washing, a sunken bridge of the nose, a prominent abdomen, lordosis, late closure of the anterior fontanelles, and late coming of the teeth are probably the most constant and earliest symptoms denoting the cretinoid state. In weighing the importance of these symptoms, it should be remembered that a prominent abdomen in a baby is often the result of the too tight application of the diaper. Then, too, it should be recalled that, though the spine is perfectly straight in infants, it assumes compensatory curves as soon as the feet are used to support the body, and that after this period a certain amount of forward curvature in the lumbar region is physiological.

There is usually little or no difficulty in differentiating cretinoid conditions, but I shall briefly refer to some diseases which may display analogous symptoms. Infantile syphilis, particularly the congenital form, is also characterized by grave disturbances of nutrition and the involvement of the bones, and those of the nose and teeth, particularly, may simulate at times cretinoid expressions, but the characteristic rashes of syphilis, rhinitis, thin, emaciated body, etc., which are nearly always present in infantile syphilis, will readily prevent a mistake in diagnosis. In hydrocephalus, the head is abnormally large, ossification is imperfect and delayed, the anterior fontanelle may persist for years; but the head is globular in form, the neck weak and thin, and possibly not able to support the head, the body is frail, and brain symptoms, such as convulsions, are present in nearly all cases. Osler points out that fœtal rickets is probably identical with fœtal cretinism, and it is probable that an intimate relation exists between rickets and cretinism. Many of the symptoms of rickets are distinctly cretinoid in character. A square head, large in proportion to the face, stunted growth, late dentition, late closure of the anterior fontanelle, bowing of the long bones, especially those of the legs, a scant growth of hair, late acquirement of the ability to walk, are common to both, and it is possible that many of the so-called rachitic manifestations are simply expressions of a faulty function of the thyroid gland. Other symptoms, such as fever, intense pain upon manipulation and upon being moved, profuse sweating, are distinctly those of rachitis and lend it its individuality.

All forms of idiocy present marked evidences of degeneracy, physical as well as psychical, and the Mongol type especially bears a striking resemblance to cretinism or myxœdematous idiocy. The shape of the head, the facial expression, and the other defects of mind and body are almost identical. The thyroid, though smaller than a healthy gland of average size, can usually be felt, and though the skin is often dry, coarse, and cold in Mongol idiocy, it rarely has the spongy, myxœdematous character of cretinism, and fatty swellings are absent. Special peculiarities about the form of the cranium and the tongue, first described by G. E. Shuttleworth, and typical malformations of the hands, particularly the little fingers, pointed out by T. Telford-Smith, still further aid in the differentiation of Mongol idiocy. Thyroid medication, though beneficial in these cases, is not followed by anything like the results obtained in cretinism and its congeners, and this justifies the assumption that the morbid anatomy of Mongol idiocy is a more complex one than that of cretinism, including, in all probability, an imperfect and unfinished condition of the brain.

The treatment of semi-cretinism, like that of cretinism, consists of proper feeding and nursing, the adoption of general measures tending to improve the mental and physical condition, and the administration of desiccated thyroid glands. In daily quantities equivalent to from ten to thirty grains of the fresh glands they are effective, and such doses can be administered indefinitely without doing harm or producing symptoms of thyroidism. The active principle of the desiccated thyroid glands is probably an animal iodine compound, for thyroid bodies like those of the ox, devoid of iodine, are ineffective. But until this active principle has been isolated, we shall secure the best results by exhibiting the desiccated glands entire. Raw glands, though equally effective, are more difficult to administer.

Myxœdema, congenital as well as acquired, has for its anatomical foundation an entire absence of the thyroid gland, complete atrophy or some other irreparable disorganization of its structure, and thyroid feeding has to be continued for life in these cases. Though it is believed by some that thyroid feeding will cause atrophy of remaining healthy portions of the gland if continued for any length of time, clinical observations lead to the conviction that, in cases of semi-cretinism depending upon inadequacy of thyroid function, the ingestion of thyroids rather tends to renew and increase functional activity to such an extent that after a time its employment may be discontinued.

In conclusion, I will report a few cases which may lend support to what has been said:

Case I.—This case I desire to place on record, simply because it demonstrates in such a striking manner the effect thyroid treatment has on the metabolism of the fatty elements of the body. The following description of her condition at the time when first I saw her, I have copied from my note-book: Girl, two years and eight months of age. Her parents are healthy, but the mother has a large goitre. This little patient was born at the end of a normal gestation and normal labor. She can scarcely say a word in an intelligible manner, but appears to understand when spoken to. There is a lack of vivacity, and she looks dull and stupid. She has an exaggerated fear of strangers. She eats well, her bowels are regular, and she sleeps

[1] "Diseases of Infancy and Childhood."

fairly well. Her voice is coarse. There is nothing abnormal about the function of the sweat glands. She is large for her age. Her head is very large; the anterior fontanelle closed a few months ago. The bridge of the nose is sunken. The teeth are not unusually late in coming, but they begin to decay. Heavy layers of fat are irregularly distributed in thick ridges over the entire body. There is nothing abnormal about the joints or long bones. She had bronchitis when four months of age; summer complaint twice, a very prolonged attack when about nine months of age. Measurements:

	At Beginning of Treatment.		Seven Weeks Later.	
Head, circumference	20½	inches.	20½	inches.
External meatus to external meatus.	12½	"	12½	"
Root of nose to external occipital protuberance	12½	"	12½	"
Foot, around instep	6	"	5½	"
Thigh, at junction of upper with middle third	15	"	12	"
Calf	9	"	8	"
Arm, about middle of forearm	7¾	"	6½	"
Wrist	5	"	4½	"
Neck	11	"	10½	"
Abdomen at navel	25	"	21¾	"
Chest, at nipples	24	"	22	"
Weight	45	pounds.	34	pounds.
Height	38	inches.		

Case II.—Girl, born June 27, 1894. Her parents are healthy; family history negative. She is bottle-fed. She has had summer complaint and bronchitis; during infancy at times chronic constipation was troublesome, at other times diarrhœa. A preliminary report of this case was published in the *Medical News* of May 29, 1897, and her condition at that time is described as follows: "Head out of proportion to the body and much larger than that of her sister who is two years older. Bridge of nose is sunken and the eyebrows are farther apart than they are normally. Her hair is coarse and dry and looks not unlike that of a doll. The skin is coarse, loose, and flabby over the entire body, and usually moist with an offensive sweat. There is a rash over the chest and abdomen, probably the result of inflamed sweat-glands. Distinct depression over the lower ribs on both sides, immediately under both nipples, is evident. Myxœdematous deposits are found on dorsal surfaces of both feet. Though two years and nine months of age, she cannot support her body on her feet, and her vocabulary is limited to a few words, and these can be understood only by her parents." Thyroid treatment began at this time, but not uninterruptedly; at times it was neglected, at other times it had to be discontinued owing to illness, bronchitis, and disturbances of digestion, but she has taken thyroids altogether for a year probably. The improvement in this case is certainly remarkable, but it is, of course, impossible to determine how much improvement would have resulted in the course of time without artificial aid, and how much is to be ascribed to the treatment. Since March, 1898, she can walk, and she now walks with ease for a considerable distance, but she is still a little awkward in her movements and in her walk. She now has the appearance of an intelligent little child. She talks much, coherently and intelligently; pronunciation, however, is not so plain or so perfect as it should be. Her hair now is long, soft, and natural, but becomes again dry and coarse when thyroid treatment is discontinued for any length of time; at any rate, this was the case during the earlier part of treatment. Lately she has taken the thyroids uninterruptedly. The skin is natural to the touch. She still perspires readily, but not at all so freely as she used to do; the rashes have disappeared, also the fatty swellings on the back of the feet. Although the anterior fontanelle was closed at the beginning of treatment, the shape of the head has changed somewhat, the distance between external meatus and external meatus having decreased, whereas the distance from the root of the nose to the external occipital protuberance has increased. During this time she has increased five inches in height.

Case III.—Macrocephalic idiot, closely resembling a Mongol. Though not pertaining strictly to the subject under consideration, I shall include this case, because it demonstrates that in certain forms of idiocy some improvement may be had from thyroid feeding; and the fact that some improvement does occur would seem to show that, besides an arrested development of the brain, there is also an inadequacy of thyroid secretion, in some cases. Whether the former at times is secondary to the latter, remains to be determined. Girl, five years of age; mother healthy, but has a small goitre; father absolutely healthy. The patient was perfectly healthy at birth and remained so for about a year. She was sick a great deal during the first three years with bronchitis, summer complaint, bowel troubles, etc. She has a large head, a small stunted body, with a markedly idiotic expression. The nose is depressed, and the eyebrows are widely separated. Her hair at present is dark, but not unusually dry; a dirty scum covers the scalp. The teeth were slow in coming; she had no tooth when a year of age. Her mother does not know when the anterior fontanelle closed. There is nothing particularly abnormal about the roof of the mouth, joints, or long bones. Her skin is not so pliable as in healthy children. The little fingers can be straightened only with some difficulty; they scarcely reach the middle of the second phalanx of the ring finger; normally they have a crescentic form. She could not walk until two and one-quarter years of age, and still walks very awkwardly. Her voice is coarse, shrill, and unnatural, and the sounds emitted when she cries remind her mother of the squealing of a pig; when crying she turns blue. She cannot pronounce a word intelligibly; is apathetic and good-natured. She does not understand why she is punished. She drinks a great deal of water and sweats profusely. She cannot hold her urine, but has control over the bowels, and now expresses desire to go to the closet. She has been under thyroid treatment for the past four months. The following measurements were taken at the beginning of treatment:

Head, circumference, 20¾ inches; external meatus to external meatus, 12 inches; root of nose to occipital protuberance, 13½ inches; chest, 19 inches; abdomen, 20 inches; height, 40 inches; weight, 32 pounds.

During these four months, she has grown nearly two inches. She is now less good-natured and more capricious. She takes much more interest in things surrounding her, and in the plays of other children. She is anxious to speak; makes efforts to speak, but as yet her articulation is so bad that it is almost impossible to understand her. There is a distinct improvement in her general condition, and this leads me to believe that in future thyroid feeding will have a prominent place in the treatment of all forms of idiocy, and that it will prove an invaluable adjunct of the usual measures adopted to improve the mental and physical condition of these degenerates.

In order to be followed by results, treatment must be resorted to as soon as the condition is recognized.

Acute Prostatitis. — Wash out the abscess cavity with hydrogen peroxide, give copious hot-water enemata and frequent hot hip-baths, avoid morphine, and advise against straining at stool and in micturition. To prevent degeneration of the gland substance, give triticum repens and fluid extract of tritipalm, combined with gum arabic or flaxseed infusion.—L. H. Montgomery.

SOME REMARKS ON THE USE OF THE OBSTETRIC FORCEPS.[1]

By S. MARX, M.D.,
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In the obstetric forceps we have an instrument which is both conservative and preservative: conservative in the sense that it saves both mother and child the results of physical injury; preservative by actually anticipating the possibility of immediate or ultimate death of the mother or her unborn child. On the other hand, we have a means by its use which, paradoxical as it may appear, is at one and the same time the safest as well as the most dangerous instrument which it is within the power of the accoucheur to use. I wish to emphasize the fact that the obstetric forceps is a powerful and a dangerous instrument in the hands of the inexpert, while in the hands of those who know its application and use, as applied according to the well-known principles of the mechanism of labor, it is the most conservative instrument placed in the hands of mankind, saving hours of untold misery and suffering by its timely and legitimate and skilful application.

To enumerate the many different obstetric forceps would take hours, for the varieties of forceps increase almost as rapidly as accoucheurs are made. It is not any one particular variety of forceps or any author's modification of any one else's instrument that will succeed when other forceps fail. I maintain it is not the instrument that is successful, but the man behind the instrument, the brains, skill, and tact that guide the delivering hand to success. When one instrument fails, other things being equal, all will fail. It is not the greater pelvic or cephalic curve, the length or shortness of the forceps that succeeds in one case or fails in another. When a forceps repeatedly slips, it is folly to apply three, four, or one-half dozen others; such a case is distinctly not a case for forceps application and delivery, but one of the other alternate operations are indicated. The fault of a slipping forceps depends on: (1) An improper application, *i.e.*, want of coaptation to the fœtal head, or the grasping of an unusually long diameter of the head. This can be readily ascertained by the marked separation of the handles of the forceps. Ordinarily when the forceps is applied, the space between the handles is a very small one. Should the marked separation of the handles be apparent and there be danger of slipping, the rectification can be readily accomplished by the reapplication of the forceps in another diameter, the most scientific of which is the application to the sides of the fœtal head. (2) Failure to introduce the blades sufficiently far to make the cephalic curve conform to the fœtal skull. When the blades are applied so as just to nip the sides of the fœtal skull with their tips, it is very evident that the slightest traction will force the forceps and head to part company, to the chagrin of the operator who may find himself, grasping the empty forceps, on the floor. Its complete application and adaptability can be readily ascertained, if after the forceps is applied, the handles are depressed and slowly but gently circumducted. This insures the proper so-called "wandering" of the blades, which almost intuitively seek their places, with the resultant ready locking of the blades. When in any case locking of the blades is difficult, it is radically wrong to forcibly attempt it, since in this attempt brute force is injurious to both mother and babe, and is a danger signal that something is wrong; and if it is persisted in and a faulty locking occurs, slipping of a forceps is almost certain to occur. The rule—and a good one too—is to remove the blades and attempt their reapplication. (3) Another cause, and frequently an unrecognized one, for slipping of the forceps, is a vicious position of the head. A normal presentation of the fœtal globe does not always mean a normal position, and the most frequent malposition of the vertex is a posterior occiput; and this, according to a personal experience, is the most frequent cause of forceps slipping. Therefore it ought to be a *sine qua non* with every practitioner to be absolutely sure that a normal or relatively normal position obtains before the forceps is applied. It is sometimes absolutely impossible to establish this by examining for sutures and fontanelles. To be absolutely positive we have one of two methods: (*a*) palpation of an ear, the back of the ear always pointing to the occiput; (*b*) the introduction of the whole hand for direct palpation and exploration. It is a rule with the writer to abstain from interfering instrumentally until a clear picture of both position and presentation is obtained by either one or other of the above methods.

Should the forceps be applied in all cases in which, anatomically speaking, the head presents; and, further, what conditions are favorable for forceps application and what not? (1) The forceps should never be used unless there are positive indications for its use. The so-called "Luxus" instrumentation is never an indication. When nature asserts herself as unable to deliver spontaneously, then, and then only, does art come in. Exhaustion on the part of the mother is recognized by changes in the temperature and pulse, as also on the part of the child by alterations in rapidity, volume, and strength of the fœtal pulsations, and a continuous free discharge of meconium in the absence of a breech presentation. (2) The head must be in a normal position, or so relatively normal that operative interference will readily convert it into one. It is always better, however, to convert by manual methods faulty positions before having recourse to instrumental interference, as witness: face case, chin behind. Under these conditions manual flexion of the head is resorted to, to convert it into occipito-anterior, when forceps delivery is accomplished. Face case with the chin in front is considered a normal position; hence direct forceps application. (3) The head must be engaged or at least fixed at the brim.

I do not sanction the application of forceps to the head above the brim except for one indication, and this is when rupture of the uterus exists or is impending. In all other cases I decidedly prefer the performance of an elective version, for fear of causing a rupture in threatened cases or increasing the tear in already present ruptures. But in most of these cases of prolonged, fruitless, and severe labors, the child has often suffered so severely as to have been already sacrificed; here an elective perforation ought always to hold preference. I still claim that the perforator is not an obsolete tool, but an instrument that still has a large field for application; and it is a rule with the writer to perforate in all cases in which the child is dead, no matter what its position in the pelvis, except when the head lies so extremely low in the pelvic tract that forceps application is easy and safe to the mother. Again I do not countenance the true high forceps application for the following reasons: Non-engagement of the head means either a malposition or a pelvis that is relatively or absolutely contracted; and by a relative contraction I mean a pelvis that is large enough to permit of the passage of an ordinary-sized child, yet is too small to admit of the engagement of an overgrown or large-sized head. In this country minor pelvic contractions are not uncommon, and they cause most frequent trouble because of their not being recognized. In these cases the mechanism is different from that which takes place in normal pelves. Instead of engaging obliquely with

[1] Read before the Eastern Medical Society, January 13, 1899.

fair flexion they engage transversely in a condition of hyperflexion. Since most pelvic contractions are antero-posterior ones, with compensatory increase in the transverse diameters, it would appear that nature conforms with what would be an ideal attempt on her part to overcome the dystocia. This is fulfilled in most cases; but in some, at the critical moment, nature's forces are exhausted and the woman fails to deliver herself. Now if the forceps is applied as usual along the sides of the pelvis, pressure is exerted from side to side, which in my experience is not compensated for by an overlapping of the bones, and thus, were this true, would not increase the biparietal diameter of the head, as I am aware is stated in the writings of Milne Murray; but according to direct observation the pressure from side to side causes an increase in the bilateral diameter, which conforms to the contracted antero-posterior diameter of the pelvic inlet, and in this fashion increases the pelvic contraction both relatively and absolutely in this direction. For this reason version is elected in all cases with the above exception, when the head is above the pelvic brim. In these version cases under the above conditions, the after-coming head descending as it should transversely, pressure is exercised by the antero-posterior contraction upon the biparietal bosses, diminishing their diameter where the greatest contraction is; and thus we get a compensatory side-to-side head enlargement, which conforms to the enlarged transverse pelvic diameter. This, I believe, explains the superiority and safety for the child of version over the high forceps application in cases of minor pelvic contraction. Now in the application of the forceps we must remember that it can be used ordinarily as a direct tractor, a compressor, or a rotator. These various functions can be used either separately or together, except the tractile and compression force. These two latter must always go hand-in-hand. The greater the extraction power, the more powerful the compression force. Therefore it being calculated that for every pound of pulling force there is to be expected one-half pound of compression upon the fœtal skull and its underlying structures, it must become evident that excessive brute force of traction must necessarily tend to inflict dangerous injury upon the tender brain of the infant. Such manœuvres as bracing both feet against the bed, or two physicians pulling upon the forceps at the same time, are not only not scientific nor skilful, but are absolutely dangerous and utterly uncalled for. Nothing can come of such brute force but the gravest lesions for both mother and child. The latter is certainly sacrificed by an unconscious act of cephalotripsy. When such force becomes necessary and the case is one for forceps, the trouble is due neither to maternal pelvis nor to fœtus, but to dystocia caused by the medical attendants. The line of axis traction is faulty. My experience in consulting work has been that men invariably pull too far forward, and not sufficiently backward. It is generally a puzzle to men to know in what axis to pull that will make the delivery easy and safe.

The ideal forceps to-day for all purposes is the true axis-traction forceps, that of Tarnier. But its cost and the danger from its use are such as to make it an instrument eminently fitted for the expert only. In teaching students the axes for forceps extraction, I have made use of the following two rules to guide them: One is that traction can never be made too far backward, the tendency being to pull too far or too rapidly forward and upward. Starting from behind, and making traction directly backward, the handles should be slowly carried farther forward and forward until the head follows downward. This can be readily ascertained by keeping one finger upon the head. The second method and better one is as follows: The forceps should be applied in the usual fashion, and the handles kept together by some means or other. The patient should be allowed to have one good pain with the forceps in place. The direction the uninfluenced handles take by being pushed downward by the uterine contraction is the one which nature wishes us to follow primarily. In the use of the forceps it is the rule to introduce the entire four fingers of the disengaged hand and not one or two fingers as is usually recommended, for it is absolutely essential to know when the blade goes too deep into the pelvis; and this can be completely controlled only by the introduction of nearly the entire hand. I have vividly in mind a case in which the entire cervix was nipped by the forceps and forcibly torn off by a slipping of the instrument. The rule to introduce the left blade first is a good and time-honored one, and ought to be followed in all cases. But sometimes—and it has occurred to the writer—the introduction of the left blade first is absolutely impossible for some reason or other. Here it is legitimate and wise to make an exception and introduce the left blade after the right one is in place. The technique of this procedure is simple. After the right blade is placed it should be elevated and the left blade introduced underneath; or else, the right blade is simply introduced before the left. It is now found that the female or left blade rests on the corresponding portion of the right. Simple rotation, or carrying the handle of the left blade over and above the right one, is then performed, when with slight rotation and sinking of the left locking is readily accomplished without trouble and without danger to the maternal soft parts. After the forceps is in place the first traction should be the so-called "tentative traction," which insures absolutely against slipping of the instrument. The finger is placed against the head and traction is exercised by the other hand. If it is found that the forceps advances and the head does not impinge solidly against the guiding finger, the forceps is surely slipping.

What position should be used in delivery? In nearly all cases the woman should be on the back; but there are a few cases, in which the head is still high in the pelvis, and direct backward traction is necessary to successful delivery. If the patient is on a high table or bed this is easy. But unfortunately in many of the houses are modern and very low beds, and it is absolutely impossible for the accoucheur to make such traction, unless he sits on the floor with his legs under the bed, his lap a convenient receptacle for maternal stool, blood, meconium, etc. Here I advise placing the forceps in the usual back position, then turning the patient on the side, with buttocks over the bed, the accoucheur sitting on a chair well behind the patient, in a position to make traction and at the same time to be out of harm's way. When the forceps is to be removed, before or after the head has cleared the perineum, is absolutely immaterial, for I do not think its removal or leaving it in place influences either speedy delivery or the integrity of the maternal parts. But should the accoucheur decide to remove it before complete delivery, no force should be used, for it sometimes happens that the fœtal ear snugly engages itself within a fenestra of the forceps blades. If it cannot be readily removed it should be left in place. No brute force should be used; for it is but a few months since the writer saw one ear of an unfortunate infant torn off and the other partially severed, by the forcible removal of the forceps before the child was born. Fortunately the child died a few days after its birth.

947 Madison Avenue.

Infantile Constipation.—Heat castor oil and apply thoroughly to the abdomen.—Beloll.

PUERPERAL INFECTION WITH THE BACILLUS AEROGENES CAPSULATUS.

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During the six years which have elapsed since the publication by Welch and Nuttall of a case of terminal infection with a peculiar gas-forming bacillus, there have been reported in the literature a considerable number of such cases, varying greatly in the time and portal of infection and in the clinical picture of the disease. The following patient entered St. Luke's Hospital, in the service of Dr. G. A. Spaulding, to whom I am indebted for the clinical notes.

The patient on admission was so ill that a consecutive history was obtained with some difficulty. She said that she had always enjoyed good health up to the present time, and had borne eleven children. Before the birth of the last a considerable œdema of the lower extremities had been noticed, but no other evidence of renal disease and no eclamptic seizures. About two weeks before admission she began to feel weak and had some dyspnœa and a slight cough, and two days before she noticed that her face had begun to swell. When examined on admission she was found to be a large woman with abundant subcutaneous fat. There was a moderate œdema of the face and limbs. The heart was enlarged, the apex beat being six inches from the median line. The action was rapid and forcible, with a marked accentuation of the aortic second sound. The pulse was quite tense. An enlarged uterus occupied the lower part of the abdomen. The fœtal heart sounds could not be heard. The temperature on admission was 102° F.; pulse, 108; respiration, 32. The urine was acid; specific gravity, 1.020. It contained so much albumin that it solidified on boiling, and there were abundant granular casts and some blood found on microscopical examination. The amount of urea was greatly diminished.

Under these conditions it seemed proper to remove the fœtus, and accordingly a sterilized soft rubber catheter was passed to the fundus of the uterus and left in place for twelve hours. After digital dilatation of the cervix, the fœtus was expelled twenty-four hours after the passage of the catheter. It was apparently about six months old, and was not macerated. Soon after the delivery of the patient a manual examination of the interior of the uterus was made, in order to find, if possible, a cause for a rather severe post-partum hemorrhage, and to be sure that all placental tissue had been removed. The temperature on the day of delivery reached 103.4° F., with a pulse of 120 and respiration 40. The patient was drowsy and stupid. The urine still contained large quantities of albumin and many casts. The abdomen was somewhat distended. About this time it was noticed that the lochial discharge was very offensive, so much so that it was necessary to remove the patient from the ward to a separate room, because of the annoyance to those next to her. The following day the temperature remained continuously above 102° F., while the pulse and respiration increased in frequency and the abdominal distention was very marked. No subcutaneous œdema was noticed. She died the third day after delivery.

An autopsy was made twenty-four hours after death, the body having been kept on ice in the mean time. The more important points are as follows: The whole body was noticeably swollen and there was a marked emphysema of the subcutaneous tissues. The superficial veins were distended with gas, and on opening the abdomen a large amount of gas escaped. The intestines were of a deep red from dissolved blood pigment, and the peritoneal coat was dull and covered with flakes of fibrin. Five hundred cubic centimetres of bloody fluid was found free in the dependent parts of the cavity. When the pericardium was opened some gas escaped, and a fresh pericarditis was found present with a moderate amount of fibrin. The heart chambers were empty and the muscle contained gas bubbles. There was a long branching thrombus in the pulmonary artery of the left side, with an infarct in the lower part of the upper lobe. The liver was slightly enlarged, and its substance was converted into a meshwork by the formation of large and small gas bubbles. There was no fluid or foam exuding from the cut surface; on the contrary, the liver tissue was dry and of a dull opaque red, as if it had been cooked. The spleen was not enlarged and contained numerous gas bubbles. The kidneys were large; the capsule stripped easily; the substance was œdematous and rotten. Gas could be squeezed from the vessels. No markings could be made out. The uterus and vagina were lined with a foul-smelling, blackish slough, very soft and pulpy, and about 5–15 mm. thick. There was no perforation or tear in the uterus or vagina. Smears from the uterus showed enormous numbers of the capsulated rods, a very few streptococci in short chains, and numerous short bacilli, probably colon. Smears from the other organs and the pericardial and peritoneal fluids showed only large, thick, encapsulated rods, positive to Gram. Cultures from the uterus grown at 37° C., with free access of air, showed only colon bacilli. Cultures from the other organs and the pericardium under similar conditions gave no growth. Anaerobic cultures, on the other hand, furnished an abundant growth of bacilli, which corresponded in every particular, including pathogenic properties toward animals, with the bacillus described by Welch and Nuttall under the name of bacillus aerogenes capsulatus. For any morphological or cultural details, the reader is referred to their paper in the *Johns Hopkins Hospital Bulletin* for 1892.

Microscopic sections of the viscera showed some interesting points: The uterine mucosa had entirely disappeared, and also the placental remains. In the necrotic layer lining the uterus and vagina were an enormous number of bacteria. First and most prominent with a Gram stain were the large rods of the gas bacillus. Besides these were a large number of what were probably colon bacilli and a few streptococci and diplococci. These cocci could not be isolated on culture media. In sections toward the peritoneal surface of the uterus the vessels, especially the veins, were filled with thrombi which contained only the gas bacillus; this form was also found in the uterine lymphatics, so that the streptococcus invasion did not extend deeply. The liver stained very poorly; most of the cells showed a very marked degeneration, which was especially noticeable in the tissue surrounding the gas bubbles. The walls of the latter were crowded with enormous numbers of the bacilli. In the kidneys, besides a very advanced chronic diffuse nephritis, there were many gas bubbles, and the bacilli in this case had also entered the glomeruli and the tubules, and could be seen on the surface of the large casts which still remained in the tubules. The heart muscle, the pericardial fibrin, the pulmonary thrombus, and the lungs all contained an enormous number of the characteristic bacilli. Sections from the hairy scalp of the fœtus showed a large number of the same bacilli, positive to Gram, both on the surface and in the lymph spaces of the corium. Unfortunately the fœtus was placed in alcohol immediately after delivery, so that no cultures could be obtained, nor were cultures made from the lochial discharge during life.

A number of questions arise in the interpretation of this case, which are difficult to answer in any absolute manner. The first and perhaps the most important is the determination of the time of the infection. The

wide distribution of the bacilli throughout the body is in no way incompatible with an infection immediately ante mortem, for if a guinea-pig is injected subcutaneously with a virulent culture, and then in a few hours is killed and kept in a warm place, the body will soon swell because of the gas production and be found to be quite generally invaded by the bacilli, which multiply with enormous rapidity in the blood, and, as the gas is formed, are pushed along the vessels into the capillaries and thus invade the parenchyma of the organs. The importance of finding the bacilli in the subcutaneous tissues of the child was very slight as regards the determination of the time of infection, for without cultural results it became a mere probability that the forms found were the specific bacillus. On the other hand, two cases of ante-partum infection of the child and amniotic fluids have been reported, though in these cases the mother did not die. It is possible, therefore, that the infection took place at the time of the production of the abortion, and that the placental tissues offered a favorable site for infection. The result of the microscopical examination of the liver and kidneys rather pointed to an infection some time before death, for the cells of these two organs were in a condition of extreme degeneration, most marked about the walls of the air bubbles. This is said not to take place when the bubbles are formed after death. In the heart muscle also, there were areas of inflammatory reaction around the gas bubbles, a process that could not have occurred within a short time of death. The exact part played by the streptococci found in the slough lining the uterine cavity is doubtful. The number found was exceedingly small, and none was found in the lymphatics of the wall or peritoneal surface of the uterus, as is usually the case in any severe post-partum infection with this species. It seems probable that both the streptococcus and the colon bacillus can be disregarded in this case.

From a clinical aspect the whole course of the disease changed from the day of delivery. The temperature became continuously high, the abdomen began to swell and was tympanitic, yet there was no intestinal distention found on autopsy; only a large quantity of gas free in the peritoneal cavity. The odor of the lochial discharge was noticed soon after delivery, and resembled that of the gas escaping from the peritoneum.

Progress of Medical Science.

The Action of Mineral Waters and Drugs on the Bile.—Dr. W. Bain (*Journal of Balneology*) places on record his investigations in the case of a man, forty nine years of age, who had a permanent cutaneous biliary fistula. He concludes as follows: (1) The amount of bile secreted in the twenty-four hours, in a man somewhat below the medium height and weight, averages 775 c.c., and the bile solids average 15.8 gm. (2) More bile is secreted during the day than at night. (3) The sulphocyanate of potassium in the saliva is not derived from the biliary salts. (4) The old sulphur spring at Harrogate, Carlsbad mineral water, euonymin, benzoate of sodium, salicylate of sodium, and the Kissingen Spa spring of Harrogate increase both the quantity of the bile and bile solids. (5) Podophyllo-resin and iridin augment the bile solids without appreciably affecting the quantity of bile. (6) The strong Montpellier spring of Harrogate and podophyllo-toxin appear to diminish slightly both the quantity and the solids. (7) Hot water and soda water in pint doses do not seem to increase the biliary secretion. (8) Salicylate of sodium increases the excretion of uric acid in the urine.

The Treatment of Syphilis by Subcutaneous or Intra-Muscular Injections.—Dr. Maurange (*Gaz. hebd. des Sci. Méd.*, January 1, 1899) has modified the formula recently proposed by Dr. Cheron. The latter suggested 20 c.c. of artificial serum containing 2 gm. 50 cgr. of bichloride of mercury to the litre. These injections should not be repeated oftener than every six or eight days. Dr. Maurange has for the past three years treated syphilis successfully by the intramuscular injection of artificial serum containing bichloride of mercury in the proportions indicated by Dr. Cheron, but injected each time 4 c.c. of serum and 1 mgm. of bichloride of mercury, repeating the injection every two days. This method seems preferable as it does not expose the patient to the accidents attendant upon large doses of mercury, such as stomatitis, diarrhœa, etc. The elimination and absorption of this salt in solution in artificial serum are very rapid. The action of mercury on the organism is not so prolonged as in the case of repeated injections of small doses of soluble salts or less frequent injections of insoluble salts.

Treatment of Variola.—The only internal treatment which seems to be effective is a combination of opium and ether. Inject into the cellular tissue morning and evening a syringe full of ether or administer daily from six to ten spoonfuls of syrup of ether. Also give twice daily the following:

℞ Ferri perchlor ..... gtt. xx.
Syr. aurantii flor..... 25 gm.
Aquæ..... 100 "
M. S. Teaspoonful twice daily.

The patient should take from sixty to eighty grams of alcohol daily. This treatment is efficacious only when instituted during the first stage of the eruption. The treatment is more efficacious in grave cases if combined with cold baths. These are specially indicated in the presence of pronounced nervous symptoms. Vigorous individuals should be bled if they have intense dyspnœa, or present congestive or encephalic phenomena. In the discrete form, in the period of invasion, employ for the backache friction with the following:

℞ Chloroformi ..... 10 gm.
Essence terebinth..... 10 "
Aquæ ..... 80 "
M.

Administer mild laxatives and tepid baths during suppuration. External treatment consists in baths containing bichloride of mercury in alcohol, during desiccation but one bath daily being given. Cover the head of the patient with tarlatan steeped in a solution of bichloride, 50 cgm. to the litre, this being so arranged as completely to cover the face of the patient, and which should remain during the course of the disease. The eyes are protected by a pledget of cotton soaked in boracic-acid solution. The mucous membranes should be antisepticized, the mouth and eyes washed with boracic acid, and the pharynx painted every two hours with a mixture of equal parts of salol and glycerin. To prevent pitting Hebra powders the skin after the bath with—

℞ Acid. salicylic ..... 10 gm.
Pulv. talc.,
Pulv. amidon.....ää 50 "
M.

In discrete and varioloid cases it is sufficient to prescribe tepid baths twice daily, followed by—

℞ Vaseline ..... 20 gm.
Salol ..... 1.5 "
M. S. To be applied externally.

—*Gazette Médicale Belge*, February 16th.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE INCREASE OF CARCINOMA AND THE MICROBE THEORY.

IN a recent journal, Park has discussed the question of the apparent increase in the amount of carcinoma in civilized communities, and has given us some rather startling figures and conclusions. There has been a general idea among some observers that the death rate from carcinoma is rising, and there has been some speculation as to the cause. The degenerating influence of civilization, the concentration and excitement of modern life, and similar causes have been held responsible, but no justifiable conclusions of importance have been drawn. The remarkable prevalence of malignant disease in some localities and families has been known for years, and no explanation has been offered with any basis of probability except that of heredity in certain of these families or groups of families. The doctrine of the parasitic origin of carcinoma, which has for some years been hovering in the background, comes forward occasionally with renewed prominence and sometimes with apparent strength. This is more particularly manifest at this time by the recent claim of Dr. Bra, of Paris, concerning a new micro-organism of cancer which is capable of propagation in the lower animals. The evidence brought forward by him in the cabled reports in the daily press is, however, more or less vague, and will hardly be accepted by most observers.

That the origin of carcinomatous growth is in epithelium may be considered proven, and we also may safely say that the carcinoma cell represents an altered or perverted epithelium cell of some kind, and further, that the kind of epithelium from which the growth develops influences the clinical course of the disease, but is not of much importance, except in that way. The cause of this perversion of activity is what we are unable to give, and what we are trying to discover. The theory of prolonged irritation as an exciting cause has many supporters, and holding it is not inconsistent with the belief in the presence of a parasite which might find a congenial nidus in tissue subjected to chronic irritation, and thus by its activity bring about that perversion of cell activity which results in what we call carcinoma. We all recognize a *locus minoris resistentiæ*, and we know that micro-organisms have a very general habit of picking out such places for the scene of their initial invasion. In some ways, it is possible to consider the growth and development of carcinoma as not entirely inconsistent with a parasitic causation, but there are some pathological analogies which seem to be so. The pathologists tell us, for example, that an adenoma is a neoplasm, originating in the gland epithelium, characterized by a growth and production of cells which in arrangement, appearance, and life history resemble the cells of the gland in which the neoplasm is growing. Such cells do not functionate. The same authorities tell us that carcinoma is analogous to adenoma, but that the growth of the carcinoma cells is characterized by the irregular and atypical quality which seems to account for the malignant features of the disease; and, furthermore, it has been their teaching that an adenoma may develop malignant characteristics—that is, it may become a carcinoma. If a neoplasm, carcinoma from the first, is caused by a parasite, why is not an adenoma which becomes malignant caused in the same way; and why is not the presence of an adenoma which remains benign to be explained by the action of some organism? The kind of activity seen in the growth of carcinoma cells is not the same as that seen in tuberculous and gummatous processes, although it may seem so superficially. Degeneration and retrograde metamorphosis are not the prominent characteristics of the carcinoma cells, while in the tubercle and the gumma such is very distinctly the case.

Carcinoma does not represent reversion in cells, but is a manifestation of perversion, with very active growth and, more important, proliferation. As far as we know, inflammatory processes, chiefly chronic, are accompanied by cell proliferation, which ceases when the inflammatory process ceases, and does not leave the cells of the affected region with any intrinsic power to go on proliferating in the abnormal way which they have assumed under the temporary stimulus of the cause of the inflammation. In carcinoma, on the other hand, the tendency of cell growth is to go on indefinitely, and each cell has a distinct intrinsic tendency to proliferate more or less indefinitely, whether it remains at the site of its original development, or is carried by the blood or lymph to a point far removed from any local irritating influences. It does not seem possible that any form of bacterial or protozoan influence could act upon the cell in such a way as to develop the peculiar power of proliferation which we know the carcinoma cell possesses. We know that carcinoma occurs most frequently after the age of about forty, just at the time of life when, in general terms, the human organism is least likely to suffer the initial invasion of any kind of bacterial infection; and we may add to this the statement that, if the cause of carcinoma is a micro-organism, we should with good reason expect to encounter cases in that period of life in which the human organism is most vulnerable to invasion, namely, in childhood. We believe that true carcinoma is unheard of in childhood and early youth, and the so-called parasite of the disease must be entirely different from all others with which we are acquainted, if this argument is fallacious. The laboratory evidence so far adduced in

favor of the parasitic origin of carcinoma is very incomplete, and to the average mind unconvincing. The microscopic appearances are indefinite; several different kinds of bodies have been described, and the observers in favor of the idea of micro-organic causation do not agree among themselves. Most of the appearances so far seen can be accounted for by supposing the presence of granular detritus from altered and broken-down carcinoma and blood-cells. A few writers have described fairly good-sized bodies with definite shape, which they have called psorosperms, seen in various parts of the tumor, but these results have not been confirmed by a sufficiently large number of observers for us to accept them without much reservation. It would seem reasonable, if we are to suppose that epithelium can be induced by a micro-organism to undergo proliferation with such dire results, also to think that when the connective-tissue cell behaves in an analogous manner, it has been subjected to the same sort of toxic or irritating influence, and that, consequently, it would be advisable to examine sarcoma for analogous appearances. We can be sure of one thing, however, and that is, that we cannot study the malignant tumors too much, and that we ought to be grateful for every shred of positive knowledge which we can get. So far the doctrine of the parasitic origin of carcinoma does not rest upon positive knowledge.

THE PARASITOLOGY OF CARCINOMA.

Much earnest study has been devoted to the elucidation of the intimate nature of carcinoma, but, it must be confessed, without as yet conclusive result. For many years the condition has been suspected to be of parasitic origin, and within the last decade numerous observations, both clinical and experimental, of a most suggestive character have been made. It cannot, however, be said that all doubt has been removed, although the evidence in favor of the view that carcinoma is inoculable, and thus probably dependent upon a transmissible cause, is steadily if slowly accumulating.

Tumors have been produced in animals with organisms isolated from fruit infusions; and organisms have been isolated from carcinomata, but it has been difficult to maintain their virulence. One of the most persistent of the English workers in this field of investigation has been Plimmer, of London, who, during the six years in which he has been studying this subject, has examined twelve hundred and seventy-eight specimens of all varieties of carcinoma obtained from various organs and parts (*Lancet*, March 25, 1899, p. 826). Among this number there were nine in which the cell inclusions were extremely numerous, so that at the growing edge and even far into the tumor scarcely a cell could be seen without an inclusion; in two of these specimens the bodies were present in enormous numbers, and from one an organism was isolated that proved pathogenic in a peculiar manner to certain animals, and whose virulence has been kept unimpaired for several months. The tumor last referred to was obtained from the breast of a woman, thirty-five years old; it was of two months' duration, and had been growing rapidly. A scraping made immediately after operative removal exhibited an extraordinary number of cell inclusions. With all possible precautions against contamination, thin slices were cut from the growth with a sterilized knife, and placed with a little of the juice scraped from the cut surface in a flask containing an infusion made from carcinoma, just as beef infusion is made, together, after careful neutralization, with two per cent. of glucose and one per cent. of tartaric acid. The flask was rendered anaerobic by exhausting the air and introducing hydrogen, and it was then sealed.

The organism obtained in pure culture by this means presents the appearances of a saccharomyces. Grown in the medium described, it produces a cloudiness that becomes visible in about forty-eight hours, and increases till about the sixth day, when the growth sinks to the bottom and the medium becomes clear. When the medium is solidified by the addition of agar, the organism forms small, round colonies that remain separate. After some weeks the color, which was originally white, becomes yellow. The colonies do not at any time attain great size. They do not liquefy gelatin, on which the growth is never luxuriant. On potato a thick, white layer is formed, which in about two weeks covers the entire surface, changing then to a yellowish-brown color. The colonies grow aerobically, but not so well as when air is excluded, and they soon lose their virulence under the condition first named.

Microscopically the organisms appear as round bodies, frequently growing in clumps, with a central portion that stains deeply, and in most cases with a thin, strongly refractile capsule that sometimes exhibits a double contour, although some young forms are apparently without a capsule. The bodies vary in size from 0.004 to 0.04 mm. They appear to reproduce by budding. They correspond morphologically with those found in the original tumor and with similar bodies described by others. Experimental inoculation of rabbits and guinea-pigs was in most instances successful.

EXPOSING THE ABSURDITIES OF THE CHRISTIAN SCIENCE CULT.

Two notable articles dealing with the question of Christian science have just appeared, one of which is from the pen of that acute English critic, Mr. W. H. Mallock, in the *National Review*, and the other contributed to the *North American Review* by Mr. Purrington. Both writers take almost identical lines—that is, they show up to public ridicule the insane fallacies and absurd farrago of nonsense by means of which Mrs. Mary B. G. Eddy has been so successful in disseminating the craze. *The Lancet* of March 25th devotes a column to a consideration of the article in the *North American Review*, and while agreeing with Mr. Purrington that the most effective manner of dealing with the followers of the new religion and of preventing possibly its further propagation is by laughing it to death, at the same time it exhibits a

considerable amount of complacency in that Great Britain, and especially London, are comparatively free from adherents to Christian science.

On the other hand, a writer in the editorial columns of the *English Medical and Surgical Review of Reviews* takes a contrary view of the situation, and says: "It is unfortunately true that a very large number of well-to-do people, particularly in London, are allowing themselves to be led astray by the ridiculous claims of these self-styled 'scientists,' and the sooner a check is put upon the movement the better for the sanity and well-being of society."

Whether Christian science is spreading in Great Britain or not we cannot say, but this unfortunately we do know, that in New York State and city the cult is progressing by leaps and bounds. The estimate has been recently made that there are thirty-eight churches and congregations in the State of New York, with a membership of about thirty thousand, the city and vicinity supplying to this total thirteen churches. The statement is put forward that in the whole country Christian scientists number nearly a million. If, then, there are already a million individuals foolish enough to be guided by such absurd tenets, and if converts are being gained at a rapid rate, it would certainly appear that in some instances repressive measures should be taken. As has been pointed out before in the MEDICAL RECORD, the law does not compel a person presumably arrived at the age of discretion to call in a doctor for himself, be he sick even unto death; but if he neglects to provide proper medical attendance for his child, he does so at his own peril. In the mean time, it is well that public attention should be called, by such articles as the one referred to above, to the nonsensical doctrines taught by Mrs. Eddy and her disciples.

MRS. FAWCETT ON VACCINATION.

IN the *English Contemporary Review* for March, Mrs. Fawcett, widow of the late blind postmaster-general, Professor Fawcett, and one of the most able writers and eloquent platform speakers in Great Britain, defends the British government for its recent action in relaxing the law of compulsory vaccination. She draws attention to the fact that compulsion was adopted in 1853 for two reasons, namely, at that time vaccination was considered a thoroughly efficient safeguard against smallpox, and because infant vaccination was looked upon as an operation perfectly without risk to health or life. Mrs. Fawcett deems that this view of the matter has not been borne out by results, and calls to her aid statistics showing that while the deaths from smallpox had been yearly decreasing, the number of children unvaccinated in proportion to the annual births had been increasing at an equally rapid rate. "After forty-six years of nominal compulsion, a very much smaller number of the infants born every year were actually vaccinated than was the case before the compulsory law was in force." Therefore Mrs. Fawcett argues that, this being so, taken in conjunction with the ever-increasing number of boards of guardians which were averse to carrying out compulsory measures, the government was justified in its refusal to risk a collision with the local authorities. Mrs. Fawcett also strongly censures the behavior of many of the magistrates toward the conscientious objectors. She says: "I am not an antivaccinator—that is, I believe that vaccination generally gives protection, long enough, at any rate, to carry one safely through an epidemic—but I have been nearer to being an antivaccinator than I ever was before, since I have seen that the cause of vaccination appears to require magistrates in the discharge of their duties to insult and endeavor to perplex the poor and ignorant who appear before them to claim exemption."

It is always well to hear both sides of a case and to listen to the opinions of disinterested persons, but it appears that the distinguished lady lecturer rather gives herself away when she falls foul of the magistrates for endeavoring to instruct the ignorant as to the merits of vaccination. The crusade against vaccination in Great Britain was brought about by a few antivaccination cranks trading upon the ignorance of the poorer classes, and it is certainly right and proper that the true facts should be placed before them. There is, however, a decided revulsion of feeling against the repeal of the compulsory vaccination act in England—or perhaps it would be more correct to say that the well-educated portion of the community are rapidly awaking from their lethargy, and now recognize the grave menace to the public health induced by the doing away with compulsory vaccination. It is also pleasing to note that other nations exhibit no signs of following England's lead, but, on the contrary, appear more inclined to insist on the existing laws in respect to vaccination being enforced with greater stringency than ever.

News of the Week.

The Health of the Pope is believed, despite denials, to be in a very precarious state. Correspondents in Rome of foreign papers, who are usually well informed concerning matters at the Vatican, continue to assert that His Holiness has never fully recovered from the shock of his recent operation, and that he has frequent attacks of syncope, any one of which may be his last.

Professional Secrecy.—Governor Roosevelt has signed an amendment to the civil code, which forbids a physician to give any information concerning the mental or physical condition of his patients, either before or after the death of the latter. Hitherto the law has permitted a physician to testify concerning the physical condition of a person holding a policy of life insurance.

The Austrian Balneological Congress held its first meeting in Vienna on March 28th, 29th, and 30th. Among the communications were "The Influence of Baths, Hydrotherapy, and Climatotherapy on the Cir-

culation and the Blood," by Professors Kisch and Glax; "The Dangers of Infection in Health Resorts and Regulations for their Prevention," by Dr. C. Ullmann; "Hydrotherapy and Climatology in Hungary," by Dr. Kuthy, of Budapest.

The Association of German Railway Surgeons will hold its annual meeting this year at Nuremberg on September 12th.

Music and Medicine.—John Philip Sousa has made a contract for $5,000 to compose a march to bear the name of a medicinal article and to be used in its exploitation. It might not be inappropriate to set the march to the tune, "Tommy, make room for your 'anti.'"

A Monument to Pasteur was unveiled at Lille on Sunday, April 9th. On the same day the Pasteur Institute of Lille was formally opened. M. Viger, minister of agriculture (who is a doctor of medicine), and M. Guillain, minister for the colonies, presided at the ceremonies.

Scarlet Fever in Institutions.—The health department has placed under quarantine the Convent of the Sacred Heart, at One Hundred and Thirtieth Street and Convent Avenue, and the Protestant Episcopal Orphan Asylum, at Forty-ninth Street and Lexington Avenue, because of the presence of scarlet fever among the inmates.

Pneumonia Antitoxin.—Extensive experiments have been carried on during the past year, in the laboratories of the New York City health department, looking to the production of a serum that will have a curative action in pneumonia. The experiments are as yet incomplete, but, according to the report of Dr. Roberts, the sanitary superintendent, are sufficiently promising to justify their continuance, and to give the hope that some definite results may be obtained.

The Poison-Bottle Bill Withdrawn.—The bill providing that all medicines containing even slight quantities of poison, except patent medicines, shall be prescribed in octagonal bottles with serrated edges between the facets, which was before the legislature of this State, has been withdrawn. The bill was almost universally condemned immediately upon its introduction, and the druggists of the State, especially, nearly overwhelmed the governor with protests against the measure, claiming that it was in the interest of a certain patented bottle.

College of Physicians of Philadelphia. — At a stated meeting, held April 5th, Dr. William T. Sharpless read a memoir of the late Dr. Isaac Massey. Dr. Alfred Stengel and Dr. Henry D. Beyea read a paper entitled "Enteroptosis: Report of a Case in which a New Operation was Undertaken and the Patient Greatly Relieved." The patient was a young woman in whom, in the absence of other etiological element, the condition was attributed to constricting clothing, and the operation consisted essentially in shortening the gastro-hepatic omentum and the gastro-phrenic ligament. Dr. John B. Deaver read a paper entitled "Report of Two Years' Work in Appendicitis, including Four Hundred and Sixty Operative Cases at the German Hospital, Philadelphia." The communication was largely a statistical one, and tended to show the advantage of early and thorough operation. Dr. Aloysius O. J. Kelly read a paper entitled "The Pathogenesis of Appendicitis—the Results of the Examination of Four Hundred and Sixty-nine Diseased Appendices Removed by Operation." Appendicitis was defined as an infectious disease dependent in the large majority of cases upon the activity of the bacterium coli commune, and the most important factors in its etiology were considered to be interference with the drainage in the appendix and increased virulence of the bacterium coli commune. Minor significance was attached to the epithelial expanse of the mucous lining, to the lymphoid elements that enter into the constitution of the appendix, to its position, to the size and attachments of its mesentery, to the character of its blood-vessels, to changes in its nerves, and to its position or attitude.

Damages for Typhoid Fever.—A man in Philadelphia has been awarded $1,500 damages for an attack of typhoid fever attributed to contamination of his water-supply by the overflow from a sewer left uncompleted by the city.

Extension of Hospital for the Insane.—Extensive improvements are contemplated at the Blackwood, N. J., Insane Asylum. A new fireproof wing of steel and brick, thirty-two by one hundred and twenty feet, and three stories high, is to be erected on the east side of the present structure, to contain forty-seven additional sleeping-rooms for patients, a dining-room, a pantry, and a wash-room. A cold-storage plant and steam-heating apparatus will be installed also. The estimated cost of the improvements is between $35,000 and $40,000.

Alleged Experiments on Patients.—It is reported by the cable from Berlin that Dr. Bosse, the Prussian minister of education, has ordered an investigation into the charge made in the Reichstag on March 11th, that many scientists, including those of the Breslau University clinic and the German hospitals, indulge in dangerous experiments with patients. The charges involve some scientists of world-wide reputation, including a number connected with the polyclinics and hospitals, some of the experiments mentioned being with the microbes of cholera and other infectious diseases.

How They Undo It.—In reply last week to the MEDICAL RECORD's little *exposé* of "How They Do It" over in the Quaker City, the *Journal* makes the following remarks: "We are glad the printer's 'stoneman' made the omission noted—the proper credit was in Dr. Stevens' manuscript and was unintentionally cut out in 'making-up'—because it gives our genial and urbane contemporary his single and coveted opportunity for displaying his characteristic courtesy and truthfulness. It would, of course, be useless to recall to his attention an appropriate Scotch proverb, 'Riven breeks should sit still!'" It used to be the "devil" who was blamed for whatever went wrong

in the making of journals; now it is the "stone-man"—at least, the Philadelphia stone-man is loose, and has been made to do duty as a substitute. It is fortunate that one so well suited for thrusts and jibes as a stone-man has been selected to bear the brunt of what needs must fall upon the poor printer's pate. To quote from one of the older poets, "The crime lies not so much in the act as in being discovered." And this reminds us of that other hot Scotch proverb, "Si non è vero, il uomo di piedra è ben' trovato."

State Bacteriologist.—Dr. A. Robin has been appointed bacteriologist to the State bacteriological station at Delaware College, Newark, Del.

Delaware State Board of Health.—Dr. E. W. Cooper, of Camden, has been elected president, and Dr. Alexander Lowber, of Wilmington, secretary.

Defervescence.—Teacher: "What happens when a man's temperature goes down as far as it can go?" Smart Scholar: "He has cold feet, ma'am."—*Tit-Bits.*

Rear-Admiral Van Reypen.—Through the action of the naval personnel bill, passed by the last congress, Dr. Van Reypen, the surgeon-general of the navy, in common with the other bureau chiefs, receives the rank and pay of a rear-admiral.

Lord Lister and Dr. R. Koch have been elected foreign associates of the Academy of Medicine of Paris, the first-named unanimously, the second without opposition, though several members abstained from voting. This honor is the highest which the medical profession of France can bestow on a foreigner.

An Obstetrical Society in Paris.—La Société d'Obstétrique, de Gynécologie et de Pédiatrie is the name of a new society recently established in Paris. *President*, Professor Pinard; *Vice-President*, M. Terrier; *General Secretary*, M. Varnier; *Annual Secretaries*, MM. Baudron and Legueu; *Archivist*, M. Potocki; *Treasurer*, M. Champetier de Ribes. Professors Hergott, of Nancy, and Moussous, of Bordeaux, were elected honorary members at the first meeting.

The International Journal of Leprosy, the publication of which, as previously stated, will shortly be begun, will bear the title, *Lepra: Bibliotheca Internationalis.* The editorial staff will include Drs. Besnier, of Paris; Deiho, of Dorpat, Russia; Hansen, of Bergen, Norway; Hyde, of Chicago; Hutchinson, of London, and Neisser, of Breslau. The journal will be polyglot, the articles being printed in all the principal languages. The publication is an outcome of the International Leprosy Congress, held in Berlin in the autumn of 1897.

Congress of American Physicians and Surgeons.—A meeting of the executive committee of this union of special societies was held in this city on March 18th, and the following officers were elected for the next congress, to be held in Washington in the second week in May, 1900: *President*, Dr. Henry J. Bowditch, of Boston; *Secretary*, Dr. W. H. Carmalt, of New Haven; *Treasurer*, Dr. Newton M. Shaffer, of New York. The committee, which is composed of one delegate of each of the fourteen societies constituting the congress, re-elected Dr. Landon Carter Gray as chairman, and Dr. William Kelly Simpson, 952 Lexington Avenue, New York, as secretary. The next congress will occupy three days only (Tuesday, Wednesday, and Thursday). General sessions of the congress will be held on Tuesday and Wednesday afternoons. The president's address will be delivered on Wednesday evening, and will be followed by a reception. On Thursday evening the banquet will be given. This will make it easy for those who wish to escape this usually dreary function to leave for home without losing any of the useful and pleasant part of the congress.

American Laryngological, Rhinological, and Otological Society.—The fifth annual meeting of this society will be held in Cincinnati on June 2 and 3, 1899. The president of the society is Dr. S. E. Solly, of Colorado Springs, and the secretary and treasurer Dr. Robert C. Myles, 46 West Thirty-eighth Street, New York City.

The Hiccup Style of Spelling.—In a notice of the election of Dr. Simmons to the editorship of the *Journal of the American Medical Association*, a writer in the *Medical Press and Circular* pays his respects to the Philadelphia style of anorthography in the following terms: "For English readers the *Journal* has only one drawback, and that is the prevailing irritating method of spelling which disfigures its pages. There are some orthographic maniacs in Philadelphia and elsewhere who have left no stone unturned in order to diffuse this form of spelling among American editors. But the curious and most significant point is that, despite every persuasion, the New York medical journals have refused to follow any such lead. Another matter which claims attention is the remarkable inconsistency of this American method of spelling. The plan is to 'lop off' the 'al' in adjectival words, such as anatomical, physiological, and so forth. But we fail to see why the 'al' should be allowed to remain in other words of the same kind. The following sentence will illustrate our meaning: 'The case is really a gynecic [this word actually appeared in an American contemporary] one. But doubt may be felt whether surgic treatment would be better than medic under the circumstances. The patient is obviously not strong in a physic sense, and probably, therefore, the most practic way of treating her would be first of all to try the effects of therapeutic measures.' The new editor of the *Journal of the American Medical Association* has now the opportunity of purging the pages of this admirable publication from a new-fangled system of spelling English words, which is both inconsistent, unnecessary, and irritating."

Medical Practitioners in England and France.—According to the "Medical Directory" for Great Britain and Ireland there was a decline as gratifying as it was great in the number of newly created medical

practitioners in that country during the year 1898. In 1895 there was an increase of 730, in 1896 of 958, in 1897 of 619, but in 1898 of only 91. The total number of lawful practitioners in the United Kingdom is now 34,994. In France there were but 17,735 medical practitioners at the beginning of the present year, but that was greater by 1,751 than the number at the beginning of 1898.

Gift to a Library.—Mrs. George H. Rohé has given to the library of the Medical and Chirurgical Faculty of Maryland the medical library, numbering some five hundred volumes, of her late husband, who died recently in New Orleans.

The American Gastro-Enterological Association.—The second annual meeting of this association will be held at The Shoreham, Washington, D. C., on Tuesday, May 2, 1899. The president of the association is Dr. D. D. Stewart, of Philadelphia, and the secretary Dr. Charles D. Aaron, of Detroit.

Food Inspection of the Board of Health.—In the report of the sanitary superintendent of the department of health for 1898, it is stated that 860,963 pounds of bad meat were condemned and destroyed, 191,880 pounds of this being "bob" veal. Of fish no less than 1,232,894 pounds were seized, and of fruit and other food stuffs 7,746,959 pounds were condemned. The milk supply is believed now to be of a good average excellence. The daily amount sold in the city is 1,212,000 quarts of milk, 20,000 quarts of cream, and 10,000 pounds of condensed milk. The cows furnishing this supply are estimated to number 186,333, and are pastured in five States, namely, New York, New Jersey, Pennsylvania, Connecticut, and Massachusetts. Farmers within and adjoining the city limits supply 332,000 quarts of milk, the remaining 880,000 quarts being brought by rail. For the purpose of supervising and controlling the sale of milk the city is divided into districts, each of which is placed in charge of an inspector. The wholesale portion of the supply is inspected on the platform of the railroad depots or in front of ferry-houses, which terminate the railroad. As the cars used in transportation are especially adapted for the purpose, being provided with ice-boxes and heating apparatus to prevent souring in summer or freezing in winter, and the highest rate of speed is maintained, our milk supply is delivered generally in good condition, even from the more remote points. The facilities provided by the railroads to the shippers, namely, ice-boxes at shipping-points and agents to care for the milk while waiting transportation, also tend to keep the milk in good condition, so that, despite the great distance from which the milk is obtained, it is still fresh and in good condition when delivered to the consumer. No person or firm is allowed to sell or deliver milk in New York City without a permit from the board of health. One of the most difficult of all the nuisances to abate is the keeping of live chickens in tenement houses. There are eighteen licensed chicken slaughter houses in the city, yet despite this provision, and notwithstanding inspection day and night by the sanitary police, live chickens continue to be kept by Hebrews and Chinese in tenements, and bring large numbers of their owners to court and conviction.

Treatment of Rabies by the Health Board.—During the past year fifteen persons bitten by supposedly mad dogs received preventive inoculations, after the Pasteur method, from the physician of the New York board of health.

International Provision Against Epidemics.—It is stated in the *Medical Times and Hospital Gazette* that Prince Orbeliana, a Russian nobleman, proposes to establish an international sanitary league to supply a complete staff of bacteriologists, medical officers, chemists, and nurses (all of whom have gone through training in actual contact with epidemics), to deal with outbreaks in any country that may be affected. The prince sees no reason for counting absolutely on the supposed immunity of Europeans in the present day against plague, which formerly carried off the inhabitants of the cities of Europe by the hundred thousand. Large numbers of people in European countries, he argues, live in conditions almost as favorable to epidemics of plague as those that prevailed when London, Moscow, Marseilles, Milan, and Naples suffered so terribly by it. In order to meet a danger which, in a large measure, affects all countries alike, it is suggested that the means of resistance should be placed on a better and an international footing.

Army Hospitals at Manila.—In a report on hospital accommodations, made under date of January 22d to the surgeon-general, Major Henry Lippincott, surgeon-in-chief at Manila, says that the First Reserve Corps hospital, which is the largest hospital there, contained at that time five hundred and eighty-three patients. In addition to the main building there is a tent ward, of one hundred and eighty beds, of which, however, few were in use at the time of writing. A small building, furnished by the Red Cross Society and called the Red Cross ward, is conducted in connection with the hospital, affording space for about thirty beds. In the Second Reserve Corps hospital there were one hundred and thirty-three cases, and it had a daily average during November and December of one hundred and seventy-seven cases. The district hospital at Cavite has furnished sufficient accommodation for the troops garrisoned there. Major W. O. Owen, brigade surgeon of volunteers, has established on Corregidor Island a convalescent hospital, with accommodation for one hundred and seventy patients, which number can be increased to four hundred or more, should it become necessary. There are buildings on the island for the accommodation of seventy-five beds, and space sufficient for the erection of enough tents for three hundred and twenty-five additional beds. There were one hundred and sixty-eight sick on the island at the time of the report.

Cremation in England.—In the annual report of the Cremation Society of England for 1898, it is stated that there were 240 cremations at Woking during the past year, which was an increase of 67 over

the previous year. At Manchester 62 bodies were cremated, at Glasgow 12, and at Liverpool, where a branch of the society had been formed during the year, 27. At the annual meeting of the society, held on March 15th, Sir Henry Thompson delivered an address in which he traced the history of the society during the twenty-five years of its existence. He said that the members of the society desired to construct a completely equipped crematorium in the near neighborhood of London, and to induce the local government board to declare cremation imperative in all cases of death by contagious disease.

The Pure-Beer Bill, prohibiting the use of deleterious chemicals in the brewing of beer, passed the New York assembly on April 6th, by a vote of 80 to 54.

Dr. A. L. Nicholson has been appointed to the chair of gynæcology in the Long Island College Hospital, to succeed Dr. A. J. C. Skene, resigned.

Classification of Causes of Death.—A pamphlet containing an exposition of the Bertillon classification of causes of death has been issued by the American Public Health Association. This association, comprising the sanitary officers of Canada, Mexico, and the United States, unanimously recommended the general adoption of this system for mortality reports at its last meeting, as did also the conference of State and provincial boards of health of North America. The system is used in France and is making progress in Europe and in South America. It is hoped that it may meet with general adoption all over the world in time to begin the mortality statistics of the next century on a uniform basis. To this end, an International Commission of Revision, representing all of the countries desiring to employ the classification, will meet in Paris at the time of the International Congress of Hygiene and Demography in 1900. The several national commissions constituting this body are engaged in ascertaining the wishes of the registrars and users of mortality statistics of their respective countries in regard to the changes which shall be made in the present form, and the present pamphlet is issued chiefly for this purpose. It will be sent, free of expense, to all persons desiring it, and the advice and suggestions of all sanitarians, pathologists, statisticians, and others interested in the subject of statistics of causes of death are earnestly solicited. Requests for the pamphlet and for other information on the subject may be addressed to Dr. Cressy L. Wilbur, secretary of the United States commission of revision, Lansing, Mich.

The Philippine War.—The cost of life and limb, as reported to the adjutant-general for the period from February 4th to April 4th, shows: Killed, 184; wounded, 976.

A Memorial to the Late Dr. Joseph O'Dwyer.—A committee of physicians has been formed for the purpose of doing honor to the memory of Dr. Joseph O'Dwyer. The first meeting was held at the New York Academy of Medicine, November 22, 1898, under the chairmanship of Dr. J. D. Bryant, and was mainly devoted to organization. Dr. George F. Shrady was elected permanent chairman, and Dr. Alfred Meyer permanent secretary, and the following committee on scope and plan was appointed: Dr. Dillon Brown, chairman, and Drs. Robert Abbe, R. G. Freeman, L. Emmett Holt, and Louis Fischer. At the second meeting, held at the Academy of Medicine, March 13, 1899, the report of the committee on scope and plan was adopted, and now only awaits final action of a meeting of the full committee. The memorial to Dr. O'Dwyer will probably take an educational form, for by the plan now outlined it is proposed to raise a fund of $30,000, the interest of which shall support two O'Dwyer fellowships in pædiatrics, open to competition by physicians who graduate in the United States, and to be held by the successful competitors for a period of two years. During this period they must furnish satisfactory proof of their engagement in original research work to a committee of five, one of whom shall be appointed by the president of Harvard University, one by the dean of the Johns Hopkins Medical School, one by the provost of the University of Pennsylvania, one by the president of the University of Chicago, and one by the president of the New York Academy of Medicine. Many details of this general plan are still to be arranged.

Obituary Notes.—Dr. Richard Kay died at his home in this city on April 2d, aged fifty-three years. He was born in England and came to this country in 1871. In 1885 he was graduated in medicine from the University Medical College, but devoted himself to veterinary practice.—Dr. Nicholas H. Cheeseborough died at his home in Summit, N. J., on April 6th. He was born eighty years ago and was graduated in medicine from the College of Physicians and Surgeons in this city in 1845. He practised in New York until 1869, and then removed to Hoboken, N. J., where he followed his profession for twenty years. In 1889 he went to Summit, N. J., having retired from practice.—Dr. William Nelson, of Danville, Va., died at his home on April 6th, from the result of a surgical operation. He was a native of Hanover County, Va., and he and his brother were the original "Two Little Confederates" in Thomas Nelson Page's story of that title.—Dr. James McAlpin Somerville died at Philadelphia on April 9th, at the age of seventy-four years. He was graduated from the medical department of the University of Pennsylvania in 1857, and was engaged in the practice of his profession until about a year ago. He was, besides, an artist, scientist, and scholar.—Dr. James B. Gibson died on April 9th, at Colorado Springs, of renal disease. He was a graduate of the medical department of McGill University in the class of 1886. He was formerly an interne in the Manhattan Eye and Ear Hospital in this city, but about three years ago went to Colorado Springs because of ill health, and there practised as an ophthalmologist.—Dr. Gideon J. Stivers, of Louisville, committed suicide by drowning on April 4th. His mind was unbalanced, and he had tried to kill himself with carbolic acid a few days before his second and successful attempt at self-destruction.

Reviews and Notices.

SKIAGRAPHIC ATLAS, Showing the Development of the Bones of the Wrist and Hand. For the Use of Students and Others. By JOHN POLAND, F.R.C.S. London: Smith Elder & Co.

THIS is a series of skiagrams intended to further illustrate the author's larger work on traumatic separation of the epiphyses. The anatomist and student of osteology, orthopædics, etc., will find it of great usefulness. The anatomical description of the bones is reproduced from the previous volume reviewed in these columns.

UEBER DIE WIRKUNG DES NEUEN TUBERKULINS TR AUF GEWEBE UND TUBERKELBACILLEN. Experimentelle Untersuchungen von DR. H. STROEBE. Jena: Verlag von Gustav Fischer. 1898.

THIS pamphlet of one hundred and fourteen pages is devoted to experimental investigations of the influence of tuberculin (TR) on the tubercle bacilli and tissues, as found in the author's studies with rabbits and guinea-pigs. It shows evidence of considerable application and careful thought, and is a thoroughly scientific contribution to the subject.

A TEXT-BOOK OF MECHANO-THERAPY (MASSAGE AND MEDICAL GYMNASTICS). Especially Prepared for the Use of Medical Students and Trained Nurses. By AXEL V. GRAFSTROM, B.Sc., M.D., late Lieutenant in the Royal Swedish Army, etc. New York: O. M. Foegri & Co., Publishers. 1898.

THIS little work of one hundred and thirty-nine pages is illustrated with eleven pen-and-ink sketches made by the author. The matter is condensed and popularized. The scheme is that of the Royal Gymnastic Central Institute of Sweden, modified by the writings of prominent teachers, and much of the author's own magazine writings have been worked in. Students of massage will find much of a practical nature here given.

THE ELEMENTS OF PHYSICAL EDUCATION. A Teacher's Manual. By DAVID LENNOX, M.D., late R.N., Medical Director of Dundee Public Gymnasium; and ALEXANDER STURROCK, Superintendent of Dundee Public Gymnasium, Instructor to the University of St. Andrews and Dundee High School, etc.; with Original Musical Accompaniments to the Drill by HARRY EVERITT LOSEBY. Edinburgh and London: William Blackwood & Sons.

THIS is a book for teachers, trainers, and those interested in the physical development of the young. Chapter I. deals with the physiology and psychology of muscular exercise, Chapter II. with physical drill, giving general instructions for single pupils and classes in marching, movements, rod and bell-bar exercises, Indian club swinging, etc., etc. It is freely illustrated to present more properly the ideas intended.

NOTES ON SURGERY FOR NURSES. By JOSEPH BELL, M.D., F.R.C.S. Edin., Consulting Surgeon to the Royal Infirmary and to the Royal Edinburgh Hospital for Sick Children. Fifth edition, thoroughly revised. 194 pages. Edinburgh: Oliver & Boyd, Tweeddale Court. London: Simpkin, Marshall Hamilton, Kent & Co., Limited. 1899.

THE author gives in this little volume some very lucid explanations of general surgical conditions such as would be valuable to a nurse who desires to follow the physician's directions in an intelligent manner. The book is divided into twelve chapters: Inflammation; Suppuration; Ulceration; Gangrene; Pyæmia and Septicæmia; The Healing of Wounds; Burns and Scalds; Fractures and Dislocations; Tumors; Special Operations; The Surgical Nursing of Children; General Advice to Nurses, and an appendix. It makes an excellent handbook for nurses, especially those engaged in general hospital work.

UEBER DIE BEHANDLUNG DER KINDERKRANKHEITEN. Briefe an einen jungen Arzt. Von DR. MED. H. NEUMANN. Berlin: Verlag von Oscar Coblentz. 1899.

AS might be expected from the title, the author does not present any text-book-like arrangement of the therapy of infancy and childhood, but rather offers, in the form of letters addressed to a young colleague, the methods of treatment which he has found most efficacious during many years of practical experience. In twenty-two letters spread over two hundred and sixty-five pages, he describes in a conversational and interesting manner his personal experience, leaving aside all theoretical considerations and the opinions of others. Five letters are devoted to general topics—feeding, hydrotherapy, fever, etc.—the remainder to special therapy. This style of writing in scientific literature is certainly unique, if not altogether new. Apart from the letters in general, the book abounds in numerous footnotes, which offer a fund of practical information as to elegant medication, cautions against overdose, food preparations, baths, etc. While not a work of reference, this book will appeal to the general practitioner as a valuable discourse possessing a striking individuality.

MATERIA MEDICA, PHARMACY, PHARMACOLOGY, AND THERAPEUTICS. By W. HALE WHITE, M.D., F.R.C.P., Physician to and Lecturer on Pharmacology and Therapeutics at Guy's Hospital, London; Examiner in Materia Medica to the University of London, etc. Edited by REYNOLD W. WILCOX, M.A., M.D., LL.D., Professor of Medicine and Therapeutics at the New York Post-Graduate Medical School and Attending Physician to the Post-Graduate Hospital; Visiting Physician to St. Mark's Hospital, etc. Fourth American Edition, thoroughly revised. Philadelphia: P. Blakiston's Son & Co. 1898.

THIS well-known and really excellent work has been made more useful by the thorough revision of the latest English edition which the American editor has given us. Additions have been freely made from current medical literature of all countries, and the author has been influenced in what to add by a rather extended personal experience with the more recent official as well as unofficial drugs. Matter not contained in the English work is indicated by being enclosed in brackets. The index is carefully made and very full. In a word, it is a work which any college need not hesitate to place on its list of books recommended to the student.

CHIRURGIE DE L'UTERUS. Par Henrie Delagénière. Avec 378 figures dans le texte. 462 pages. Paris: Institut de Bibliographie Scientifique, 93 Boulevard Saint-Germain. 1898.

THIS work is exceedingly valuable in bringing together most concisely and succinctly an account of the various surgical procedures invented in the past years for the relief of the various pathological conditions of the uterus and its adnexa. One will not find a clearer and more able discussion of these various procedures than in these pages. No superfluous descriptions are wasted, but the matter in hand is made clear by admirable plates, and by the methodical arrangement of the subject matter. It is also interesting to view these matters from the French standpoint. The chapters devoted to the different procedures for operation on the broad and round ligaments are especially valuable. The account of the various operations and the recent progress made in the removal of fibroids is also valuable. American readers will be interested in the account of trachelorrhaphy, or Emmet's operation for the repair of the cervix. The author says of it, that it has no precise recommendations and gives less good results than amputation of the cervix. The chapter on pessaries is very weak, and of little use. In the description of the removal of submucous fibroids he fails to describe or mention that most useful of all instruments in this procedure, Thomas' serrated spoon saw.

RAILWAY SURGERY. A Handbook on the Management of Injuries. By CLINTON B. HERRICK, M.D., Surgeon to D. and H. and Fitchburg Railways, etc. Illustrated by numerous original engravings. New York: William Wood & Co. 1899.

WE cannot agree with the author of this work that the treatment of injuries sustained in various ways upon railroads is to be considered sufficiently distinct from that of other severe injuries to constitute a class by itself. The injuries seen after railroad accidents are undoubtedly of tremendous severity, but otherwise they do not differ from any other severe crushes or lacerations. The same grinding, tearing, and crushing forces are, surgically speaking, at work in all machinery casualties. The author has given us some useful suggestions on the transportation and emergency treatment of severe injuries, and shows us that some railroads have a

well-organized system of relief. His discussion of surgical conditions and indications is an epitome of the proper treatment of very extensive injuries of various structures and organs, and as such is useful. The book, however, perhaps assumes a little too much of the text-book form for the class of readers to whom such a work would be expected to appeal. The chapter upon "Traumatic Neurasthenia" rather reaches into the domain of neurology. The illustrations and typography are excellent.

TRAITÉ DE CHIRURGIE, Clinique et Operatoire. Publié sous la direction de MM. A. LE DENTU et PIERRE DELBERT. Volume VII., 844 pages. Paris: 1899.

THE seventh volume of this treatise on surgery has for its subjects the breast, abdomen, peritoneum, and intestinal hernia. The chapter upon the diseases of the breast is written by J. W. Binaud and J. Braquehave. It deals with the anomalies of the breast, the inflammations and benign and carcinomatous tumors. The subject is carefully and elaborately treated without anything especially new or striking to recommend it. The illustrations are sparse and not very well executed. The same may be said of those illustrating the work in general. The chapter on appendicitis, by Aimé Guinard, is especially readable. He says that it is a fact absolutely demonstrated that cæcal appendicitis is the origin of all the inflammations, or all at least of the great majority of pericæcal infections. To show the state of ignorance that formerly existed in regard to appendicitis he quotes from the autopsy of Gambetta, dated January 1, 1883, and signed by such surgeons as Lannelongue and Verneuil, and such physicians as Siredey and Cornil. The appendix was preserved, and one can yet see very clearly it was ulcerated and had perforated. It was mentioned in the report of the autopsy that there was found "a large and extensive purulent infiltration behind the colon and in the abdominal wall, and that a slight degree of general peritonitis had taken place in the last moments of life." The author remarks that to-day there is not one of our externes who in the presence of these lesions of the appendix, of this retrocæcal suppuration, and this recent infectious generalized peritonitis, would not make the diagnosis of perforating appendicitis followed by infection, at first localized and afterward extending to the whole peritoneum. He reviews at considerable length the theories which occasioned great discussions in 1896 and 1897 before the Société de Chirurgie et de l'Académie de Médecine. Those of Talamon and Dieulafoy, that the closing of the appendix caused the trouble, obtained great support. The writer says it is necessary to explain the cases of appendicitis in which the cavity is not closed, and those cases of closed cavities without infectious peritonitis, and he announces the conclusion that the obliteration of the vermicular canal is the result and not the cause of appendicitis. This total or partial closing of the appendix acts as a predisposing cause of the first order, above all when it is only partial. Guinard has also written the chapter on "Affections of the Abdomen." Jaboulay gives an interesting and elaborate chapter on hernias which will repay perusal.

The Sewage of Naples.—*The Sanitary Record* says: "It will be glad news to tourists to learn that the sewage problem has made its appearance at Naples. The disposal of the town refuse has led to a lengthy discussion at the meetings of the Reale Institute d'Incoraggiamento di Napoli, and the publication of a number of papers in their large annual volume of atti. The subject is introduced by Prof. Paolo Boubée, who seems rather to favor treatment by the Arnold Le Blanc system, or the use of destructors, though it would appear that the refuse of the Neapolitan streets is too wet and also too poor in carbon to burn without the additional consumption of coal. At present the street sweepings are taken and deposited some distance outside the city and the accumulations are ultimately used as manure, but the effluvia arising from so large a mass of putrefying matter have become prejudicial to health. It is suggested that the problem might be best solved by a series of experiments on the different alternative methods of disposal."

Therapeutic Hints.

Menorrhagia.—

℞ Acidi gallici ..... gr. xv.
Acidi sulphurici aromat. ..... ♏ xv.
Tincturæ cinnamomi ..... ʒ ij.
Aquæ destill ..... ℥ ij.
M. S. One dose; take every four hours until bleeding ceases.

—HAZARD.

Cystitis.—

℞ Extr. hyoscyami,
Extr. cannabis indicæ ..... āā 0.4
Sacch. alb 5
M. f. pulv. div. in dos. æq. No. xii. S. One powder t.i.d.

—ULZTMANN.

Catarrhal Jaundice.—

℞ Ammonii iodidi ..... ʒ i.
Liq. potassii arsenitis ..... ʒ ss.
Tincturæ calumbæ ..... ʒ iv.
Aquæ destill ..... ℥ iss.
M. S. Teaspoonful before meals.

—BARTHOLOW.

Chloasma.—

℞ Naphthol 2
Glycerin 1
Tinct. sapo. virid 50
M. S. Apply twice daily.

—KAPOSI.

Epididymitis.—

℞ Extr. belladonnæ 1
Ung. simpl 20
M. S. Apply.

—NEUMANN.

Myringitis.—

℞ Acidi boracici 0.3
Cocain. muriat 0.5
Aquæ destill 10
M. S. Fifteen drops into the ear t.i.d.

—GRUBER.

Vulvitis.—

℞ Liquoris plumbi subacetatis ..... ʒ i.
Tincturæ hyoscyami ..... ʒ ij.
Aquæ camphoræ ..... q.s. ad ℥ viij.
M. et ft. lotio. S. Apply with saturated cloth.

—WARING.

Chronic Rheumatism.—

℞ Liquoris potassii arsenitis,
Potassii iodidi ..... āā ʒ ij.
Syrupi simplicis ..... ℥ viij.
M. S. Teaspoonful three times a day in water, between meals.

—DA COSTA.

Lumbago.—

℞ Potassii iodidi ..... ʒ ss.
Tincturæ opii deod ..... ʒ ij.
Spiritus lavandulæ comp ..... ʒ i.
Spiritus ætheris nitrosi ..... ℥ ss.
Aquæ destillatæ ..... ℥ xij.
M. S. Two tablespoonfuls twice daily.

—SIR B. BRODIE.

Gout.—

℞ Tincturæ colchici seminis ..... ♏ xv.
Magnesii carbonatis ..... gr. vi.
Magnesii sulphatis ..... ʒ ss.
Aquæ menthæ piperitæ ..... q.s. ad ℥ i.
Fiat haustus. S. Repeat according to circumstances.

—*University Hospital.*

Hemorrhagic Sputum.—Hemorrhagic sputum may be seen in: (*a*) Croupous pneumonia; (*b*) pulmonary infarction; (*c*) in cardiac lesions producing marked stasis in the pulmonary circulation; (*d*) violent paroxysmal cough (coming from pharynx or larynx); (*e*) hæmoptysis, the expectoration being bright red and frothy. Large quantities of blood may be spat up in erosions of blood-vessels through ulceration, in cases of pulmonary tuberculosis, bronchiectasis, gangrene, and sometimes in cases of malignant disease of the lung. It is always well to make sure that the blood

does not really proceed from the patient's gums.—T. J. BOKENHAM, "Treatment," vol. ii., No. 20, p. 630.

Asthma.—

℞ Potassii iodidi ..... ʒ iij.
Extracti belladonnæ fluidi..... ʒ i.
Extracti lobeliæ fluidi..... ʒ ij.
Extracti grindeliæ fluidi..... ʒ ss.
Glycerini,
Aquæ destillatæ .....āā ʒ iss.
M. S. Teaspoonful every two, three, or four hours, as necessary.

—BARTHOLOW.

Insomnia of Alcoholism.—

℞ Ess. Jam. ginger,
Spt. amm. aromat.,
Tr. valerian.....āā ʒ ij.
Sat. solut. potass. brom.....q.s. ʒ viij.
M. S. One tablespoonful in water every three to four hours.

—C. W. HUNT, *Pacif. Med. Journ.*, January, 1899.

Diphtheria.—

℞ Iodidi trichloridi..... 5 gm.
Aquæ destil..... 500 "
Saccharini ..... .50 "
S. To be diluted with ten parts of water and used as a gargle ten times a day.

℞ Sod. sozoiodol. pulv..... 5 gm.
Sulph. precipitati ..... 15 "
S. To be blown into the nose and throat ten times a day, after gargling.

—DR. N. ENGLUND.

Sore or Cracked Nipples.—

℞ Castor oil,
Subnitrate of bismuth.....āā 3 i.
This is applied freely to the sore nipple.

—DR. HIRST.

To Preserve Cocaine Solutions.—

℞ Cocain. hydrochl..... 0.25
Aquæ destillat..... 10
Acidi salicylici
vel
Acidi carbolici .....āā 0.01

This can be kept for two months without alteration.—C. JONAS, *Bull. de la Soc. Royal de Pharm. de Brux.*

Injectio Cocaini Hypodermica.—

℞ Cocain. hydrochlor..... 1
Acid. salicylici..... 0.015
Aq. destil. bull 10

—*Pharm. Britan.*

To Check Milk Secretion.—

℞ Atropinæ sulphat..... gr. 1/4
Magnes. sulphat..... ʒ ij.–+ 3 viss.
Infus. gentianæ..... ʒ viiss.
M. S. Tablespoonful every two hours.

—*Gaz. Hebdomad.*

Injections of Gelatin.—

℞ Gelatin,
Sodium chloride .....āā 10
Aquæ 1,000
Sterilize. Begin by injecting into the thigh 50 c.c. and increasing up to 150 c.c.

—LANCEREAUX and PAULESCO.

In Hæmoptysis of Tuberculosis:

℞ Gelatin ..... 7 gm.
Sodii chloridi..... 20 "
Aquæ ..... 1,000 "
Dissolve with heat, filter, and sterilize. Inject at first 50 c.c. beneath the skin of the abdomen.

In Aneurism:

℞ Gelatin ..... 2 gm.
Sodii chloridi ..... 10 "
Aquæ..... 100 "
Initial dose 25 c.c., increased to 50 c.c.

—HUCHARD and DEGUY.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 6, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

Syphilis of the Respiratory Passages.—DR. FRANCKE H. BOSWORTH read a brief paper on this subject. He said that his experience had taught him that there was practically but one syphilitic manifestation in the nose, and that was the gumma.

In the very large majority of cases it was not recognized until the gumma had broken down, and had resulted in the formation of a deep ulcer and in necrosis of the bone. It was rare to meet with necrosis of bone in the nose, aside from its association with malignant disease, except as a result of syphilis. There seemed to be no adequate explanation of the frequency with which syphilis of the nose resulted in necrosis of bone, except that the manifestations of this disease in the nose belonged to the tertiary period. Syphilis of the fauces consisted in a deposit of inflammatory material in the superficial layers. Mucous patches demanded exceedingly vigorous local treatment. The patient should be seen daily, and the patches cauterized with the solid stick of nitrate of silver until they had healed. If the outbreak occurred two or three years after the primary sore, the result was a superficial ulcer; if it occurred after six to ten years, the ulcer would be deep. This ulcer manifested a marked hesitancy in passing beyond anatomical barriers. He knew of no morbid process occurring in the air tract which resembled the manifestations of syphilis. Syphilitic ulcers of this region should be distinguished from tuberculosis and malignant disease. The term "ulcer" was very commonly used loosely and vaguely in medicine. The best definition of an ulcer that he knew of in the English language was that of Erichsen, viz.: "A solution of continuity with progressive waste of tissue." The local medication was of secondary importance as compared with the internal administration of iodide of potassium in the treatment of syphilis of the pharynx. The peculiarity of syphilis of the nose was its "explosive action"—in other words, a deposit of gummatous material, and its sudden breaking down, resulting in ulceration and necrosis limited to the area of the original gumma. After this, the constitutional virus seemed to become quiescent for a longer or shorter time, and then a new outbreak occurred. The indication was to remove all the necrosed bone as soon as possible. A marked feature of syphilis of the pharynx was the degree of contraction occurring during the process of healing. It often seriously interfered with deglutition or respiration. This severe ulcerative process, it seemed to him, belonged essentially to the food-tract. Syphilitic ulcers of the larynx were usually limited in extent, and superficial. The usual type of laryngeal syphilis was a mild one, there being perhaps one severe case to twenty mild ones. Local treatment was of some importance, though secondary to the internal administration of remedies. The indication was promptly to arrest the local process of ulceration by the administration of iodide of potassium, and after this the long-continued use of mercurials.

A Discussion on Malaria.—Researches on the Etiology of the Texas Cattle Fever, and its Bearing upon Malaria.—PROFESSOR THEOBALD SMITH, of Harvard University, opened the discussion on malaria with a paper on this subject. The object of his communication was to give support to the inoculation theory of the origin of this disease. He said that it

had been known for many years by the farmers of the United States that cattle going north beyond a certain line at a certain season contracted a peculiar disease, and also that the cattle driven from the north, south of this line likewise became affected with the disease. This line was now drawn by the Department of Agriculture in an irregular way between the twenty-ninth and forty-second parallels of latitude. Beginning with 1868 various reports had been issued from time to time on this disease. In 1888 the speaker said he had first become interested in this disease by the examination of portions of various organs from animals that had died of this fever. The material had not been in sufficient quantity at that time for the satisfactory study of the blood. Subsequently, a coccus had been found in the blood of the affected animals. In 1889 he had been able to find intracorpuscular parasites. The microscope, Thoma's blood-counter, and the clinical thermometer had thereafter been the chief means of recognizing Texas fever.

Symptomatology.—The acute type of the disease began with a fever, the temperature not infrequently reaching 108° F. or over. During this stage only a comparatively small percentage of the blood corpuscles contained the parasites, but there was at this time an exceedingly rapid destruction of the corpuscles. When the animal succumbed in the first week, the spleen was found enormously engorged, and its pulp partially disintegrated. In sections of the liver injections with solidified bile could be seen. The kidneys were enlarged and congested. The bladder was often filled with wine-colored or blackish urine. By smear preparations many infected corpuscles could be found. In the kidney the corpuscles would be found disintegrated, and the parasites free. The parasite in the acute disease was largely restricted to the capillaries of the internal organs. The heart muscle had usually furnished him with the best specimens of these parasites. In the early stage of the life of the intracorpuscular organism a motile, rod-like form could be seen moving within the corpuscle.

Spread by Cattle Ticks.—The theory that insects carried the disease had been suspected for many years. Experiments undertaken at Washington by F. L. Kilburn had soon shown that the ticks were an essential factor in the dissemination of the disease. This ectoparasite was a very widely disseminated organism. The cattle tick was exclusively parasitic in its habits, and completed its life upon one animal. Susceptible animals remained well for about five weeks after the infection of the fields with the ticks, and then suddenly developed high fever and died soon afterward. Young ticks had been reared in the laboratory artificially, and cattle infected with them had developed the characteristic fever although perhaps this disease had been somewhat milder than usual. This malady had been found to exist in Finland, Roumania, Italy, Austria, South Africa, and in German East Africa. The blood parasite of Texas fever had been proved to exist actively in the blood for as long as five years.

Relapses.—When animals were infected in the early summer the disease assumed the acute form. If the animal survived the first week it might recover. In from three to five weeks after the first attack, a milder one was ushered in, characterized by a moderate evening temperature, marked anæmia, and the presence of a small coccus-like parasite on the periphery of the corpuscles. These bodies might persist for four or five weeks until colder weather arrived. This type of fever was common in the fall, the acute stage preceding it being often short and unnoticed. He had explained this relapse by the occurrence of partial immunity, by virtue of which the development of the parasite had been retarded.

Mosquitoes and Malaria.—Since 1896 he had been working upon the inoculation theory of malaria, founded upon his knowledge of the Texas cattle fever. This theory assumed the introduction of the malarial parasite into human beings through the medium of mosquitoes and perhaps other insects. The fact that malaria was apt to prevail in localities in which there were many sluggish streams and pools of standing water, and where mosquitoes abounded, lent some color to this theory. It was now believed that the blood parasite was protected through the winter in the bodies of human beings. The harmlessness of mosquitoes in regions still free from malaria had been well established. Experiments with ticks pointed to a loss of infectious power when they were restricted to northern animals. The appearance of malaria during excavations he attributed to the introduction of blood organisms into the bodies of the laborers, who were often chronically infected. In our own climate it was not too late to stay the diffusion of malaria, and the inoculation theory of malaria was a safe one with which to begin a crusade against this menace to the public health.

Present Status of the Inoculation Theory of Malaria.—Dr. Walter B. James read a paper with this title. He said that by the inoculation theory of malaria of the present day was meant the theory of the inoculation with the disease by means of mosquitoes. It was not a new idea, as it had been mentioned by certain Roman writers nearly as far back as the Christian era. That malaria could be conveyed from diseased to healthy persons by direct intravenous injection of blood had been exclusively proved in the early days of the study of the malarial organism. In support of the theory regarding the part played by mosquitoes in the inoculation with malaria there were many facts of common observation. The malarial season was usually that in which mosquitoes were the most numerous. Again, the physical conditions which predisposed to malaria were favorable to the growth of mosquitoes. Staying in at night, sleeping on beds raised some distance above the ground, and the observation of certain travellers in the tropics of the protection afforded by sleeping under nets, were significant facts in connection with the prevention of malarial infection of the human being. Ross had studied carefully what was known as "bird malaria." He had found that if mosquitoes were fed with the blood of such infected birds, the blood-vessels in the stomachs contained the hæmatozoa characteristic of bird malaria. A study of the further development of the parasites showed that they developed remarkable powers of penetrating the tissues. It was not known as yet whether the mosquito was more than an intermediary host, but it had been ascertained that certain species of mosquitoes were best for the purposes of such experiments. As yet, comparatively few experiments had been made and published, there being many practical difficulties in conducting them. The work could be done only in a malarial region, and generally in one far removed from laboratory facilities. Koch, Laveran, and Nuttall had been shown the dissections of mosquitoes made by Ross, and all had recently expressed a leaning toward Ross' theory. Before making practical application of this theory it would be necessary to know much more about the life history of the organism outside of the human body, and perhaps also outside of the mosquito host. It was quite possible that other insects than mosquitoes might act as intermediary hosts. The natural science department of the British Museum had recently distributed a small pamphlet giving the best methods of catching, preserving, and studying mosquitoes. The mosquito theory would help to explain the phenomenon that certain localities which had never before been malarious had become so after the emigration into

them of persons coming from malarial countries. This was very closely allied to what was observed in connection with the dissemination of the Texas cattle fever. If the mosquito theory of malaria should be proved, the prophylaxis of this disease would be especially hopeful. For instance, the number of mosquitoes in a locality could be greatly diminished by draining the small pools and streams, or, where this could not be conveniently done, by floating kerosene on the water from time to time, thus preventing the development of the mosquito larvæ.

African Black-Water Fever.—Dr. F. P. Lynch, late of the Congo Free State, read a paper on this subject. He said that his purpose was to present briefly some clinical observations regarding this fever. These had been confined to the lower Congo, in which region the number of foreign residents was limited to a few hundred people scattered over an area of two or three hundred miles. The fever was confined to the white population, and prevailed during the hot or dry season. Its most marked symptom was a claret-colored urine. It was usually ushered in suddenly by this change in the appearance of the urine. The temperature ordinarily varied from 101° to 106° F., and responded readily to treatment. The eyes were often yellow, and the was skin dry and sallow. Severe vomiting of bile in surprising quantities was not uncommon. Constipation was always present. The duration of the disease was from one to three days. If there was no improvement by the end of the third day, death would ensue. There was marked mental depression, and delirium was often present. The vigorous man would fall as readily a victim of this disease as one with a delicate constitution, and the latter would have an equally good chance for recovery. The disease most commonly developed in persons who had been in the country two or three years. It was rarely seen among women. In the event of recovery, convalescence was rapid. The most successful treatment consisted in an emetic of mustard water, an active purge of calomel and jalap, and injections of hot water. After profuse perspiration had been secured by diaphoretics and wrapping in blankets, quinine should be given until recovery was assured. In a series of eighteen cases so treated, only one died.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, March 8, 1899.

T. Mitchell Prudden, M.D., President.

Two Cases of Gangrenous Bronchitis with Isolation of an Organism Related to Streptothrix.—Drs. Charles Norris and J. H. Larkin reported these cases. The first case was that of a man who had complained chiefly of cough and dyspnœa for a month and a half before coming into hospital. He had died eight days after admission, evidently of sepsis, the temperature having ranged between 103° and 104° F. The clinical diagnosis had been probable gangrene of the lungs. The autopsy had been made on January 23d, by Dr. Larkin, two hours after death. The left lung was found to be bound down by old adhesions, and the lymph nodes at the root of both lungs were extremely large. The mucous membrane of the trachea and bronchi was œdematous, and contained white granules, about the size of millet seed. On section, myriads of white foci were seen scattered over the lung, occluding the smaller bronchi. The lesions were confined to the bronchi. The odor of the lung was extremely fetid, and its color was dark green. The second case, which they reported through the kindness of Dr. E. Hodenpyl, presented nothing of importance in the personal history. The patient had been perfectly well up to January 1st, but since then had suffered from cough, profuse and fetid expectoration, and pain in the chest. Examination showed flatness over the lower part of the right lung, with bronchial voice and breathing, and moist and crackling râles. The heart, liver, and spleen were normal. Death occurred on January 17th, and the autopsy was held twenty-four hours later. There was a fresh pleurisy over both lungs, and both showed extensive consolidation of the broncho-pneumonia type. The small bronchi contained pus and white granules, and the bronchial nodes were enlarged. The presence of opaque, whitish, and friable granules was the most noticeable feature. They were found in the secretion of the larger bronchi, or more often lightly adherent to the congested bronchial walls. The characteristic yellow color of the ray fungus of actinomycosis was absent. It was difficult to transfer the particles to the object-glass. Under a low power they were seen to be made up of rods radiating toward the centre, the ends of these rods being often more or less swollen. No distinct bulbs or end capsules, so characteristic of actinomycosis, were observed. When stained with fuchsin one saw long, slender rods of irregular outline, as well as rods slightly bulbous at their ends; cocci free or in short chains, but without characteristic grouping. Capsules could not be demonstrated by any of the usual methods. With Gram's staining all the cocci retained their color, but the rods were variable in their behavior. The plates, grown both aerobically and anaerobically on glycerin-agar and ascites serum, developed colonies very similar in appearance. Smears from these colonies showed short chains of cocci. Inoculations in mice were negative. There was no growth on potato. On gelatin a streptococcus appeared as whitish colonies along the punctures. With the material from the first case three intratracheal injections were given to rabbits, with negative results in two after two weeks. The third rabbit died later from a double empyema with adhesive pericarditis, the lungs being completely softened and necrotic. The empyemial pus showed large numbers of rods similar in appearance to those found in the granules of the bronchi, and streptococci. Both these cases of gangrenous bronchitis presented similar clinical features and had run a fairly rapid course, characterized by fetid secretion and by the occurrence of whitish masses or grains, resembling those described under the name of pseudo-actinomycosis. The second case was the more acute. Sections of the lungs of both cases stained by Gram's method showed a peculiar, reddish, iodine reaction of the masses or grains. This reddish color of the streptothrix was also observed on the smears, and the same color reaction was obtained when stained by Gram's iodine solution. Absence of any growth except streptococci on the ordinary media at once separated both cases from the usual forms of gangrenous bronchitis. The fungus or streptothrix produced in animals injected in the peritoneum an adhesive peritonitis with localized collections of pus containing numerous typical rods, often with extension of the inflammation to the pleura through the diaphragm. Intratracheal injections were followed by softening and necrosis of the lungs, with extension to the pericardium. Intravenous injection was also followed by necrosis and softening of the lungs with empyema. The marked predilection of the streptothrix to attack serous membranes, no matter how introduced, was an important feature. From the empyema of a rabbit injected intravenously with the grains of the second case, a growth on the cut surface of the rabbit's kidneys was obtained in the shape of translucent, whitish masses, resembling those seen in the bronchi of both cases. By continuous transplantation

from kidney to kidney, they hoped to obtain a pure culture of the streptothrix free from streptococci. Distinct and positive branching has not yet been noticed. The rods presented interesting staining reactions in every respect. They were not dissimilar to the diphtheria bacilli. Metachromatic particles were especially noticed, staining deeply by hæmatoxylin, by Gram's stain, methyl blue, and by Ernst's stain.

Drs. Larkin and Norris will publish the result of their work on this apparently new and interesting streptothrix in a paper which it is hoped will soon appear. The cases have at this time been reported in the hope that others having their attention called to these cases might find similar ones, as both these cases occurred within two weeks of one another.

Dr. J. H. Larkin demonstrated the gross and microscopical specimens from the foregoing cases.

Dr. G. A. Tuttle said that he had seen one case of streptothrix which agreed fairly well with the cases reported from Baltimore, but the lesions in his case were almost identical with those of tuberculosis, and the organism was very different from that just described. He now had it under cultivation, and found that it produced a lesion very similar to that of tuberculosis in animals.

Dr. Larkin remarked that the brown color which the bacteria took in staining the sections according to Gram was not permanent at all; it disappeared after about five days.

Diffuse Carcinoma of the Stomach.—Dr. J. H. Larkin presented specimens taken from a man, sixty-five years of age, who had entered the hospital during the very cold weather without any special history. He had complained of slight pain in the stomach, and had seemed quite weak. Examination of the abdomen had revealed a large tumor in the epigastric, right and left hypochondriac regions. Two weeks after entering the hospital he died of exhaustion. At the autopsy it was found that the cavity of the stomach was very small, and that, with the exception of a portion of the lower curvature, it was extensively infiltrated with carcinoma. No metastases were found in the liver, but the spleen had been converted into a mass of carcinoma. The carcinoma had also involved the splenic flexure of the colon, producing partial stenosis. The most interesting feature was the escape of the liver and the total involvement of the spleen by carcinoma.

A Case of Hemorrhagic Pancreatitis with Fat Necrosis.—Dr. Larkin reported this case. The patient, a woman, fifty-six years of age, gave a history of indigestion lasting a year. On January 29th, about twelve hours after a hearty meal, she had had a severe attack of epigastric pain accompanied by vomiting. After a few days she had been able to go around, and had remained well until February 12th, when, about eight hours after a meal, she had had a severe and persistent epigastric pain, accompanied by profuse vomiting. Tympanites had developed quite rapidly. The bowels were obstinately constipated. At the autopsy the abdomen was found filled with fluid and coagulated blood. The heart, lungs, kidneys, and liver were normal. The pancreas was involved as a whole. It was greatly increased in bulk, and about four times the normal size. It was of a dark red color, with small islands of necrotic lobules scattered throughout, bright yellow in color. There was extensive hemorrhagic infiltration of the pancreas. The intralobular fat tissue was necrotic, and presented similar appearances to the necrosis in the mesenteric fat tissue. There was diffuse hemorrhagic infiltration of the peripancreatic fat tissue, which was also necrotic.

A Case of Suppurative Pancreatitis with Rupture of the Pancreatic Duct into the Stomach.—Dr. Larkin reported this case, occurring in a woman, thirty-five years of age, who had been sick for one year with cirrhosis of the liver. Five months before death she had begun to get slightly jaundiced, and soon afterward there had been recurrent attacks of pain and vomiting, corresponding in every way with those of biliary colic, and recurring every fortnight. After about fourteen of these she had come to the hospital, and had had a severe attack there, followed in two weeks by a second attack, and one week later by a third. The patient died in great agony. At the autopsy the peritoneum posteriorly and down on to the kidneys was filled with old and recently coagulated blood. The heart, lungs, kidneys, and spleen were normal. The liver was cirrhotic. The pancreas was found to be very small and hard, and on cross section the pancreatic duct was found to be an irregular and tortuous canal, which had become necrotic. There were no gall stones and the bile duct was pervious. On the lesser curvature of the stomach and posterior wall was a small, blackish area, in the centre of which were two small openings, which communicated directly with the pancreatic duct. The stomach was filled with black fluid, looking like digested blood.

A Case of Suppurative Pancreatitis with Abscess of the Stomach Wall, Involvement of the Spleen, and Fatal Hemorrhage.—Dr. Larkin reported another case of suppurative pancreatitis, and presented the specimens, which had been taken from a man, fifty-six years of age, who had complained chiefly of pain for several months. A few days before entering the hospital he had developed jaundice. On admission the patient was jaundiced, and complained of abdominal pain and tenderness, and the abdomen was tympanitic. He continued to do badly, and died eight days after admission, no positive diagnosis having been made. The autopsy had been made on the following day. The abdomen was slightly tympanitic and the peritoneal cavity filled with fluid and clotted blood. There was a large blood clot over the spleen. On the lower border of this organ was a large, ragged opening, through which the fatal hemorrhage had occurred. At the hilus of the spleen was a small abscess which passed directly through the pancreas. The pancreatic duct was dilated, and pus and detritus could be squeezed out. At the head of the pancreas was a very young carcinoma. In the greater curvature of the stomach was a large mass bulging into the stomach. The mucous membrane over it was normal. It proved to be an abscess in the wall of the stomach, which had formed in the serosa proper. There was no connection between the pancreas and this abscess.

Dr. G. A. Tuttle said that in his experience hemorrhagic pancreatitis had always been a disease of the blood-vessels, and hence it did not seem to him proper to speak of these cases as examples of hemorrhagic pancreatitis, any more than to call a cerebral apoplexy a hemorrhagic cerebritis.

Dr. F. C. Wood remarked in this connection that in one of the cases there had been a marked fat necrosis, showing that there was something more than a simple apoplexy.

Dr. W. H. Park said that two diphtheria antitoxin horses belonging to the health department had suddenly died, and at autopsy there had been found a large quantity of blood in the peritoneal cavity and in the liver. The quantity of blood in the liver was about four times the weight of this organ. As yet there had been no report on the condition of the arteries.

A Case of Multiple Fibroma.—Dr. Harlow Brooks presented the fresh specimens from the case of Mike Kelly, seventy-seven years of age, who had been for twenty-five years in Bellevue Hospital. The old man had been going about the wards as usual, when he became unconscious and died within a few

hours. The sudden death was explained by the lesions found at autopsy. The most prominent and best-known lesion in this famous case—the fibroma of the scalp, which hung down on the right side of the head—had been completely removed, and was presented with other specimens from the case. It had not been adherent to the bone, but only to the superficial layers of the scalp, and the periosteum was only slightly thickened over this area. Over the skin were numerous nodules looking like papillomata on superficial examination, but closer inspection showed them to be elastic, and situated entirely beneath the epithelium in the subcutaneous tissues. These numerous fibromatous masses were of varying size. They presented no symmetry in their distribution, and had no apparent connection with the nerve trunks. The nodules somewhat resembled lipomata, but were much firmer. All the nodules, including the one over the crest of the ilium, were encapsulated. In the upper part of the œsophagus were found a few, small, apparently fibromatous masses beneath the mucosa of the upper portion. The heart and lungs were negative. The mucous membrane of the stomach was extremely atrophic. Beneath the peritoneal surface of the stomach were numerous nodules, measuring about three or four millimetres in diameter, and apparently encapsulated. In the duodenum, beneath the peritoneum, easily dissected out without injury to the mucosa, and covered by endothelium but not by connective tissue, were nodules of jet-black color. On section they did not present the appearance of fibromata, and were apparently not lymph nodes. In the ileum only a very few of these nodules were found, and there was none in the walls of the caput coli or colon. The caput coli was carried over to the median line, and was adherent to the right side of the lumbar portion of the spinal column. The appendix lay directly behind, and was adherent to the posterior surface of the caput. At about the level of the crest of the left ilium there was a complete fold in the intestines, which passed upward to the cœliac axis, where it was adherent to the duodenum. This peculiar arrangement of the intestine recalled the fact that at times this man had presented symptoms of intestinal obstruction. Careful search had been made throughout the body, but no evidence of tubercle had been found, though the patient had been resident in the hospital for years. The cause of death was found to be acute nephritis. There was great œdema of the brain and of its membranes. A report of the microscopic examination of the tumors was promised for the next session of the society.

Pulmonary Valve with Four Cusps.—Dr. Leon T. Le Wald presented a heart showing four cusps on the pulmonary valve, three of about equal size, and one very much smaller. The specimen had been taken from a man, thirty-two years of age, who had died of pneumonia.

Complete Transposition of all the Viscera.—Dr. Le Wald also presented specimens from this case. They had been removed from a woman, twenty-eight years of age, a native of the West Indies, who had died from an acute lobar pneumonia "on the right side, but in the left lung." The heart was turned upon itself so that the aorta was in front. The heart was practically normal. The arteries normally coming from the right side of the aorta were given off from the left side, and *vice versa*. The lung on the left side had three lobes, while that on the right had two lobes. The suprarenal bodies were transposed.

Abscess of the Liver Discharging into the Lung.—Dr. Le Wald then presented some post-mortem specimens just removed from a man, forty-five years of age. The autopsy showed an abscess of the liver, probably amœbic, containing fetid pus. It had penetrated the diaphragm and had discharged into the lower lobe of the right lung. There was some ulceration of the cæcum.

An Adenoma of the Tyroid Gland.—Dr. Le Wald also presented a tumor of the thyroid gland, taken from a man, thirty-one years of age, who had died of pulmonary tuberculosis. There had been no symptoms referable to the thyroid, although the tumor was of considerable size. Microscopical examination showed it to be an adenoma. There was no metastatic growth or further involvement.

A Case of Gas Bacillus Infection.—Dr. Francis C. Wood read a paper on this subject (see page 535).

Dr. W. H. Park suggested that a period of four or five days was too long to justify the assumption that the gas bacillus was the cause of death. With the presence of the streptococcus and colon bacillus infection, there was plenty of reason for the illness.

Dr. Wood replied that the case had been complicated with a nephritis and a high temperature. The period of infection with the gas bacillus he would limit to two days before death.

Dr. E. K. Dunham said that his cases of undoubted ante-mortem infection with the gas bacillus had been, for the most part, operative cases, with infection in the urethra. In one, the temperature had risen within a very few hours after the operation, and had reached 106° or 107° F. before death, which occurred at the end of about thirty-six hours. The gas bacillus was present in great abundance, and was found even before death. In all but one of his cases the presence of the gas bacillus before death had been demonstrated.

Dr. Harlow Brooks said that there had been two cases at one of the hospitals in which the infection seemed to have occurred after death. He had made the autopsy in one case about four hours after death, and in this one the gas had already begun to form. This patient had fallen out of a window while menstruating, and the vagina had been filled with blood. Infection seemed to have taken place after death, as no clinical manifestations of it were present and it was not suspected until the autopsy was begun. Infection in this case was thought to have taken place through a traumatic tear in the wall of the rectum, which extended nearly through the walls of the vagina.

Clinical Department.

A CASE OF ACUTE INFECTIVE CHOLECYSTITIS—OPERATION—RECOVERY.[1]

By MOSES S. KAKELS, M.D.,
NEW YORK.

It is a well-known fact, as autopsies have proved, that calculi may lie in the gall bladder for many years, without producing any functional or pathological changes. Their presence, however, frequently manifests itself by certain clinical symptoms, due chiefly to their migration through the biliary passages. The symptom which would oftenest lead us to suspect their existence is colic, caused by the wandering of a stone from the gall bladder into the cystic or common duct. Jaundice may or may not accompany these seizures, it depending principally upon the amount of obstruction the concretion offers to the flow of bile in the common duct. When in addition to calculi there is an invasion of pyogenic organisms, grave symptoms may rapidly supervene. This occasionally occurs in the absence of any previous history whatsoever, and the objective and subjective symptoms due to an acute infective process may be the first manifestations of the existence of

[1] Read before the Metropolitan Medical Society, March 22, 1898.

biliary concretions. Pain and tenderness over the region of the gall bladder often come on suddenly, gradually increase, and localized peritonitis due to the extension of the inflammatory process to the surrounding serosa sets in. Irregular temperatures, occasional rigors, rising pulse, nausea, and vomiting occur. In short, we have to deal with an acute infectious cholecystitis. Bacterium coli commune, the streptococci, staphylococci, and Eberth's bacillus may be the infective agents. The following case is illustrative of this condition:

Mrs. B——, aged thirty-five years, has always been apparently healthy. She had been married nine years, during which time she had been pregnant only twice, and at each time carried the child to full term. Owing to a narrow pelvic outlet each of these deliveries was instrumental, and, on account of the difficulties encountered, endangered her life very seriously.

On close questioning the patient does not admit ever having had jaundice or any colicky pain referred to the epigastric region. On the evening of February 21st, I found her suffering from acute pain referred to the pit of the stomach, radiating toward the back and between the shoulder-blades. She had been attending to her household duties during the day and felt nothing except a slight heaviness in the stomach, which gradually grew worse. Of her own accord, believing she had an attack of indigestion from some indiscretion in diet, she took a dose of oil, but without any effect. She had vomited and had a slight chill before I arrived, and was pale from pain, with a pulse of 100 and temperature of 101° F. Sensitiveness over the epigastric region was marked. On careful and deep palpation extreme tenderness over the region of the gall bladder was elicited. The urine contained no sugar, albumin, or bile.

A dose of calomel was prescribed and an ice-bag was ordered to be placed over the painful area.

The next morning (Tuesday) the pain had increased, was extending toward the umbilical region, and abdominal resistance was more evident. There had been no vomiting, but the increasing nausea made the patient feel very bad. The region of the gall bladder was much more sensitive. By pressing the fingers well up under the liver a slight enlargement could be felt. The pulse was still over 100 and the temperature 101.5° F. The bowels having moved from the calomel, small doses of morphine were ordered in order to alleviate the intense and constant pain.

By Tuesday evening the pain was more localized and increased. Pulse, 110; temperature, 102° F. The patient had nausea and vomiting with chilly sensations during the day; there was no flatus.

From the extreme localized tenderness noticed the next morning, it was reasonably certain that the gall bladder was involved in an acute inflammatory process and perhaps with a commencing peritonitis. The temperature, though, had fallen to 101.5° F., but the pulse was still over 110. That night the temperature rose to 102.5° F., and pulse over 120. Chills had occurred during the day. All these symptoms pointed to a localized abscess.

Guided by these conditions I decided to operate at once; that was on the third day after the onset of the symptoms. The abdomen was opened by an oblique incision, about six inches long, the centre over the region of the gall bladder, the point of greatest tenderness. This viscus was found deeply situated under the liver and slightly distended, its serosa being very much congested and inflamed. It was drawn as much as possible toward the abdominal wound, and tampons were packed around to shut off the general peritoneal cavity. An aspirator withdrew about ninety grams of creamy pus, without admixture of blood or bile. The parietal peritoneum was loosened from its wall so as to facilitate the stitching of the gall bladder to its surface before incising it. When nearly completed some of the purulent fluid oozed through an accidental rent made by the teeth of the forceps which held the bladder in position, and fearing contamination I deemed it advisable to abandon the rest of the stitching for the time. However, enough sutures had been placed to prevent the gall bladder from slipping back. Packing was continued around the opening, and five days later, March 1, 1897, adhesions having formed by this time, the patient was again narcotized and the gall bladder opened. Its walls were found slightly thickened and inflamed, in parts necrotic. By forceps and scoop a dozen or more mulberry calculi which seemed embedded in meshes in its walls were removed; a little sero-purulent fluid was also withdrawn at this time. By careful probing no stone could be felt in the cystic duct. A drainage tube was inserted, the wound was repacked with fresh iodoform gauze, a dry dressing was applied, and the patient was put to bed. In the absence of any flow of bile through the tube it is fair to assume that the cystic duct was occluded either as a result of a chronic inflammation of its walls or by thickening of its lining membrane due to the acute infective process.

At any rate, pyogenic infection had taken place. Associated with this was inflammation of the walls of the gall bladder and duct. Retention of the suppurative products produced tension in its cavity and caused the intense pain. Had this continued without operative relief there is no doubt that the increased pressure would have produced further injury to its walls and necrosis, and finally perforation with all its concomitant dangers would have resulted.

The patient made an uneventful recovery.

The cardinal features of this case, which I think are worthy of consideration, are:

1. That an acute infective inflammation of the gall bladder, containing calculi, may arise without any previous history of the existence of these concretions.

2. That the irregular temperature, high pulse, and chills point to a septic inflammatory process going on in the body; and the acuteness and extreme sensitiveness localized over the gall bladder make the diagnosis of a purulent cholecystitis fairly positive.

3. That it is best in such cases not to temporize when we are reasonably sure of our diagnosis, but to operate at once before perforation takes place and a purulent general peritonitis sets in.

There is another point worth mentioning in this case, and I offer it as a theory which is plausible because it is based upon the fact that violent exercise and muscular exertion, such as straining, etc., sometimes are causative factors in the production of biliary colic. It is supposed that by such exertions the stones are forced into the biliary passages, producing the characteristic excruciating pains. Now if such is the case, may we not assume that the difficult and protracted labor the patient had in September, and the violent efforts made in the expulsion of the child through a narrow outlet, may have caused such spasmodic contractions of the gall bladder upon the contained stones that the mechanical injury produced an irritation and abrasion of its mucous surface, which offered a *locus invasionis* for pyogenic organisms?

814 Lexington Avenue.

Treatment of Chronic Interstitial Nephritis.—High tension with low specific gravity and cardiac hypertrophy call for iodide of potassium. Be careful not to lower too suddenly this high arterial tension. When polyuria is an annoying symptom, nux vomica with bromide of sodium is beneficial.—Larkin W. Glazerbrook.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

SECOND WINTER—INFLUENZA EPIDEMIC—DIPHTHERIA—BLACK-WATER FEVER; DISCUSSION AT THE EPIDEMIOLOGICAL SOCIETY—RADICAL OPERATION FOR HERNIA—DEATHS.

LONDON, March 24, 1899.

WE are having too much America just now over here—not Americans, observe. They are always welcome. But weather. You have sent us blizzards, storms, frost, and other trials—and at a most unseasonable time of year. The almanacs are all wrong. On the day they declared spring began, we had the sternest bit of winter of all the year. Bitter east and northeast winds prevailed, with snow and ice. The lakes in the parks were frozen over, and the market gardens were grievously injured. All over the Thames valley it is the same thing, and the telegrams from the provinces are all telling the same tale—from twelve to twenty-four degrees of frost sweeping over the country.

To add to this, influenza is increasing. The deaths from the epidemic rose last week to 125, an increase of 25 over the preceding week and the highest number in any one week since 1895. This week there will almost certainly be a still higher number, for the scourge seems spreading in all directions. The death rate per 1,000 in London is now 24.1, and in the country it has reached 23.3. Diphtheria also shows an increased mortality, 45 deaths against 29, 48, and 36 of the three preceding weeks. The notifications up to Saturday were 203. There were then 1,255 cases in the asylums hospitals, of which 132 had been admitted during the week.

Black-water fever was discussed at the Epidemiological Society on Friday, the paper being read by Mr. W. H. Crosse, whose views I have on a former occasion referred to. He has had nine years' experience in Nigeria, where the conditions for its endemicity seem complete—it is a vast delta of sand and mud, partly covered with jungle and mangrove swamps, intersected by a network of sluggish streams, leaving at low tide and dry seasons tracts of foul mud; the ground water is close under the surface, and the air is saturated with moisture. The mean temperature is 80° F., with a diurnal range often less than 10° F. Europeans are not often attacked in their first year unless already broken down by malaria, and after three years' tolerance of the climate attacks are unusual. The characteristic symptoms are fever, hæmoglobinuria, jaundice, and nausea, and vomiting of bile. Koch's notion about quinine poisoning was quite erroneous; in fact, quinine is essential to the treatment, and Mr. Crosse recommended the American plan of hypodermic injections of soluble salts. He suggested that as in mild or malarial fevers the parasites transformed the hæmoglobin into pigment, which was deposited in the tissues, so in severer forms they destroyed the corpuscles, liberating their contents before they could be acted on, and thus set up hæmoglobinæmia. Under ordinary conditions the free hæmoglobin was converted into bile pigment and bilious remittent fever resulted, but when the pigment could not thus be dealt with hæmoglobinuria was the consequence; this phenomenon was the only one common to paroxysmal hæmoglobinuria, poisoning by chlorate of potassium, and black-water fever, though brought about by different causes in each.

Dr. Manson recommended quinine as a prophylactic, and said that East African negroes who lived with Europeans, and like them, suffered to some extent. Generally, too, natives were immune to the fevers of their own district, not of others. The presence of a parasite did not alone prove it to be the cause of a disease.

Dr. Harford-Battersby said caution in diagnosis was necessary, for he had seen epidemics when the urine was almost black from blood and bile pigments, but not hæmoglobinuric.

Mr. Craister took quinine daily during his five years on the Niger, and had only three slight fevers—never black-water. In eleven cases in which he gave quinine, all the patients recovered. Of six or seven when the supply failed, all died.

Dr. Washbourn from experiment confirmed Mr. Crosse's explanation. At first the liver transformed the hæmoglobin into bile pigment, but when the amount was too great the excess passed out by the kidneys.

Mr. Pakes said if only one or two of the varieties of plasmodia could produce the disease, its geographical distribution could be explained independently of the malignancy of various local malarial fevers.

Mr. Langton read a paper at the Medical Society, on the radical operation for inguinal hernia, in which he briefly noticed its history and progress of the surgical treatment from early times. He remarked even to a late date operation was not in favor with surgeons, and up to 1835 no attempt was made to occlude the canal. Mr. John Wood introduced his operation in 1857, and claimed seventy per cent. of successes; but Cheever, of Boston, United States, stated in 1870 that American statistics showed barely twenty-five per cent. of permanent cures, and reported twenty cases with two deaths. Mr. Langton described four methods of procedure, but when practicable he preferred the reconstruction of the canal, with transplantation of the vas deferens and its vessels to the upper angle of the incision, so as to form a new inner ring. Of course, it is not practicable to determine the exact conditions until the parts are exposed, and one of the other procedures may sometimes be more advantageously employed. He used preferably kangaroo tendon as a continuous rather than interrupted suture, the coaptation of the canal being thereby more complete. He did not decry, however, other ligatures. Drainage was required only when hemorrhage had been profuse or a cavity left after removal of a large hernia. The recumbent position for a month after operation was most desirable. In the very young and very old the mortality was greater, and operations should be avoided unless for urgent reasons. During the last five months he had done thirty operations, twenty-seven healing by first intention and three showing slight suppuration. He always advised the use of a truss for a time. Although many surgeons differed from this opinion, it was confirmed by the experience of the Truss Society, where those who sought advice after failure of operation were usually patients who had not worn a truss afterward. During the last six years two hundred and forty-two patients had come to the Truss Society in consequence of failure of operations, so that the total number of such results must be considerable. In private practice there were more successes—about eighty per cent. Operation was contraindicated at the extremes of life; when there is coexistent organic disease; when the hernia is too large for the abdominal cavity to receive it or retain it under moderate pressure; when the tendino-muscular walls are weak; when there is septic peritonitis.

In the conversation that followed, the president said he had often operated on patients under six years of age, and would do so on a child of three years having steadily increasing hernia, with careless parents. He liked silk as a suture, as it would do for anything.

Mr. Boyd said he used fishgut sutures, operating by

a flap, putting three knots on the suture (a continuous one), and cutting the ends off close to the knot. He took three years as his age limit, as by that time the child had acquired control over the bladder. He urged that the muscular arch should be restored as far as possible to the normal arrangement, by arching over the fibres of the internal and oblique transversalis.

Mr. Osborn said a hernia in a young child would often disappear after the application of a truss, without any operation.

Deputy-Inspector-General Jee, C.B., V.C., died on the 17th. He had a distinguished career. He received the C.B. for Lucknow with Havelock's column, and also the V.C. for conspicuous gallantry. The death is also announced of Dr. J. H. Butler, of Bradford, from septicæmia following the prick of a safety-pin when dressing a patient. He was only thirty-five years of age. Dr. Knight, J.P., of Rotheram, committed suicide by poisoning with prussic acid in a fit of temporary insanity.

ARIZONA FOR THE CLIMATIC TREATMENT OF TUBERCULOSIS PULMONALIS.

To the Editor of the Medical Record.

Sir: After two years spent in the principal resorts for tuberculosis throughout the United States, I desire to call the attention of the profession to Arizona, especially in and about Phœnix. I wish to be understood as not speaking from any selfish motive, present or future, but of my opinion based upon facts from a residence in most resorts for a longer or shorter time. Again, I do not wish to exclude as unworthy of consideration or trial some of our better known resorts in the North and South; but what I do want to emphasize is the fact that, while Phœnix has its objections, they are fewer in number and less in magnitude than those of any place I can find in America. The temperature changes are fewer and less severe, and the relative humidity is seventeen per cent. less than in any other point from which I can secure a report covering a period of five years back.

During the winter recently passed, while the North was undergoing such severe changes extending far south and southwest, Phœnix has been delightful. Since December there have been only four days that one would not care to be out—the air was clear and bracing.

Since the treatment of tuberculosis pulmonalis has resolved itself into one of diet and climate, then the nearer we can get to an ideal climate, accompanied by a proper amount of nourishment, the sooner will our percentage of cures increase.

Facts and figures so far are in favor of Phœnix. It has an altitude of twelve hundred feet, with a population of about fifteen thousand, growing rapidly. It is situated in a valley, thirty miles wide by about sixty long—a veritable oasis in this great desert. True, its sanitary arrangements can and will be improved, and steps should be taken by its people to furnish entertainment (out-of-doors) for its guests.

Let me append a recent report issued by the government weather bureau for the year 1898: The mean temperature for the year was 70° F. The mean for the months of January, February, and March was 47°, 59°, and 49° F. respectively. The lowest temperature recorded for these months was 23°, 36°, and 28° F. respectively. The relative humidity recorded for these months was 46, 41, and 33 per cent. respectively. The spring months of April, May, and June showed a mean of 57°, 72°, and 73° F. respectively, while the mean temperature of the hot months of July, August, and September was 92°, 90°, and 84° F. respectively; but the relative humidity again was only 37, 44, and 32 per cent. respectively. On 319 days the mean temperature was above 50° F., and on 249 days above 59° F. The total rainfall for the year was 5.95 inches, and still the valley is a garden, owing to the careful irrigation. The average velocity of the wind was 4.3 miles per hour.

One other most important fact still remains, viz., that out of the 365 days there were 259 days absolutely clear, 71 days partly cloudy, and 35 cloudy; of the 35 cloudy days, one could have passed 20 out of doors with comfort. Where else can this be equalled?

If I can succeed in calling the attention of the profession to this climate sufficiently so that they will investigate and finally test it, then this short article will have attained its object. I particularly address the profession in the East, for I notice that a large percentage of the cases of tuberculosis in Phœnix are from the West, Northwest, and Middle States.

Henry H. Stone, M.D.

Oneida, N. Y.

"MODERATE DRINKERS AND SANE WORKERS."

To the Editor of the Medical Record.

Sir: Permit me, at the expense of being considered "mentally weak or a fanatical anti," to say a few words concerning the editorial on the above subject in the March 25th issue of the Medical Record. If the report of Dr. Bowditch is true, and I believe it is, it seems to me that we have a startling explanation of the cause of sudden death occurring with remarkable frequency among the "leading men" of this country; for it is well known that even the moderate use of alcohol predisposes to arteriosclerosis. Again, the records of the Marysville, Ohio, Sanatorium show that over twenty-six hundred inebriates have been treated since 1884, and that in over ninety per cent. of these cases the cause of the disease is given as previous moderate drinking. As true physicians, should we not endeavor to prevent as well as cure? The report of Dr. Bowditch only emphasizes the need of greater effort in the direction of prevention.

H. A. Rodebaugh, M.D.

Marysville, Ohio.

A SECOND ATTACK OF ZOSTER.

To the Editor of the Medical Record.

Sir: Recurrence of zoster being so very rare, some authors asserting that it is never observed, I beg space to record an instance.

In the early summer of 1898 I treated Minnie S——, aged thirteen years, for a lumbo-abdominal zoster. She was also seen at that time by Drs. Sobel and Mayer. On March 21, 1899, we all three had the good fortune to be together when the patient presented herself with a well-marked zoster of pectoral and brachial distribution upon the same side, which had begun two days before. Charles W. Allen, M.D.

126 East Sixtieth Street.

Physicians and Druggists.—Counter prescribing is wrong; substitution is not only wrong, but unpardonable; promiscuous refilling of filed prescriptions is an evil; but all of these wrongs can be righted. There are pharmacies where such things are unknown, and such pharmacies should be supported and jealously protected by the members of the medical profession. It would require but a slight premium on honesty to make dishonesty an unknown quantity.—*Pacific Medical Journal*, December, 1898.

Surgical Suggestions.

A Tumor which, having existed for a long time, suddenly begins to grow, should be regarded with the gravest suspicion. It is probably malignant.

Bloodless Operation in Goitre. — The operations described include one hundred and fifty-nine thyroidectomies, twelve enucleations, nineteen resections, sixteen enucleations and resections, and two ligatures of the large thyroid arteries. Only unilocular goitre cysts, easily shelled-out nodules, or large nodules in immovable goitres are enucleated; thyroidectomy is done in all other cases, including those of acute and chronic strumitis, while exothyropexy is justified only when the operation has to be performed without the necessary instruments.—KOCHER, *Rev. de Chirurg.*, No. 4, 1898.

Acute Mastoid Abscess. — The two points to be avoided in the operation are the openings of the lateral sinus and the injury to the facial nerve. The opening of the lateral sinus can be avoided in the majority of the operative cases by keeping well forward in sinking the conical canal. In sclerosed mastoid this danger is to be feared to a greater extent than in the pneumatic mastoid. In cases in which the sinus is directed well forward, it is injured in the early part of the operation and may defeat our operative procedure. The hemorrhage from the sinus is readily controlled by packing. Injury to the facial nerve can and should be avoided. One should be careful not to sink the apex of the operative canal too deep, nor should it be allowed to fall below the level of the spine.—CHARLES W. RICHARDSON.

Aseptic Catheterism.—Aseptic catheterism is one of the problems of modern surgery. It is impossible to deal with it fully now, and I will mention only the precautions which I have been constrained to adopt in cases in which there is a large amount of residual urine, and which, so far, have proved successful. All instruments must be disinfected first by boiling. The hands, the prepuce, and the skin of the penis must be cleansed as thoroughly with soap and water as if a surgical operation were going to be performed, and then sponged over with a solution of corrosive sublimate, 1 part in 5,000. The glans and the meatus require especial care. An irrigating catheter is then introduced into the fossa navicularis, and this part of the canal is thoroughly washed out from behind with boric acid. Then the catheter is pushed on into the deep part and the process repeated. Finally Melchior's double catheter is introduced and the urine drawn off. In this way it is possible to obtain a very high degree of asepticity. The lubricant I prefer is lanolin, because it is readily soluble in water, kept aseptic by the addition to it of 1 part in 5,000 of corrosive sublimate.—DR. C. MANSELL MOULLIN, *The London Lancet*, September 10th.

Operative Interference in Recent Simple Fractures of the Patella.—Dr. Charles A. Powers enumerates the conditions tending to cause imperfect union and the obstacles to union as follows: (1) Separation of the fragments is due to: (*a*) retraction of the upper fragments from contraction of the quadriceps femoris and a slight drawing down of the lower fragment through a shortening of the ligamentum patellæ; (*b*) effused blood. (2) Tilting of the fragments (this may be present to a marked degree and unrecognizable without operation). (3) Rupture of the tendinous expansion of the vasti and of the lateral portions of the capsule of the joint. (4) Prolapse of the prepatellar tissues into the breach. (5) Atrophy of the quadriceps femoris, due to: (*a*) disuse; (*b*) arthritis; (*c*) marked contusion of the muscle; (*d*) blood extravasated from the joint through a rent in the upper part of the capsule. (6) Arthritis of the knee-joint, this possibly resulting in (7) adhesion of the patella. Further, though of little value, may be added: (8) Natural poverty of the blood supplied to the bone (rendered negative by the fact that the vertical fractures heal satisfactorily); and (9) exceptional tendency to osteitis, seen in fat people, in the aged, and in certain conditions of the blood.

Prospect of Cure of Hernia by Trusses.—It has been estimated that about fifteen or twenty per cent. of cases of inguinal hernia become cured permanently or temporarily by trusses. Some seventy per cent., however, of these cures are in infants under the age of one year. In such subjects there is a tendency for the hernia to disappear spontaneously, even if no truss be worn. This is more marked in the inguinal hernia of girls than of boys. As every year of life advances, spontaneous cure or cure by trusses becomes less and less common in inguinal herniæ. Such examples of cure may be said to be very rare after the age of thirty, and to be especially uncommon in female adults. In men who have entirely become "out of condition" as regards their muscular system, and who have developed a slight rupture, a cure may follow on the wearing of a truss, aided by well-arranged exercises which will especially involve the abdominal muscles, and by a healthy mode of life. Spontaneous cures are said to have followed a long confinement in bed. These remarks apply to inguinal hernia. The femoral hernia, on the other hand, appears to be, under all circumstances, practically incurable, so far as treatment by trusses and supports is concerned.—DR. FREDERICK TREVES.

Gastric Erosion.—Dr. Dieulafoy concludes as follows: (1) Besides the simple gastric ulcer, there is a form of very superficial erosion, varying in size from sixpenny to a four-shilling piece, for which a suitable name is "exulceratio simplex." (2) This latter may cause even more terrible hæmatemesis than most cases of simple ulcer. (3) The loss of substance does not extend in depth below the mucosa, including the muscularis mucosæ. The accompanying hæmatemesis is caused by ulceration of the arteries running in the muscularis mucosæ. The opening in the vessel is usually lateral, and thus in the worst position for natural arrest of hemorrhage. (4) Clinically the disease may present all the classical signs of simple gastric ulcer, but more often its onset is insidious or completely latent until revealed by profuse hæmatemesis. (5) The best treatment in this form of simple erosion is by operation. The quantity of blood vomited rather than the frequency of hæmatemesis is the indication for operation, a large amount usually coinciding with ulceration of a large artery—a fatal condition unless remedied at once. (6) It is very important to remember while operating that the stomach may at first sight appear perfectly normal, in spite of an erosion being present. Thus the mucous membrane must be examined very carefully; if necessary with a lens. Occasionally patches looking like ecchymoses may serve as a guide to the position of the erosion. (7) In the absence of special indication it is sufficient to suture together the bleeding part with a small part of the healthy mucosa round it. The prognosis after operation for exulceratio simplex is better than for ulcus simplex, because of the limited extent of the former lesion.—*Bull. de l'Acad. de Med.*, No. 3, 1898.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 8, 1899:

	Cases.	Deaths.
Tuberculosis	159	166
Typhoid fever	19	7
Scarlet fever	156	11
Measles	267	14
Diphtheria	185	29
Laryngeal diphtheria (croup)	12	9
Cerebro-spinal meningitis	0	10
Chicken-pox	21	0
Smallpox	2	0

Checking the Baby has become a feature of metropolitan life, especially in the borough over the bridge. While the mother shops the baby is watched till called for, by a parcel boy or by a committee of young women; also while she attends service at church. The only drawback is that the mother may become thoughtless and wander off.

Tolstoï and His Doctors.—A Russian journal has just published a curious portrait of Tolstoï. The philosopher is dressed in a short pair of knickerbockers and a sort of loose athletic shirt. As a matter of fact, Tolstoï is an enthusiastic cyclist. He declares that he has to thank his bicycle and his vegetarian diet for the robust health which he still enjoys at the age of seventy. Twenty years ago a celebrated Russian physician advised Tolstoï to avoid too much muscular exercise, but the patient was obstinate and did exactly the contrary. He has ever been a lover of sports and remains in the best of health.

Lawson Tait on Drunkenness among Women.—Mr. Lawson Tait, giving evidence before the liquor commission, drew a marked distinction between drunkards of the two sexes, and said that a drunken woman required special treatment. Almost without exception he had been able to trace the cases of female drunkenness to physical or mental suffering. Female drunkenness occurred, he said, in all classes of society, even in the highest, and in analyzing a set of one hundred and eight cases he found they fell into two groups: (1) A small one of twelve persons having an average age of twenty-six years; and (2) a large one of ninety-six with an average age of forty-eight. And he drew the conclusion that the suffering due to the change of life was the cause of the second group, and that when the period was passed the tendency ceased. He thought also that in the first group the drunkenness was due to physical suffering, and that when the cause was removed the drunkenness diminished.

The Red Cross in the War.—The grand total of gifts from all parts of the world, including supplies and transportation, was not less than $3,000,000 and probably not more than $4,000,000, although the agents in different States say it is very difficult to value the supplies. No such munificence was ever known before in the history of the world. Though the war is practically over, the Red Cross keeps up its good work, and will, as far as it can, lend its energies to ameliorating the condition of the Cubans. In Porto Rico little or nothing remains to be done, and in the Philippines there will be no great need of charitable action; but in the luckless island of Cuba a very large body of people will require assistance for two or three years before they become prosperous and self-supporting. Not alone are the fields ruined, but the homes, factories, machinery, and live stock have been destroyed. Many of the nurses, doctors, and agents who served during the war underwent great privation and suffered severely from hunger, thirst, fever, and malarial diseases. Two of the women nurses died, and several have returned with their constitutions impaired if not ruined by the deadly climate and the vile surroundings of the Cuban cities. The heroic Red Cross army has a long roster and it seems invidious to single out a few of the workers. Miss Barton proved herself an indefatigable executive, and Dr. Lesser and Sister Bettina were skilful and faithful medical directors. Mrs. John Addison Porter, wife of the secretary of President McKinley, Miss Adele Gardiner, of New York, Miss Annie Wheeler, Miss Margaret Chanler, and Miss Isabelle K. Rutty, an English college woman, made noble records for themselves which will never be forgotten by this generation.—Miss Margherita Arlina Hamm, in *The American Monthly Review of Reviews* for January.

The Plague in India.—The London *Spectator* of December 31st says: "The plague appears really to have made some impression on Hindoo minds. A great meeting was held in Bombay on December 28th, at which some five thousand 'Bohras' were present with their high-priest, together with Professor Haffkine, who has discovered a very promising form of inoculation. The high-priest made a speech, in which he declared that there was nothing opposed to religion in the professor's system and then and there consented to be inoculated, and, what was a stronger indication of his faith, to suffer his son to be inoculated also. A large portion of those present followed his example. There it is. The Hindoos will not endure segregation, which involves the removal of women from their homes, nor will they bear domiciliary visits by soldiers, but if the white doctors can suggest remedies or preventives which do not menace their honor, they will follow them readily enough. The point is to convince their own ecclesiastical leaders first of all that no oppression is intended. It is natural enough that doctors and magistrates who know that they intend only to benefit the people should be impatient of a foolish resistance, but a little more persuasion and coaxing done through the right agents would smooth the path of science very greatly. To the cleansing of the drains, to the slaughter of the rats, to the burning of infected houses—with compensation—there is no resistance whatever."

Buveurs de Pétrole.—Truly there is no accounting for taste. We are aware of the fact that individuals do exist who "to keep their spirits up" do so "by pouring spirits (rectified and methylated) down," also that others have a partiality for ether as a "pick-'em-up"; but it is to Paris we must grant the palm for the vilest "taste" in the choice of a stimulant. A Parisian journal informs on good authority that there exists in the gay capital what are called "buveurs de pétrole," or "petroleum drinkers." True, the baneful and disgusting habit is only peculiar to the Bastille quarter as yet; still, it is spreading with alarming rapidity and is an unforeseen and additional monster to the list which the temperance societies will have to deal with. When the discovery was made it was thought the habit was the direct result of the increased tariff on alcohol which had lately been imposed, and which, of course, in proportion affected the price of even the laborer's cheap and nasty "petit verre"; but it transpires that such is not the case, inasmuch as the habit existed long before the sur-tax on alcohol was thought of. Moreover, it appears that these "petrolies" have a marked preference for this illuminating medium, possibly because,

as it is asserted, "there is no headache in the bottle." Nevertheless it is an acquired taste like that for tomatoes. The species of intoxication produced by this new drink somewhat differs from that of ordinary alcoholic beverages in that the "petrolie" is exceedingly morose, though less inclined to brutality. His sleep is calm and natural, and upon awakening he seems none the worse for his little tipple, apparently enjoying his usual health. As to its ultimate effect upon his system, doctors in this, as in all other cases, agree to differ. Some declare it to be harmless if used in moderation, it being a capital vermifuge and anti-spasmodic, while others say that in all proportions it is dangerous, for it is palpably conducive to derangements in the organism and creates the germs of mortal maladies. This new problem is, however, sufficiently interesting to merit profound study.—*English Pharmaceutical Journal.*

What is a Physician?—Mr. Foster Palmer, the first president of the newly formed Chelsea Clinical Society, in his opening address recently, made some trenchant and true remarks upon this subject. "The physician as such," he says, "must sooner or later become extinct. The pure general consulting physician is already almost a rarity. 'Send for a specialist' is now the almost universal cry. It is only the antique type of patient who thinks of calling in a physician. The very word is barbarous; faulty in its derivation and in its root obsolete and degraded. We do not 'physic' people now in the old sense. If a 'physician' means anything, it means a student of 'physics,' not of 'physic'—a slang word for drugs."—*The Medical Press and Circular*, November 23, 1898.

Test for the Presence of Nicotine in Tobacco.—To demonstrate the presence of nicotine in tobacco smoke, Kissling uses a bottle half full of water rendered faintly acid with sulphuric acid; two tubes pass through the stopper, one dipping into the fluid and having a cigar inserted in the upper end; through the other much shorter tube the assistant draws the smoke in the ordinary way of smoking. When a portion of the cigar is consumed, a few drops of Mayer's reagent are added to the liquid, in which a copious precipitate is produced in the presence of nicotine. Further evidence of nicotine may be obtained by rendering the solution alkaline with soda and distilling. The idea that a picoline base, and not nicotine, causes the reaction described is not borne out by this experiment. Previous investigations by the author also show that tobacco smoke contains relatively a large proportion of nicotine and never more than a very small proportion of picoline base.—*Chem. Zeitung*, lxxviii., 805.

The Treatment of Consumption in England.—The London *Spectator* says: "The cure of consumption has undergone a complete transformation as to the theory of its origin and distribution. The first great revolution was the discovery that it could be treated with far better promise of success in the high Alps than in the warmer regions to which doctors of an older generation had been in the habit of sending their patients. It was as a result of this discovery that Davos Platz rose into fame. The success of the new plan was remarkable. Patients who seemed not to have twelve months to live found that by passing every winter in Switzerland they might hope to go on for years. Now, however, further investigations and experiment have led to a fresh discovery. What is so valuable in the Swiss treatment is not the air of the Alps but the air. People who in England would have been shut up in their rooms all the winter have been encouraged to be a great deal out of doors, and have gained fresh life and strength by the process. Air is the secret of the cure, and experiments carried out in districts so unlike as Edinburgh, Norfolk, and Ireland have convinced the medical profession that treatment which at Davos or St. Moritz is of necessity costly may be had at home at a comparatively small outlay. Sanatoriums are about to be built in London and at York, and by and by doubtless they will be as common as hospitals. Further experience will probably suggest fresh developments of the open-air system and will make it possible for patients to profit by it in their own homes. The association has abundance of work before it, but it begins its labors with the most encouraging prospects."

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

TRANSACTIONS OF THE MEDICAL SOCIETY OF NORTH CAROLINA. 1898. 8vo, 173 pages.

GOUT. By Dr. Arthur P. Luff. 8vo, 248 pages. William Wood and Company, New York.

FRACTURES AND DISLOCATIONS. By Dr. H. Helferich. Translated from Third Edition by J. Hutchinson, Jr., F.R.C.S. 8vo, 130 pages. Illustrated. William Wood and Company, New York.

INTERNATIONAL CLINICS. Edited by Dr. J. Daland, Dr. J. M. Bruce, and Dr. David W. Finlay. Vol. IV., Eighth Series. 1899. 8vo, 375 pages. Illustrated. J. B. Lippincott Company, Philadelphia.

HANDBOOK OF HYGIENE AND SANITARY SCIENCE. By Dr. George Wilson. Eighth edition. 8vo, 798 pages. P. Blakiston's Son & Co., Philadelphia. Price, $3.00.

MALADIES DE L'ENFANCE. By Jules Comby. Troisième édition. 8vo, 967 pages. J. Rueff, Paris.

NERVOUS AND MENTAL DISEASES. By Dr. A. Church and Dr. F. Peterson. 8vo, 843 pages. Illustrated. W. B. Saunders, Philadelphia. Price, cloth, $5.00; half morocco, $6.00 net.

ALBUMINURIA AND BRIGHT'S DISEASE. By Dr. N. Tirard 8vo, 362 pages. Illustrated. Smith, Elder & Co., London.

BABY. By Frances S. Bolton. 12mo, 144 pages. Mothers' Journal Company, New Haven, Conn.

ESSAYS OF STUDENTS. By S. Paget, F.R.C.S. 8vo, 17- pages. William Wood and Company, New York.

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RESPIRATORY EXERCISES IN THE TREATMENT OF DISEASES. By Dr. H. Campbell. 8vo, 200 pages. William Wood and Company, New York.

THE SERUM DIAGNOSIS OF DISEASE. By Dr. R. C. Cabot. 8vo, 154 pages. Illustrated. William Wood and Company, New York.

PROGRESSIVE MEDICINE. Edited by Dr. H. A. Hare. Vol. I., March, 1899. 8vo, 490 pages. Illustrated. Lea Brothers & Co., Philadelphia.

THE NATURE AND THE CONSEQUENCES OF ANOMALIES OF REFRACTION. By Dr. F. C. Donders. Edited by Dr. C. A. Oliver. 8vo, 80 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia.

THÉRAPEUTIQUE DES MALADIES DU CŒUR ET DE L'AORTE. By Dr. E. Barié. Deuxième édition. 8vo, 480 pages. Octave Doin, Paris.

THÉRAPEUTIQUE OBSTÉTRICALE. By Dr. A. Auvard. Deuxième édition. 8vo, 331 pages. Illustrated. Octave Doin, Paris.

LE TÉTANOS. By Drs. J. Courmont and M. Dovon. 8vo, 95 pages. Librairie J. B. Baillière et Fils, Paris.

CHIRURGIE D'URGENCE. By Dr. E. Rochard. 8vo, 308 pages. Illustrated. Octave Doin, Paris.

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Original Articles.

NOTES ON CYSTS OF THE BREAST.[1]

BY WILLIAM T. BULL, M.D.,

SURGEON TO NEW YORK HOSPITAL.

SOME imperfect notes I have of cystic disease of the breast may serve to justify the convictions I have formed in regard to the diagnosis and treatment of this condition, and to draw out the criticisms and opinions of others. In the last fourteen years I have noted thirty-nine cases of cystic tumor of the breast, of the variety which in pathological language we call retention cysts. I have also seen eight cases of general cystic disease of the breast, known as the maladie de Réclus, but have never encountered a case of any of the other varieties of cysts—sebaceous, simple serous, hydatids, etc. The majority of these cysts were in married women who had had children (twenty-two married, seventeen unmarried), and in only four was there a history of mastitis or sore nipples. A blow or fall was noted in six cases as a possible cause. The ages were in seventeen cases forty to fifty years, ten cases thirty to forty years, nine cases over fifty years, three cases under thirty years. The duration of the cysts varied from one week to ten years, but most were detected early, seventeen being diagnosticated within three months from their appearance, seven in from three months to one year, and five in from one to ten years. The size of the cyst has varied from that of a large bean to that of an egg, intermediate proportions being described as of the volume of an olive or chestnut. There was a single cyst in one breast in twenty-six instances, two or more cysts in seven, one cyst in both breasts in four, and two or more cysts in both breasts in two cases. An enlarged axillary gland has been seen in two cases, but it was not hard. About one-half of the patients discovered the tumors by accident; one-half had their attention attracted by painful sensations. The fluid contents have always been thin, turbid serum, gray or light brown in color. The microscopical examinations of this fluid and of the wall of the cyst have not been preserved.

The diagnosis of these cysts is easy when they are superficially situated, or in small and soft breasts. It may be difficult when they are deep-seated, or in firm or voluminous mammæ. In many instances the following data will suffice for their recognition: They have a sharply rounded outline, with smooth surface and a feeling of elastic resistance on palpation between one finger and the wall of the chest, the patient being recumbent. The skin is never adherent nor wrinkled, though it may be tightly stretched over the cyst wall and the superficial veins enlarged. An enlarged but soft gland is occasionally felt in the axilla. The nipple is normal, and there is discharge from it only very exceptionally. I have noted this feature in but one case (in two cases of cystic adenomata and in one of cystic carcinoma I have seen a bloody discharge. I believe the statement correct that bloody discharge indicates always papillary growth in the ducts and suggests malignancy, or at least such an approach to it as is found in the "intra-canalicular epithelioma"). The history of slight twinges of pain with brief duration of the tumor suggests strongly the existence of a cyst, for small cancerous deposits are usually not painful; and I think fully one-half of the cysts I have seen were associated with slight pain, and some, situated near the axilla, gave a history of pains radiating down the arm. The story that the tumor has disappeared and then reappeared makes the diagnosis probable. Puncture with needle and hypodermic syringe is the final diagnostic test, and this should never be neglected. A good-sized stiff needle is desirable. I broke a fine needle in one instance, and extricated the fragment with no little difficulty and with much mental disturbance on the part of the patient. In at least a dozen cases the needle test has cleared up for me cases in which exploratory incision, and even radical operation, have been advised by others.

As regards prognosis I would like to emphasize the statement, made by Dr. Bryant in his monograph and by Dr. Shield in his recent book, that these cysts sometimes disappear spontaneously. The following cases demonstrate this occurrence:

CASE I.—A married woman, aged thirty-nine years, in 1885 had one entire breast removed for an egg-sized cyst. Six years later a similar growth appeared in the remaining breast, and disappeared spontaneously in three months.

CASE II.—In 1895 I noted small cyst (bean-sized) near the nipple in a girl, aged twenty-two years. It disappeared within a year. Her mother at the age of forty-five years was said to have had a similar tumor, which disappeared in the course of one and one-half years.

CASE III.—A widow, aged fifty years, seen in 1894, had a cystic tumor of the right breast treated for two years with iodine applications, without effect. It was as large as an egg and was aspirated, and has not reappeared since (five years). At the time of aspiration a cyst, half as large, was discovered in the left breast. This has gradually disappeared.

CASE IV.—In a single woman, aged thirty-seven years, seen in 1897, three small cysts were detected in one breast. One year later no sign of them could be found.

CASE V.—Another unmarried woman, aged thirty-six years, had in 1895 three small cysts of one breast. After two and one-half years one had disappeared and the two remaining were reduced in size.

CASE VI.—The wife of a physician had a cyst of egg size in the left breast, and preparations were made to excise it. Two weeks later the cyst had disappeared completely, and a tumor of the same size was found in the right breast. This was aspirated. Neither tumor had reappeared in more than five years. The woman was about fifty years of age.

In the earlier years of my practice I was more disposed to advise operation in these cysts than I am at present. I find that I have in thirteen instances removed them with satisfactory results. In one instance a single cyst was removed from each breast; one case had three and another two cysts in the same breast.

[1] Read at the meeting of the Practitioners' Society, New York, March 3, 1899.

Two cases were operated on after aspiration had been followed by reappearance of the cyst. Aspiration alone, without pressure or any external application, has cured or rendered quiescent fourteen cases for periods varying from three months to six years. The largest cyst that has thus been cured by aspiration was of the size of a hen's egg, five and one-half years ago. In twelve patients the cysts remained stationary or have been lost sight of; but I feel confident from the character of the individuals that in some of these latter I should have been made aware of any change in their tumors. Four patients have been under observation for periods of four, five, six, and three years respectively, without any perceptible change.

These experiences lead me nowadays, after making the diagnosis sure by puncture, to begin the treatment in an average-sized cyst of one or both breasts with aspiration; and to recommend excision only—(1) in case the cysts refill; (2) in case of unusually large single or multiple cysts; (3) in case the patient is of the exceptionally nervous type ("cancerophobics"), who cannot put up with the presence of the growth and is tormented by the idea of the development of cancer. I should discourage all injections into these cysts, and justify external applications only as placebos.

Of general cystic disease of the breast I have seen eight instances. In three it was at such an early stage that only "lumpiness" of the breast and no definite small or large cysts were noted. These were advised to wait. One of them had presented the condition eleven months without change. In one case both breasts in a single woman of forty-eight years were examined for advanced cystic disease. In the remaining four one breast was removed. This condition undoubtedly calls for excision of the mamma, but it seems to me justifiable to wait till the cystic formation is pronounced and the volume of the breast increasing. We have little evidence that this condition degenerates into cancer, and it certainly may be slow in its development. One of my patients, a single woman of forty, had her cystic breast thirteen years. In that time it had only doubled its natural size, and that without pain. In the involution changes which the breast undergoes at the menopause, cyst formation is not rare; and the occasional cysts met with under these circumstances need not be interfered with.

SALICYLIC ACID IN THE TREATMENT OF PNEUMONIA.[1]

By WILLIAM C. SEBRING, M.D.,

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A DISEASE with a hundred remedies is a disease without a cure. If any one will take the trouble to look in Foster's "Therapeutics" he will find forty-five remedies quoted as being used at the present time in the treatment of lobar pneumonia; and it may seem like a work of supererogation to attempt to add another to the list. However, for every single step that medical science has advanced by scientific investigation, it has advanced a score accidentally. Take any therapeutic measure that you please, trace to their origin any means of dealing with any disease you will, and the exceptions can be counted on the fingers in which those means were not really accidentally secured. Of course these statements do not apply to surgery and surgical treatment, but think a little and perhaps they will not appear so wide of the truth even in regard to this branch of medicine. Not for a moment would any one decry those whose names are world-wide in our science, and I believe and hope that they will accomplish great deeds—but they have not done them yet. No, not even in the treatment of diphtheria.[1]

A great deal has lately been said about self-limited diseases, and it is true that pneumonia is a typical member of the class. It is true that one should not draw conclusions concerning any treatment from a limited number of cases, or from a protracted series provided the cases have occurred under like conditions both as to locality and epidemic; hence one should not be too ready to congratulate one's self on any particular line of treatment that has proved successful under circumscribed conditions, as these conditions together with the nature of the epidemic may have been the causes for success, and not the method of treatment. Some of our standard authors show a tendency to make light of pneumonia as a serious disease. For example, Strümpell says: "Croupous pneumonia belongs in general to the benignant diseases"—but he uses five hundred words in modifying this most optimistic statement. You know, and I know, and every other practising physician knows that pneumonia is not a "benignant disease," and every family, and every physician that attends a family in which there is a case of pneumonia, feels apprehensive as to the result of that case until the patient has recovered. As a matter of fact, the mortality in pneumonia both among those who are young and those who are aged, and under all kinds of conditions and treatment, is about twenty-two per cent. of the number infected. The author is ignorant of any disease anywhere that has a higher mortality. Therefore if a physician has in any way lowered this mortality in a respectable number of cases, he need make no apology for presenting his line of work.

The original paper on this subject when first presented contained a detailed account of something like fifty cases of pneumonia that had come under my notice that had been treated with salicylate of sodium, but for obvious reasons the description of them has not been included in this article. The writer came to use salicylate of sodium or salicylic acid in lobar pneumonia through as egregious an error in diagnosis as, I fancy, was ever committed by a young physician, yet if he should meet a similar case again he might make the same blunder. During the month of October, 1893, he was called to see a young man who had returned about two weeks previously from a visit to the World's Fair. After being home but a few days he began to complain of general malaise, constipation, frontal headache that was continually growing more severe, and an almost overpowering somnolence; in fact, his people were forced to go to the field to rouse him and make him return. When the patient was first seen his face was slightly jaundiced; his temperature was 101° F.; there was some degree of tenderness with distention of the abdomen, the tenderness being most marked in the right groin. The stools were straw-colored. At night a slight delirium was apt to appear. His temperature climbed steadily upward a degree a day for three or four days, with morning remissions and evening exacerbations. Taking the history and condition into consideration, I had no hesitation in informing the family that his was a case of typhoid fever, and a typical case at that. With some vague and misty idea that recovery from typhoid fever was accomplished through "intestinal antisepsis," and with an equally vague and misty idea gotten from the realm of "somewhere" that salicylic acid was an intestinal antiseptic, the patient was given this among other remedies. Imagine my surprise, after having attended the case for about a week, to find one morning that the patient had

[1] First presented before the Orange County Medical Society in September, 1894. Read before the Ulster County Medical Society, October, 1898.

[1] There were in 1887 6,490 deaths from diphtheria, in 1897 4,115 deaths, in the State of New York.

scarcely any pyrexia and an almost normal pulse, was perfectly rational, and aside from being weak was practically well—my case of typhoid fever had evaporated in a single night. On making inquiry of the family concerning what had occurred, his mother stated that during the night the patient had coughed a little, and in a receptacle she showed me a quantity of typical prune-juice expectoration. This patient had had no chill, no cough, no pain in the chest, "no nothing" that at any time pointed to pneumonia. His attack had been as unsymptomatic as if it had occurred in a drunkard. There was but little for the writer to do except to tell the family that he was mistaken in the diagnosis, and it took more moral courage to do it than he has ever had to exercise before or since. The boy was about his work in a few days, but it seemed that the treatment that had eventuated so favorably even through accident was worthy of further trial.

During the eight months following there was a genuine epidemic of pneumonia through that section of the State. And during that period and the following winter there were treated by myself seventy-five or seventy-six cases of pneumonia, with only one death, and that one of a plethoric woman of seventy years of age, who had had attacks of cardiac syncope for a long time before she was seized with the pneumonia; and her death I think can hardly be attributed to the disease, as she had been ill for more than twenty days and was materially better, when her attendant found that she had died some time during the night.

More than twenty-five of this series of cases were in patients over sixty-five years of age. Four of them were over eighty years old, and one was a man of eighty-four years who was an habitual drunkard. Several of these people were suffering from cardiac diseases of one sort or another. One, a young woman eighteen years of age, had mitral regurgitation with extreme dilatation, together with a most severe chorea, from which she died six weeks after recovery from pneumonia. It may be worth noting that her chorea decreased in severity just in proportion as the pneumonia increased, until at one time she had ceased all choreic movements for the first time in six years; but as the pneumonia passed away the chorea returned as severe as it was before the attack.

It is not apropos to say that these results came from the nature of the cases, or from the mildness of a benign epidemic, for it was not so. The cases were almost without exception severe ones, and some of them were extremely desperate. In the same localities, with the same surroundings, and with the regular forms of treatment, my medical brethren had many deaths. I had seen before and have seen since a fair amount of pneumonia, and that series of cases was of more than average severity.

It may not be out of place to detail the only case that I have ever directly treated without the use of salicylate of sodium.

I was called to see a man about forty years of age, robust and without any lesion other than pneumonia involving the lower part of the left lung, and there was not a great amount of lung tissue infected. I was asked to attend him until his regular physician should return after a few days to take charge of his own practice. Not wishing to try my pet drug on another's patient, the man was treated *secundum artem*. For a few days he seemed not to be profoundly affected in any way by the disease. He was seen on the morning of the seventh day and was progressing well. On the morning of the eighth day he was found in a muttering delirium and with a temperature of 108.75° F., and he died in two hours. On making inquiry for some cause that might have brought about the result, one of the attendants told me that I had been asked if the patient could have all the water that he wanted, and I had told him "Yes." One of the family then produced a "schooner glass" and told me that some one had filled it with ice-water the day before, and the patient had taken the whole amount at one time; and that a few minutes afterward he had a violent chill and had grown steadily worse. Of course this is a pointless case, so far as concerns the matter in hand, except that the man received no salicylate, except that he died, and except that the experience gave me a chill toward the too liberal use of cold water in pneumonia that I have not yet recovered from.

Since the winter of 1895, in my own practice pneumonia has not been so prevalent as it was before that time; personally I have treated but about twenty-five cases and have had no deaths; but from some of my medical acquaintances I have reports of one hundred and twenty-five cases with only two deaths, and these two were in people of extreme old age (one ninety-eight years who had been seen but twice, the other eighty-seven years).

Putting aside all personal prejudice, it seems to the writer that the evidence certainly warrants the assumption that, so far as the drug has been used under his notice, it closely approximates a specific for lobar pneumonia.

As regards its administration, the dose is the same as for an attack of acute inflammatory rheumatism: gr. viii. to x. every two hours. With reference to the other usual agencies that are employed in the treatment of the disease, the writer would say, use them exactly and for exactly the same indications as if you were not administering the salicylate; but, no matter how desperate your case may seem, do not abandon the remedy, as it has absolutely no depressing effect on the heart, and so far as the writer knows it is the only one of the coal-tar series that has not. Personally I have had the courage of my convictions to treat but few cases with the salicylate alone, and these were cases of only medium severity, but the patients all recovered promptly and without complications.

From observation I have come to believe that the results of the administration of the salicylate are these:

(1) In the beginning of an attack it quickly quiets the tumultuous pulse.

(2) It acts as a sedative to the general nervous excitement that is prevalent through that period; indeed it seems to act as a hypnotic all through the course of the disease in many instances, as a fair proportion of the patients have slept a major part of the time until recovery had become well established.

(3) It almost surely and quickly gives relief from the pleuritic pains.

(4) It seems to inhibit the manifestation of malign mental symptoms. Thus far none of the patients has developed the least delirium after beginning to take the drug, except the first, and five cases of drunkard's pneumonia, in which the delirium preceded the disease.

(5) The pulse remains full and not over-rapid to the end, except in one case; cardiac symptoms due to the disease itself have been unnoticed and symptoms of a "tired heart" do not often occur.

(6) After the first few doses of the drug the patient will perspire freely as long as the diseased condition of the lung persists, but either from this cause, or from some other that the author is not cognizant of, the temperature seldom exceeds 103° F.

(7) The cases will show a far smaller percentage of complications than is usual.

(8) In nineteen out of twenty cases the disease will subside by lysis.

(9) The length of time required for recovery is less than is the rule with patients that recover under the usual treatment and by lysis.

(10) The infected lung tissue progresses to resolu-

tion more slowly than it does with the average case, though complete recovery from an attack—that is, return to normal health—is more expeditious.

(11) There is a marked diminution in the severity of the disease, all conditions being taken into consideration.

In regard to the *modus operandi* of the action of salicylic acid on pneumonia, the writer can say this: Though he has carefully searched a good deal of literature, he is not cognizant of a single drug, with the possible exception of methylene blue and quinine, that has any real antiseptic action and is taken directly into the blood unchanged, except salicylic acid.

Professor Blumer, of the Albany Medical College, has been kind enough to interest himself in this matter, and he informs me that a one-per-cent. solution of salicylate of sodium is fatal to the pneumococcus in five minutes. Both he and myself devoted some attention to the attempt to solve the problem of what is the percentage of the drug in the blood of an average adult, provided he has taken eight grains of salicylate of sodium every two hours for the period of a day. Frankly, we arrived at all sorts of conclusions, from one part in four hundred and fifty to one part in five thousand, and eventually gave the problem up. In some communications that I have received from Prof. T. L. Chittenden, of Yale, he also says that he has never investigated the question, but that the bulk of the drug taken is rapidly absorbed and quickly eliminated, though a small residue will remain in the system for a rather prolonged period. If any one does know the answer to this question, the writer would be greatly obliged if he would communicate it to him. However, this we do know, that the drug is a powerful germicide to the pneumococcus; that it is absorbed unchanged directly into the blood; that it can be exhibited in large quantities, and that the drug is brought by the blood into direct contact with the germ of the disease. We know that there is more than a probability that acute rheumatism is a bacterial disease, and it is very doubtful if a rheumatic element would ever have been thought of in connection with quinsy, if the drug had not seemed to be almost a specific for both. By the way, some of the older pathologists were wont to regard pneumonia as an acute pulmonary inflammatory rheumatism. The writer is not for a moment trying to deduce the slightest similarity between these two diseases, but if it is granted that inflammatory rheumatism is a bacterial disease we have at least a somewhat analogous condition that is almost certainly relieved by the salicylate, and this must come through its germicidal action. It is useless to say that the salicylate is a failure in rheumatism, as some would have it, for there is not one physician in a hundred who does not prescribe it first of all for acute rheumatism, as his experience and the experience of those about him have taught that it will relieve more cases, and more promptly, than any other drug that has ever been tried.

From a rather extended practice in a very malarious region the author has at times been tempted to think that the salicylate of sodium is almost, if not quite, as potent an antimalarial as quinine, and they must both act in the same manner, by their solution in the blood being strong enough to kill the plasmodium or hinder the development of the spores. In passing let me say that by two separate authors, one in America and the other in Europe, the salicylate is highly esteemed in the treatment of puerperal fever.

Of course the writer is not trying to make the drug a cure-all, but these statements are to the point in that they are evidence tending to prove that the salicylate has strongly marked germicidal properties. Much more could be said along the same line, as its frequent use for coryza, grippe, and the like.

To return to its action on the pneumococcus: as has been said, it is noticed that the crises are usually absent when the drug has been administered, while the disease processes are retarded rather than shortened in the lung. And it stands to reason that this should be true, for, adopt what theory you please to account for the crises, they certainly must depend in some manner upon the virulence of the germ, and if the remedy is in any degree weakening to the virulence of the pneumococcus, it would tend to prevent a crisis. This statement may look a little like reasoning around a circle, but it is not.

This, too, will explain why the disease is retarded, for a crisis is nothing but the death, the sudden death of the germs that produced the malady, and if the drug so enervates these germs that no crises occur, yet they can to a degree increase, though they are under unfavorable conditions, until they exhaust their vitality either owing to the continuous germicidal action of the drug or to some other cause that we do not know. In either case the process would be a longer one than if the pneumococcus was immediately rendered inert, as by a crisis. It may be objected that the germ of malaria and the pneumococcus belong to different kingdoms, one being animal and the other vegetable, but I fail to see that this would disprove the theory of the remedy.

The reverse side of this matter is this: During a conversation, Professor Zeh, of the Post-Graduate School, informed me that in not more than ninety per cent. of the cases of lobar pneumonia could the pneumococcus be demonstrated. But with the evidence at hand it would seem to imply simply that the pneumococcus is a parasite of the disease, if one may use the expression, and the real cause has not been discovered; but granted that Professor Zeh's statement is true, it would still seem as though the drug is as antagonistic to that cause, whatever it may be, as it is to the pneumococcus if that be the real producer of the malady.

It is not advanced as a theory, or even as a guess, but stranger revelations have occurred in the history of medicine than that at last pneumonia should come to be regarded as an acute, pulmonary inflammatory rheumatism, plus an infection of pyogenic bacteria.

In closing let me say that it is with the greatest modesty that I present this paper, as even to myself it scarcely appears conceivable that, amid the world-wide and science-broad investigation of disease, by accident I should have fallen upon a specific for one of the most fatal maladies that afflict the human race; and nothing but the evidence of my own experience and the experience of others could justify me in presenting this subject for consideration.

Since the above article has been written, I see by an editorial in a late number of the MEDICAL RECORD that Dr. Andrew H. Smith, in the chapter that is under his charge in the "Twentieth Century Practice of Medicine," is about to place salicylate of sodium among the leading agencies that we have in dealing with the disease, and it will be curious to note if his conclusions and my own will bear any resemblance, as he of course has investigated the disease far more broadly and deeply than it will ever be possible for me to do.

Disuse of the Bed-Pan in Typhoid Fever.—The arguments in favor of the night-chair are: (1) Less annoyance to the patient; (2) more complete evacuation of the bowel, and therefore less frequent disturbance; (3) the more natural position causes less straining, and therefore really less danger of either hemorrhage or perforation. Only when the patient is unable to get out of bed is the bed-pan to be used.—H. C. DRURY.

A CASE OF RESECTION OF BOWEL FOR CARCINOMA.

By CARLOS C. BOOTH, M.D.,
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I was called in consultation by Dr. Williams, of Girard, Ohio, October 20, 1898, to see Mrs. C——, aged sixty-two years, who had, eight weeks previous to my visit, been seized with severe pain in the abdomen. At that time Dr. Williams was called, who after a

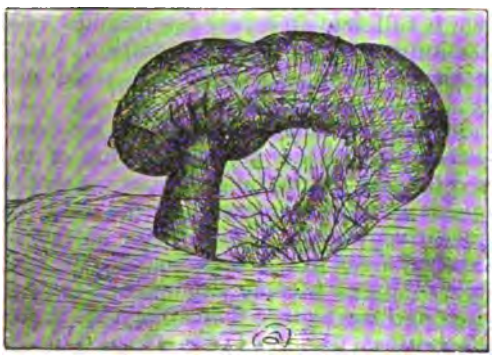

Fig. 1.

careful examination could not detect the cause or probable cause of the pain. He administered some anodyne powders, and left instructions for the bowels to be moved, and that he should be sent for again should his services be needed. They called him back during these eight weeks occasionally, and he continued anodyne powers when needed for pain, and insisted upon a daily bowel movement. The patient remained in bed, but ate pretty well, and suffered more or less during this time with sharp shooting pains in the right iliac region. The bowels operated normally during this time.

One week previous to my visit the doctor discovered an enlargement in the region of the appendix, and as treatment did not relieve the condition he asked for a consultation. On my arrival I found an anæmic, pale, white-haired woman, confined to bed; she was cheerful, sleeping well, suffering little pain, eating, bowels regular, with no vomiting; the abdomen was soft and flabby; pulse, 110; temperature slightly elevated.

On examination I found a movable tumor midway between the anterior superior spinous process of the ilium and the umbilicus. The surface was oval, ap-

Fig. 2.

parently generally smooth, but in one position it felt very much like a movable kidney and could be moved high up and low down. It was not very painful on pressure, but the normal position and condition of the right kidney, gall bladder, ovaries, and stomach excluded this diagnosis, and I told the doctor it was my opinion it was a carcinoma of the cæcum.

There being no inflammatory symptoms at any time, the idea of appendicitis was excluded, which the doctor said he had feared. I advised her immediate removal to the Mahoning Valley Hospital for operation. On October 30, 1898, with the assistance of the staff, I made an incision, two and one-half inches long, over the tumor, and, following the colon to the appendix, I drew the latter out with some eight inches of the ileum and ascending colon; it presented the appearance shown in Fig. 1. The ileum seemed to have been invaginated into the colon, and the head of the colon felt as though the small bowel was doubled up inside of it. I then tried to pull out or turn out the small bowel, and after turning out some inches of it I could press out no more; on turning the bowel over, it appeared as in Fig. 2. The dotted line shows the lines of excision. The black irregular lines radiating from the ileum show the breaks in the peritoneal surface caused by the pressure exerted in turning the ileum out. These ruptures showed the nature of the trouble. I immediately began a resection of six inches of the ileum and five inches of the colon above the cæcum.

After carefully tying off the mesentery and removing the enlarged glands I put on the intestinal clamps, and excised the whole. I intended to insert the Murphy button into the dorsum of the colon, but, on being told that time was precious with my aged patient, I closed up the end of the colon, except room enough for the button, with a double row of fine silk

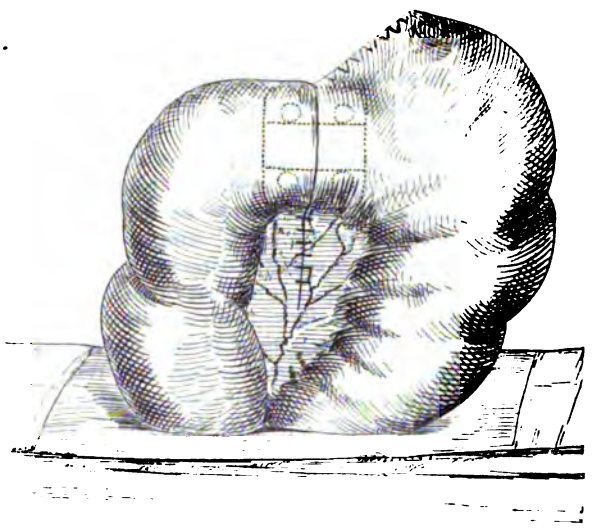

Fig. 3.—The Murphy Button is shown by dotted line.

sutures. I then placed the other half of the button in the ileum, and brought the two together, thus forming a continuous opening; adjusted and stitched the mesocolon and mesentery, dropped the repaired bowel into the abdomen, covered it over with the omentum, and closed the abdominal incision. The patient was on the operating-table about forty minutes. She was put in bed with pulse 120, and good reaction; she passed gas that night, and the bowels moved slightly the next day. Fig. 3 shows the bowel as repaired.

The patient had no inflammatory symptoms, and had a comfortable convalescence with the exception of a small bedsore, which formed by accident ten days after the operation. Since then she has done well and is making a complete recovery. A very interesting feature of the case was that she had no obstruction of the bowel at any time. Microscopical examination showed the mass to be carcinomatous.

Finger Stalls of thin rubber are useful in curing the habit of nail-biting; in retaining ointments and other applications in paronychia and nail diseases; and are invaluable to the genito-urinary surgeon as a protection in examinations of uterus, prostate, and seminal vesicles.—C. W. Allen.

THE LUNG AND HEART REFLEXES: A CONTRIBUTION TO THE STUDY OF HERETOFORE UNDESCRIBED CLINICAL PHENOMENA.[1]

By ALBERT ABRAMS, A.M., M.D.,
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In a recent contribution, Moccucci[2] relates how he, at the suggestion of Professor Raimond, sprayed the left half of the abdomen with ether in twelve cases of enlarged spleen. Marked reduction in the volume of the spleen was observed in all the cases. In repeating the experiments, I likewise noted a decided diminution in the area of splenic dulness in all individuals on whom the method was tried, irrespective of the fact whether enlargement of the spleen existed or not. Was this reduction of splenic dulness real or apparent? If apparent, to what was the reduction due? The reduction of splenic dulness was both apparent and real, but especially did the former prevail. If a spray of ether is directed over the region of the spleen, percussion of that organ shows a diminished area of dulness amounting in most instances to obliteration of the area of percussion dulness. Coincident with this phenomenon, one may note super-resonance of the lungs contiguous to the spleen. It is the latter phenomenon which explains the apparent reduction in volume of the spleen. If the spleen is examined by aid of the fluoroscope during the application of the ether spray, a slight reduction in its volume may be observed, but it is in no wise commensurate with the reduction ascertained by linear percussion. Therefore one is justified in concluding that the splenic reduction is more apparent than real, and consequently another explanation must be sought for the diminished area of dulness. That the cause is resident in the lungs, simple experiments will show. If the ether spray is directed over the heart region, the percussional area of that organ will be reduced at once; in fact, the superficial area of cardiac dulness may be obliterated by this manœuvre. Similarly, if the spray is directed over the liver region, the superficial area of dulness of that organ can be reduced at once. If the spray is directed over the borders of the lungs posteriorly, the lung borders will descend from two to four inches, dependent on certain conditions.

Suffice it to say at this time that dislocation of the lung borders by forced inspiration never approaches the dilatation produced by the ether spray. Further experiments demonstrate in brief the fact that the application of any cutaneous irritant, whether the latter be mechanical, chemical, or electrical, will always induce acute dilatation of the lungs. Even in emphysematous individuals the application of a cutaneous irritant will augment still further the existent lung dilatation. Acute lung dilatation is a well-established condition occurring in capillary bronchitis and in bronchial asthma. Unlike alveolar emphysema, the alveolar ectasia is temporary and capable of eradication when the cause is removed. The writer has shown[3] that acute dilatation of the lungs can be induced in healthy persons by irritation of the nasal mucosa.

In this contribution I presented the following propositions: First, that there are conditions of nasal reflex genesis manifested by dilatation and contraction of the lungs. The second proposition is, that the pulmonary neurosis of dilatation can be induced in almost every healthy individual by irritation of the nasal mucosa, and conversely that this condition can be dissipated after the removal of the source of irritation. The pulmonary neurosis of dilatation can be attained by firmly pressing cotton into both nasal cavities. The degree of lung dilatation, with its concomitant phenomena, will naturally vary according to circumstances which modify other reflex acts. After the introduction of the cotton, a few minutes elapse before percussional results are noted. One will then observe super-resonance and immobilization of the lung borders and diminution of the areas of hepatic and cardiac dulness, in the latter instance even to obliteration. The auscultatory signs of lung dilatation are less constant and pronounced. Removal of the source of nasal irritation is followed in a very few minutes by a complete restitution of the normal condition. Irritation of one nasal cavity only does not yield manifest results.

If the mucosa of both nasal cavities has been thoroughly cocainized before the introduction of the cotton, no dilatation of the lungs ensues. Compression of the nasal cavities by pressure on the nose likewise yields negative results. I have made no attempt to locate special areas in the nasal mucosa, the irritation of which conduces to lung dilatation. Experiments on rabbits and frogs prove the correctness of the clinical observations just cited. In frogs, I have often observed the phenomena of lung dilatation under the microscope. The results were always negative when the nasal mucosa was cocainized before irritation of the mucous membrane was attempted.

I maintain that the phenomenon of lung dilatation can be provoked at any point in the extensive course of distribution of the pneumogastric nerves, and that the stimuli can act indirectly on the vagus nerves through the terminal fibres of the trigeminus, or, as I have already shown, by irritation of the cutaneous sensory nerves contiguous to the lungs. The question naturally arises, by what means are we able to establish the fact that the application of any cutaneous irritant will cause acute dilatation of the lungs, a condition, it may be mentioned parenthetically, which is of only a few minutes' duration? In making such an hypothesis tenable we summon to our aid the conventional physical signs and the fluoroscope. These aids show that when the skin is irritated by means of cold, by friction, or by a strong faradic current, lung dilatation will ensue. The degree of lung dilatation is dependent on the character of the irritant and the severity of its application. The response of the lung to dilatation is always greatest in that part of the lung contiguous to the source of cutaneous irritation.

The physical signs that enable one to recognize lung dilatation are: First, diminished respiratory excursions of the lung borders; second, extension of the pulmonary percussion note and obliteration of the cardiac and splenic areas of dulness; third, hyper-resonance of the lungs; fourth, absence of the apex beat. The fluoroscope is another valuable aid. Auscultation is most untrustworthy as a sign, inasmuch as the artificial lung dilatation is of very short duration, not lasting in the majority of instances longer than three minutes after the source of cutaneous irritation has been done away with. Lung dilatation, it must be observed, does not involve both lungs, nor even an entire lung; it spreads from the source of cutaneous irritation, involving primarily circumscribed parts; then, if the irritation is severe enough, more remote parts may be involved. In lungs showing diminished resonance, the latter can always be increased by rubbing the skin vigorously over the lung percussed. I have learned to rely on this sign, which I call the lung reflex, in all doubtful cases of lung dulness, and to test the resiliency of the pulmonary tissue.

The aid that the *x*-rays furnish in recognizing the lung reflex is marked. Before considering the aid thus furnished, we must recall a few essential facts in anatomy relative to the complemental spaces. Each

[1] Read before the Medical Society of the State of California, April 14, 1899.
[2] Riforma Med., 1898, p. 208.
[3] New York Medical Journal, June 13, 1896.

lung has a double covering. The inner covering, the pulmonary pleura, is intimately attached to the lung, whereas the parietal pleura builds a sac in which the lung is permitted to move freely. In many situations this sac is larger than the lung volume, and in those situations reserve spaces are created, which have been called the complemental or pleural spaces. These spaces make variations in the respiratory volume of the lungs possible. The pleural spaces are found at the lung borders. These spaces in the cadaver measure as follows: Right sternal line, 2 cm.; right parasternal line, 2 cm.; right mammillary line, 2 cm.; right axillary line, 6 cm. In our measurements after cutaneous irritation, we found that the dislocation of the lower lung border exceeds these measurements, which can be accounted for by the fact that, relatively speaking, even in health, the lungs are in a partially collapsed condition; our measurements on an average were as follows: Right sternal line, 3¼ cm.; right parasternal line, 3¼ cm.; right mammillary line, 4 cm.; right axillary line, 6 cm.

If we examine the normal lung with the Roentgen rays, the fluoroscopic picture presents a uniformly light area. This light area will vary not only in different individuals, but also in the same individual. The lungs appear brighter during inspiration than during expiration. If now we irritate the skin of the thorax by means of a wire brush or spray of ether, we may note, contiguous to the site of irritation, that the brightness of the lung will become intensified. We also observe that this increased brightness is especially manifest in situations corresponding to the complemental spaces. By gradually applying our irritant to different parts of the skin of the thorax, we shall observe that eventually the entire lung may be made to yield a more intense luminosity. We shall further observe that this increased brightness is of varying duration, lasting in some instances but a few seconds to four minutes; whereas in the average individual the duration is about two and a half minutes, the lungs after that time resuming their normal appearance.

In previous communications,[1] I have repeatedly directed attention to a condition of pulmonary atelectasis which more forcibly illustrates the value of the lung reflex in diagnosis. The essential facts of these contributions are as follows: (1) There are present over the thorax of apparently normal individuals constant areas of diminished percussion resonance varying from dulness to flatness. (2) The areas vary in number and situation, as far as the individual is concerned, but in the aggregate they admit of definite localization. (3) I have denominated these areas of dulness as atelectatic zones. (4) Repeated forced inspirations will dispel them in children, as well as in adults, although they will reappear (usually after two or three minutes) when tranquil breathing is resumed, and will continue as such until an increased demand is again made on the vital capacity of the lungs.

If individuals in whom atelectatic zones are demonstrable by percussion are subjected to an *x*-ray examination, it will be found that the zones obstruct the rays, and, in consequence, the fluoroscopic picture will be marked by areas of opacity corresponding to the atelectatic zones. It will be noted, furthermore, if the patient is instructed to practise forced breathing, that, in a variable length of time, the opaque areas become bright, only to become opaque again when forced breathing is suspended. It must be remarked, however, that the zones are not always opaque, the shadow thrown on the fluoroscope varying from slight haziness to decided opacity. This is fully in accord with the results yielded by percussion.

In very many instances forced breathing will not dissipate the areas of opacity; then recourse must be had to irritation of the skin of the thorax, which more effectually induces the lung reflex, which is one of dilatation. After examining a large number of individuals with a view of determining the degree of lung dilatation as secured by forced inspiration, in comparison with that attained by stimuli applied to the skin of the thorax, I find the following (the measurements were made in the middle axillary line on the right side): Average dislocation of the lower lung border from quiet respiration to forced inspiration, 3 cm.; average dislocation of the lower lung border from quiet respiration after violent irritation of the skin in the axillary region by means of a wire brush, 6 cm. The following conclusions were formulated:

(1) Atelectatic zones may be demonstrated in a large number of individuals.

(2) These zones throw circumscribed shadows on the fluoroscope, which will vary according to the degree and area of the pulmonary atelectasis.

(3) The shadows cast by the atelectatic zones can be made to disappear by continuous forced breathing, and they will reappear after a variable period when quiet breathing is resumed.

(4) Before deciding whether the shadow cast on the fluoroscope is really due to pulmonary consolidation, the subject should be instructed to make forced inspirations; if the shadow disappears and is supplanted by a bright reflex, it is due to atelectasis; if the shadow persists, pulmonary consolidation may safely be concluded to exist, excluding, of course, other anatomical conditions that would interfere with the transmission of the Roentgen rays to the fluoroscope.

(5) Radioscopy of the lungs demonstrates that the opacities on the fluoroscope corresponding to the atelectatic zones greatly exceed the percussional areas of the latter; and, furthermore, that in individuals in whom no zones can be demonstrated by percussion, opacities are sometimes present which disappear after forced inspiration.

(6) Before and during a radioscopic examination of the lungs, it is always imperative to instruct the patient to practise forced breathing, and when this manœuvre does not dissipate the opacity, recourse must be had to cutaneous irritation.

The heart reflex will next engage our attention.

If we irritate the skin in the precordial region, a contraction of the myocardium is thereby reflexly induced. Receding from the precordial region, irritation of the skin will proportionately diminish the myocardial contraction. These facts are not demonstrable by percussion because the same stimulus results in the production of the lung reflex, which in itself is an acute lung dilatation, thus making percussion elusive for the superficial area of cardiac dulness. This phenomenon of myocardial contraction, which I have called the heart reflex, is only manifest by means of the Roentgen rays and the fluoroscope. Contraction of the right ventricle following cutaneous irritation can less frequently be observed than contraction of its fellow-ventricle. The heart reflex phenomenon is especially manifest in children. In one instance, the case of an emaciated girl, aged fourteen years, my assistant, Dr. Louis Gross, and myself saw both ventricles recede fully one and one-half inches on either side, upon application of the cutaneous irritant. Of course, the anatomical heart in the adult measures only three and one-half inches in breadth, but we are here concerned with the physiological heart. The myocardial contraction thus induced is

[1] "Report of One Hundred Cases Treated by the Pneumatic Cabinet," Pacific Medical Journal, September, 1891; "Pulmonary Atelectasis as a Cause of Anæmia," Transactions of the Medical Society of the State of California, April, 1892; "Observations on Pulmonary Atelectasia," *ibid.*, Session of 1894; Medicine, December, 1895; New York Medical Journal, June 13, 1896; Philadelphia Medical Journal, November 26, 1898.

sudden and of momentary duration, and like other reflex acts soon becomes exhausted.

I advise those who desire to produce this phenomenon to select children, or at any rate persons who possess thoraces best adapted for *x*-ray examination.

The lung and heart reflex phenomena subserve a purpose in diagnosis and are indications for a rational treatment of pulmonary and cardiac diseases.

In diagnosis, the lung reflex establishes a clew to the diagnosis of the nature of lung dulness, whether due to consolidation or to atelectasis. If the latter is present, vigorous cutaneous irritation will dissipate the dulness, whereas if the former is present it will persist. In the broncho-pneumonic affections of children, it is frequently impossible to say whether we have a dulness dependent on consolidation or only atelectasis caused by occlusion of the bronchioles. Here the application of cutaneous friction will at once decide the question. In pulmonary tuberculosis and in the pretuberculous condition, experience has taught me that the lung reflex is only slightly present. Whereas in the middle axillary line on the right side the average dislocation of the lower lung border after cutaneous friction in this region is 6 cm., in the pretuberculous condition and in phthisis it is only 2.5 cm. The heart reflex is a valuable index to the state of the myocardium. If the latter muscle is degenerated, the heart reflex is exceedingly feeble or even absent. In pericardial exudates and in pericardial synechiæ it is also absent.

The lung reflex suggests many valuable lessons in regard to treatment. It teaches us that, in the development of the lungs, vigorous cutaneous frictions are invaluable. In broncho-pneumonia, in which lung atelectasis deprives the patient of extensive areas of respiration, the application to the chest of cutaneous stimuli is invaluable in maintaining lung dilatation. This can be secured by the use of cold water, friction, or heat by means of poultices. I must confess a weakness for the latter, in defiance of custom. To me, the application of heat to the chest when indicated in pulmonary affections seems more rational and intuitively less barbarous than the conventional application of cold water. Then, again, the response of the lung by dilating is as great to heat as to cold. I believe that, as I have shown in a previous paper,[1] the good effects observed after the Schott treatment are dependent on stimulation of the sensory nerves of the skin.

I employ in many of my patients vigorous cutaneous frictions, in lieu of the conventional Schott treatment, with results nearly as good as by the latter method. Relief of dyspnœa follows, and there is a marked reduction of the pulse rate, together with an increase in volume and force. The following conclusions may be formulated in reference to the Schott treatment:

(1) Lung dilatation follows the exercise and bath treatment of the Schott method, the dilated lung acting as an excretory channel for the overburdened heart.

(2) The cause of the lung dilatation is dependent on cutaneous irritation provoked by the exercise and baths.

(3) The degree of lung dilatation may be increased by more powerful cutaneous irritation.

(4) A decrease in the volume of the heart likewise ensues after the Schott treatment.

(5) This reduction in cardiac volume is likewise provoked by cutaneous irritation, which is one of the real factors involved in the Schott treatment.

(6) Vigorous cutaneous friction by means of a wire brush, such as is employed in the application of the faradic current, will accomplish almost as much as the baths and exercise of the Schott treatment. At the same time it is a simpler and more expeditious as well as inexpensive method of treatment.

In explanation of the lung and heart reflexes, we all recognize the great influence of the skin in physiological and pathological conditions. According to Von Preuschen, stimulation of the respiratory centre is greater through the cutaneous nerves than through the vagus branches to the respiratory organs. In animals which have been made apnœic, the application of cutaneous stimulation (use of cold water) induced strong respiratory movements, and he concludes that mechanical cutaneous stimulation by flagellation, cold water, or the electric brush is of great value in stimulating the centre of respiration.

The centre for the inhibitory nerves of the heart is stimulated reflexly by centripetal nerves. In support of this physiological axiom, we need only recall the "Klopf Versuch" of Goltz, which demonstrates that striking the abdomen in animals will inhibit the heart's action.

[1] The Medical News, January 7, 1899.

THE USE OF THE EXTRACT OF SUPRARENAL CAPSULE IN OPHTHALMIC PRACTICE.

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The favorable reports from the use of the extract of the suprarenal capsule, by some writers, in operations on the eye and in the nose, was an inducement to give this drug a trial. Within a short space of time a recent experience at the Manhattan Eye and Ear Hospital, in cases of different diseases of the eye, warrants the putting on record the results so far obtained, or rather what has been accomplished in the cases in which it was used. From this limited use of the extract it might be unwise to draw definite conclusions. Others who have used it speak in high praise of it. From my use of it, while it has been of benefit in some cases and I feel inclined to give it further trial, there were cases in which not only was there no benefit, but it seemed to do positive harm. In fact, in the first case in which it was used by me, one of gonorrhœal ophthalmia, instead of a decrease in the redness, swelling, and discharge from the conjunctiva, there seemed to be a decided increase of all these symptoms by its use. In this case the suprarenal capsule extract was used in a much weaker aqueous solution than it was in subsequent cases of other diseases, but it hardly seems reasonable to say that a strong solution of it would have been of benefit while the weaker one did harm.

In the use of a new drug or of the new application of an old drug one is apt to exaggerate the benefit, or perhaps it would be better to say that there is a natural desire for much benefit and any slight good effect is magnified. Conservatism is desirable, especially when, as now, such a large number of new remedies are constantly being brought out. At the same time it seems unwise to reject without trial a remedy simply because it is new. The use of suprarenal capsule in ophthalmic practice is not altogether new, but so far as I know it has not been used very extensively or by many. Possibly some have given it a trial and then abandoned it.

The first case was Joe G——, twenty-seven years of age, admitted October 31, 1898, with gonorrhœal ophthalmia of the left eye, of six days' duration, which had had no treatment. There were marked chemosis, especially of the lower part of the eyeball, profuse purulent secretion, swelling of the lids, and the entire cornea had a "ground-glass" appearance, with a small marginal ulcer at the supra-temporal quadrant. The patient was admitted during the evening, and the usual treatment of ice cloths, frequent cleansing with

boric-acid solution, and the application of a solution of nitrate of silver, gr. x. in ℥ i., was followed. On the next day, when I first saw the patient, the symptoms were worse, the purulent discharge was increased, and the entire cornea was quite opaque. As the eye seemed to have a very slight chance for recovery, it was decided to try the effect of the extract of the suprarenal capsule, with the hope that its reported marked astringent or blanching effect would be beneficial in cutting short the inflammatory process. A fresh solution, gr. viii. in ℥ i., was used. After several instillations of this, the eye first having been thoroughly cleansed, there seemed to be a little less opacity of the cornea and possibly less redness of the ocular conjunctiva. It was directed that the solution be used every half-hour, with also frequent cleansing, ice cloths, and atropine solution. During the night the cornea perforated and there was a rapid sloughing of it. The following day the chemosis, secretion, and swelling of the lids were the same, and pain, which after perforation in these cases is sometimes less, seemed to be quite severe. The use of the suprarenal capsule with the other treatment was continued, and on November 3d the strength of the solution was increased to gr. xiv. in ℥ i. This strength of solution is weaker than that recommended for use when an operation is to be performed. To all who examined the eye it seemed that the purulent discharge was in excess of what is usual in such cases. After four days' use of the suprarenal-capsule extract it was discontinued, as we were satisfied that, in this case at least, it was of no benefit. By courtesy of Dr. Webster I shall briefly mention a similar experience of his. A case of ophthalmia neonatorum, with the cornea of one eye practically destroyed, was admitted a few days after my experience with the suprarenal capsule in the case narrated above. Its use in Dr. Webster's case not only did no good, but after its use the discharge, swelling, and redness of the lids became excessive.

The following three cases of ulceration of the cornea with hypopyon showed that the extract of the suprarenal capsule was of decided benefit in the operation of paracentesis to remove the hypopyon, and as each case was of such a severe character that the prognosis was extremely bad, and as the progress to recovery was so marked and rapid, one is inclined to attribute a certain amount of benefit to the drug, although it was not used after the operation. Each one of the patients was in a poor general condition, bad nutrition, lack of proper food, had had very little treatment for the eye, and had suffered much pain.

Case I.—James B——, forty-three years of age, came to the outdoor clinic on November 15, 1898. There was a large sloughing ulcer of the cornea with hypopyon. He was advised to enter the hospital, but on account of work and family affairs delayed until two days later. Atropine solution and hot-water applications were ordered. On November 17th the ulceration and hypopyon were increased. The ulcer now involved an area of one-third or more of the cornea and the hypopyon was three lines in height. There was much swelling of the ocular conjunctiva, with redness, pain, and purulent discharge, as is usual in cases of this kind. The vision was perception of light. A ten-per-cent. aqueous solution of the extract of suprarenal capsule was dropped on the eyeball frequently during five or eight minutes. There was marked blanching of the red and swollen conjunctiva. A solution of cocaine, four per cent., was then used several times, followed by some return of redness. Then the ulcer was thoroughly cauterized with the actual cautery and the hypopyon was evacuated. It seemed to me and to others present that the anæsthesia of the eyeball was much more marked than is ever obtained in these cases with the use of cocaine alone. One point which was noticeable was that in grasping the conjunctiva with the fixation forceps the patient did not seem to have the pain usually experienced from this when the eye is much inflamed. The subsequent treatment consisted in the use of atropine, hot-water applications, and cleansing with boric-acid solution.

On November 29th the patient was discharged from the hospital. The vision was $\frac{20}{200}$. While the eye was not entirely well it was so nearly so that it was safe to allow the patient to leave and to continue the treatment at home. The eyeball was quite white and only a slight ulceration of the cornea remained, but with a large opacity, as was to be expected.

Case II.—Thomas O'C——, sixty-nine years of age, admitted November 8, 1898. Here there had been a traumatism ten days previous, and on admission an ulceration of the lower half of the cornea with hypopyon was present. The patient was in poor general condition, rheumatic. The eye was treated with leeching to the temple, atropine, hot water, and cleansing. For a few days there seemed to be a slight improvement, and then ulceration, hypopyon, redness, swelling, and pain increased. The same plan of using the extract of the suprarenal capsule and the cocaine was followed as in the preceding case, and the hypopyon was evacuated. No cauterization was used. The same effect as to blanching of the eyeball and anæsthesia was obtained. The patient was discharged December 5th. There was a large opacity of the cornea, and the patient was able to count fingers with the eye.

Case III.—The next case in which the extract was used showed decided benefit therefrom. The patient, Thomas C——, fifty-one years of age, was admitted November 22, 1898. There was a sloughing ulcer of the cornea involving its lower half, and with hypopyon filling about one-fourth of the anterior chamber. A ten-per-cent. solution of the extract was used. A marked blanching of the ocular conjunctiva, which previously was much congested and swollen, took place. Then a four-per-cent. solution of cocaine was used several times. The pus was evacuated. The same good effect was obtained, the ocular conjunctiva being sufficiently anæsthetic to permit of grasping the eyeball with the fixation forceps, without giving the patient pain. The after-treatment was the use of hot-water applications, atropine, and cleansing, and the progress to recovery was more rapid and certain than I have usually found in similar cases.

Another case, in which the extract seemed to be of decided benefit as to the anæsthesia, was one of dacryocystitis, with much redness, tenderness, and external swelling, and with a large amount of pus in the lacrymal passage. I am convinced that the operation was performed with less pain to the patient than could have been done with cocaine alone, and the use of a general anæsthetic was avoided.

The extract was used in several other cases, in which it did not prove of any apparent benefit. One of these was a case of inflammatory glaucoma. The suprarenal capsule did produce a blanching of the reddened eyeball, but a one-per-cent. solution of holocaine afterward caused a return of the congestion. The anæsthesia was not sufficient for the iridectomy, and so ether was used. The patient was very nervous, as is usual in these cases of glaucoma, and possibly a more favorable result might be obtained in other cases of glaucoma. Unsatisfactory results were obtained also in cases of plastic iritis, episcleritis, and interstitial keratitis.

From this limited experience we may say, as far as the use of suprarenal capsule in ophthalmic practice is concerned, it has been of decided benefit in operations for dacryocystitis and hypopyon keratitis, diminishing

the congestion to a marked degree and permitting more complete anæsthesia, but that in purulent ophthalmia, in glaucoma, and in deep-seated inflammations it is not of benefit.

While this conclusion is drawn from rather few cases, I am led to feel that there may be more indications for its use, and I shall make further trial; and if this report shall induce others to try it who have not done so already, my purpose will have been accomplished.

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SURGICAL TREATMENT OF GENERAL PERITONITIS, WITH REPORT OF CASES.[1]

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General peritonitis has long been considered, if not universally fatal, at any rate a condition almost beyond the scope of successful treatment. The old idea of idiopathic peritonitis has been wellnigh abandoned, and we have now come to regard it as in nearly every case secondary to an infection of some sort—either a perforation of some part of the digestive tract, extension of inflammation of the pelvic organs (puerperal or otherwise), tuberculosis, or a traumatism. The old method of treatment by heroic doses of opiates has fallen into disuse, and in its place has arisen a new and more hopeful plan of surgical procedure, which promises vastly better results.

Pelvic peritonitis, as we all know, is in many cases self-limited, and spontaneous recoveries are by no means rare; infection and consequent inflammation of the general peritoneum is a far different condition, and if left to itself or treated medicinally, is in nearly every instance fatal. My own experience during the past few years has, however, led me to believe that a well-timed surgical interference in these cases affords us a hope of saving a large proportion of patients who would otherwise be beyond human relief.

Reasoning by analogy, we may well ask: Why cannot the same methods which result in the cure of a suppurative pleural cavity, hip, or knee joint, as well be applied to an inflammation of the same type of membrane, even if more extensive, which we find investing the intestines and lining the abdominal parietes? In other words, why may not incision, evacuation, thorough cleansing, and drainage do for the peritoneum what the same procedures accomplish in an empyema or inflammation of the large joints? As illustrative of the truth of this hypothesis, permit me to cite a series of ten cases bearing on the subject.

Case I.—J. E. R——, aged twenty-nine years, colored, occupation Pullman porter, was operated on by me for perforative appendicitis within six hours after the perforation, the patient being in collapse, but rallying somewhat before operation. The appendix was removed through a median incision; the peritoneal cavity was found bathed in sero-pus, probably one pint in quantity. There was intense injection of the visceral peritoneum, with numerous forming lymph deposits. The intestines were withdrawn, so far as possible, from the abdominal cavity, and thoroughly washed with decinormal saline solution; the sero-pus in the pelvic cavity was removed by careful swabbing, followed by the introduction of a quantity of fifty-per-cent. peroxide of hydrogen, which was afterward absorbed by gauze sponges. The intestines were returned, and iodoform gauze drains, without glass tubes, were introduced deep into the pelvis and transversely in each direction across the abdomen, emerging at the lower angle of the incision, the remainder of which was closed by silkworm-gut sutures, the patient making an uninterrupted recovery.

Case II.—A. M——, aged twenty-seven years, occupation laborer; operated upon for appendicitis through a lateral incision; the appendix was found perforated and was removed. Upon further exploration, I discovered a condition of general peritonitis as evidenced by free pus and more or less general adhesions. A median incision was then resorted to, and through this the intestines were drawn out and treated as in the previous case. After thorough cleansing they were returned, and the pelvis and abdomen drained as before; recovery was uneventful except for the formation of an inflammatory mass in the neighborhood of the cæcum, which, however, resolved without suppuration, within the following ten days.

Case III.—Willie B——, aged three and one-half years, was operated upon for appendicitis on the tenth day of disease. I found a well-defined pus cavity around the perforated appendix; this abscess apparently not communicating with the peritoneal cavity. Not recognizing the existence of peritonitis, although there was considerable tympanites, and fearing the effect of breaking down adhesions, the abscess cavity was simply drained. The patient died on the third day from general peritonitis, which undoubtedly existed at the time of the operation; in my opinion, the result might have been equally favorable as in the first two cases, had I appreciated that fact and carried out the same thorough procedures.

Case IV.—T. J——, aged thirty years, occupation laborer, was operated upon for appendicitis of three days' duration; the appendix was found perforated, and general peritonitis existed. The intestinal tract was eviscerated as before, washed with decinormal saline solution and peroxide of hydrogen; the intestines and pelvis were dried, the intestines were returned to the abdominal cavity, and free gauze drainage was inserted; there was uninterrupted recovery within three weeks.

Case V.—Mary S——, aged eight years, schoolgirl. This case presents certain peculiarly interesting features which are worth recording. One month previous I had attended a younger sister, aged three years, for specific vaginitis, as proved by bacteriological cultures; local treatment of this case by solutions of nitrate of silver effected a cure, and within the following two weeks I was called to attend the patient whose history I am now relating, for an apparently similar vaginitis. On account of the immediate sequence and similarity of symptoms in the two cases no cultures were made in this instance, I taking it for granted that it was of the same nature as that from which the sister had suffered. Upon my first visit the little patient complained of some abdominal pain, to which I unfortunately attached little importance, and established the same treatment as was carried out with the other member of the family. Being away from the city for two days, I did not see her during that interval; upon my return I received an urgent call and found her suffering with intense abdominal pain; abdominal muscles rigid, tympanites quite marked, pulse rapid and thready, countenance pinched, temperature 102° F. by rectum. I at once realized that I had to deal with a general peritonitis, probably of a septic origin, and I advised immediate operation, which was refused until the end of another twenty-four hours, when the child's parents consented. Upon opening the abdomen, I found one of the most extensive conditions of general peritonitis I have ever seen. The inflammation in this case was of the plastic type;

[1] Read by request before the North Hudson County Medical Society, February 1, 1899.

all the abdominal viscera being adherent, as if a quantity of glue had been poured into the cavity, and evidently the entire mass of intestines could have been lifted out of their bed *en masse* had it not been for their adhesions to the abdominal parietes. Curious to relate, the Fallopian tubes were apparently normal as to gross appearance; a culture made by mopping the surface of the intestines and applying to the gelatin in a culture tube, and subjecting it to the usual incubation, failed to reveal the presence of the gonococcus; this fact may be explained by the well-known difficulty of cultivating the bacterium of Neisser, except from pure gonorrhœal pus, and also because inadvertently a weak solution of carbolic acid had reached the peritoneal surface prior to making the culture. The operative procedure consisted in liberating all adhesions, rigid cleansing of all peritoneal surfaces with decinormal salt solution and peroxide of hydrogen as before, and thorough drainage of the peritoneal cavity with gauze strips in several directions. In spite of the fact that this little patient was almost moribund before operation, pulse and temperature had fallen to normal within the next four days. From that time on, the progress of her case presented no unfavorable symptoms, and she was discharged cured at the end of three weeks.

Case VI.—F. J. M——, aged thirty-five years, occupation seaman. In this case the symptoms simulated those of ordinary appendicitis, accompanied, however, by some general abdominal distention and tenderness. Upon making the usual incision over the appendix and opening the peritoneal cavity, I was met by a gush of pus, mixed with a quantity of fluid closely resembling bile. The appendix was found more or less adherent to surrounding parts, otherwise normal; strictly speaking, presenting a condition of periappendicitis. In view of the presumable presence of bile, I worked my way upward along the ascending colon, through some more or less dense adhesions, to the neighborhood of the liver, when I was rewarded by a flow of a considerable quantity of clear bile. Appreciating the fact that the primary condition was undoubtedly due to a lesion of the gall bladder, I made a second incision over the location of that organ, and found all the neighboring parts so densely adherent that I could not make out the gall bladder with any distinctness. Passing my finger in various directions through each opening, I found that there were numerous adhesions between coils of intestines, proving the condition to be general peritonitis. Feeling that the case would most likely reach a fatal termination in any event, and that any further operative procedure would only diminish the patient's chances for recovery, I simply introduced iodoform drainage into both incisions, after as thorough cleansing as possible, and much to my surprise the patient made a gradual and complete recovery within the next month, all discharge ceasing and both incisions permanently closing.

Case VII.—Mrs. K. W——, aged thirty-eight years, housewife, was seen by me in consultation with another practitioner who had diagnosed recurrent appendicitis, with probable general peritonitis—a similar attack, though of milder character, having occurred some months previous. Pain over the McBurney point was pronounced, while general tenderness with more or less rigidity existed over the entire abdomen. Vaginal examination was refused, thereby preventing me from differentiating between appendicitis and a possible salpingitis. Operation was consented to the following day, and upon making the usual incision the appendix was found to be normal, but upon further exploration the right Fallopian tube proved to have been much distended and to have perforated—the perforation, from the history of the case, probably having occurred forty-eight hours previous. On exploring the general peritoneal cavity, it, as well as the pelvis, was found to contain a considerable quantity of free pus, from one to two pints in quantity, the intestinal surfaces presenting numerous lymph deposits, together with extreme injection. The incision was extended to allow the removal of the right ovary and tube, and drawing out of intestines, which were cleansed according to measures previously described; they were then returned and the pelvis and abdomen drained with iodoform gauze as before. The patient made a rapid recovery with no untoward symptoms, and was able to leave the hospital at the end of two weeks; ultimate recovery was completely satisfactory.

Case VIII.—P. L. E——, aged thirty-six years, occupation cigar salesman, was admitted to Christ Hospital suffering from undoubted appendicitis, which I believed to be perforative and complicated by general peritonitis, and I so informed the patient, advising immediate operation, which he, however, refused for a period of forty-eight hours; at the end of which time I operated and found my diagnosis correct, the peritonitis being general and of a most virulent type. The same plan of evisceration, cleansing, and drainage was followed as in former cases, but without the same favorable result, death occurring forty-eight hours after operation.

Case IX.—P. C. E——, aged forty-four years, occupation flagman, walked into Christ Hospital, Tuesday, October 27, 1898, presenting a history of having been ailing for from six weeks to two months, not, however, having been confined to bed until five days previous. For forty-eight hours before his admission to the hospital he complained of severe pain in the right iliac region and presented, upon his admission, the appearance of a very ill man with extreme pain and tenderness over the McBurney point, rigidity of abdominal muscles, and general abdominal tenderness. I diagnosed perforative appendicitis with general peritonitis. As soon as the necessary preparations could be carried out the usual incision for appendicitis was made. I found the appendix entirely normal, but the lower portion of the ileum presented a typical perforating ulcer, through which fecal matter had exuded and produced a most intense type of general peritonitis. I closed the ulcer with a row of deep, fine silk sutures, reinforced by a second row of Lembert sutures. The incision having been enlarged, I brought out the intestines, which were bathed in pus and covered with numerous and extensive lymph deposits. Cleansing with decinormal saline solution and peroxide of hydrogen was done as thoroughly as possible, and three gauze drains were introduced. This patient rallied from the extreme shock of the operation and survived for three days; the autopsy finally proving that the suturing at the point of perforation had been successful, and also revealing the presence of numerous cicatrized typhoid ulcers; this evidently having been a case of walking typhoid with late perforation. An interesting feature of this case was that upon my first examination I discovered a rapidity of respiration (36–40 to the minute), which led me to suspect a pulmonary complication; inspection, percussion, and auscultation revealed a slight bulging over the lower part of the right thorax, accompanied by marked diminution of vocal fremitus and vesicular murmur, together with dulness; suspecting a fluid accumulation in the pleural cavity, I introduced a hypodermic needle, and withdrew a syringeful of pus; and upon this combination of conditions I diagnosed a complicating empyema. During the succeeding operation I performed a thoracotomy between the seventh and eighth ribs in the anterior axillary line at the point where I had made my previous puncture, but to my great surprise I found the pleural cavity empty and thoroughly clean; neither did subsequent punctures of the liver near this point reveal the

presence of an hepatic abscess. I found, however, upon exploring with my finger, that the liver was crowded well up, owing, no doubt, to the intestinal distention, so that the free border of the right lung reached only the lower edge of the scapula. My only explanation of securing the syringeful of pus is, that owing to the high location of the liver with the patient in the recumbent posture, my needle had passed just below the free border of the liver and had withdrawn pus from the upper part of the peritoneal cavity, where it had gravitated against the diaphragm, thus teaching us how easy it is, in such cases, to be led into an error of diagnosis.

CASE X.—H. M. T——, white, aged forty years, occupation carpenter. The history and course of treatment of this patient are so nearly identical with those of Case IV. that it is scarcely necessary to enter into the details.

An analysis of the foregoing series shows that out of ten cases of general peritonitis, all of which, with the exception of Case III., were treated by free abdominal incision, thorough washing of abdominal contents, and subsequent drainage, there were seven recoveries. Of the three fatal cases, two patients were operated upon at a period when the result by any procedure promised almost nothing; these patients might, and should, have been operated on from twenty-four to forty-eight hours earlier, but for the extreme obstinacy exhibited in the one case and the unavoidably late application of treatment in the other; it is, therefore, fair to presume that had these patients undergone the same treatment, at a suitable stage, as did those who presented the seven recoveries, the result would have been equally favorable.

In the third of the fatal cases I have only myself to blame for failure to discover the existence of a coincident peritonitis during my operation upon the appendix. In this connection I would put forward a plea for thorough investigation in any case of appendicitis which presents symptoms of a probable peritonitis, even though it necessitates the breaking up of adhesions constituting an apparently circumscribed abscess cavity; in other words, when the patient has a distended abdomen, more or less rigid and tender, accompanied by vomiting and constipation, it is my belief that we subject him to less risk by disturbing the much-vaunted "nature's wall of protection," or even by making a second incision, thereby proving the existence or non-existence of a secondary general peritonitis, than by trusting to luck, and learning, perhaps too late, of the presence of a condition which proper surgical procedure would almost surely have controlled.

Taking the statistics of this series of cases upon their face value, I think we may consistently claim remarkable results from the methods adopted; for certainly a record of seventy per cent. of recoveries from a condition which medical treatment alone is almost powerless to help, is a vast improvement upon the old method of non-interference, or at most of free opiates and external applications, while, if we consider the fact that, in two of the fatal cases, this line of treatment was carried out on patients almost moribund, and in a third case was not used at all, through an error of diagnosis, we may fairly, it seems to me, claim for the method a recovery of one hundred per cent.

It must be admitted, of course, that a series of ten cases is usually too limited for the establishment of a general principle; and yet when even so small a list of statistics is brought to bear upon a condition so formidable, and when such results show an almost absolute reversal of the results secured by former methods, it is unwise, in my opinion, to ignore them simply on the ground of their limited number. The fact is, that had we only the histories of such cases as V. and VII. we could hardly do otherwise than conclude that to surgical rather than to any of the previously advised medical methods of treatment must we look, in the future, for favorable results.

Reasoning alone upon general principles, I think, must also bring us to the same conclusion. What practitioner but will admit that in dealing with a large abscess cavity, free incision, thorough evacuation, and efficient drainage are the only means by which he may hope to relieve his patient? In cases of general suppurative peritonitis, have we not practically the same lesion to combat? Certainly in the peritoneal cavity, bathed in a quantity of pus or sero-pus which can find no exit, or which, from the very delicate and almost vital character of the peritoneum (the inflammation of which causes a far more serious shock to the system, while the extent of its surface affords multiplied opportunities for absorption of septic matter)—in such a cavity, I say, we have certainly to face similar but greatly magnified dangers compared with those we find in ordinary abscess cavities. How much greater, then, the importance of freely opening the hidden sources of disease, cleansing the pus-bathed surfaces, and affording an opportunity for the subsequent escape of poisonous material! The reluctance which still exists, on the part of some of the profession, to deal so radically with general peritonitis is, no doubt, a legacy left by the widespread fear which formerly existed relative to any disturbance or manipulation of the peritoneum; but knowing, as we now do, that the unfortunate results of former interference with this delicate membrane were due entirely to its coincident infection by septic material is the strongest proof we could have of the great necessity of ridding it most promptly and thoroughly of the presence of those very elements which, in former decades, were the source of the disease we now aim to banish.

Progress of Medical Science.

Pulmonary Abscess.—These abscesses may be met with in connection with: (1) Pneumonia followed by necrosis and softening of a considerable area of the consolidated lung. (2) Pulmonary tuberculosis when a large carious area undergoes rapid disintegration. (3) Chronic non-tuberculous cavities. (4) Bronchiectasis, either with or without ulcerative changes in the bronchial walls and surrounding tissues. (5) Suppuration of a hydatid cyst. (6) Softening of a pyæmic infarction. (7) Pulmonary embolism followed by softening. (8) Perforation of the lung by a malignant growth in the œsophagus. (9) Suppuration of bronchial glands extending into the lungs. (10) Empyema rupturing into the lungs. (11) Perforation of the lung by a mediastinal abscess. (12) Perforation by an abscess extending through the diaphragm. (13) Injuries to the lung.—J. KINGSTON FOWLER.

Electrical Treatment of Hysterical Gastralgia.—Dr. Apostoli (*Gaz. Méd. de Strassbourg*, February 1st) draws the following conclusions apropos of a case of hysterical gastralgia of ten years' standing, that did not yield to the usual medical treatment and was of supposedly tabetic origin, and which disappeared entirely under electrical treatment: (1) Certain gastralgias, apparently hysterical, may show severe symptoms and yet have no tabetic origin. (2) The differentiation between the two varieties may be brought out by electricity properly applied, the results being carefully observed. (3) Electrical treatment discloses from the very beginning of its application the hysterical state by showing the peripheral perversions of the sensi-

bility. (4) This electrical treatment applied for a sufficiently long time is very effective in cases of hysterical gastralgia, and the diagnosis will be made perfectly clear by the therapeusis.

Operative Treatment of Cholelithiasis.—A. Wölfer (*Prager medicinische Wochenschrift*, February 9th) says that when gall stones exist in the gall bladder for a number of years without producing any disturbances whatsoever, it is advisable to leave them alone and to undertake no therapeutic intervention of any kind. In acute cholecystitis, with or without the subsequent development of colic, the Carlsbad salt and warm applications are very serviceable; in these instances, a certain amount of danger exists in delay, namely, when to the acute cholecystitis an acute cholangitis with general septic symptoms is added, but in such instances even operative intervention affords but slight chances. The first and most common cases belong to the realm of surgery, namely, when chronic cholecystitis is combined with a long-standing dropsy of the gall bladder. The more the local symptoms become prominent, the more frequent are the attacks of colic, despite judicious internal medication, and the more plainly, in addition to the cholecystitis, a pericholecystitis and cholangitis develop, or an emphysema occurs, the greater the necessity for operative interference. Still in some instances Carlsbad salts may be given a trial. If all conservative methods have been tried and found wanting, then a most important indication for operation exists; this operation must be undertaken when the disease has become chronic with the occurrence of relapses. According to statistics, the operation, even in advanced cases of chronic lithiasis, is less dangerous than the conservative treatment, in which as a rule the biliary calculi remain in the organism.

The Result of Operation for Carcinoma of the Breast.—From an analysis of the results of his experience with ninety-nine cases of carcinoma of the breast in which from one to nine years have elapsed since the operation, and in fifty-six of which there has with certainty been no recurrence, Cheyne (*Lancet*, No. 3,942, p. 756) concludes that, taking cases of all kinds together, not merely selecting those favorable for operation, but operating on all cases in which operation is possible, except in the presence of visceral involvement or of irremovable external deposits or of extreme weakness, it may be estimated that about fifty per cent. of the patients will remain free from recurrence if operation is undertaken promptly and carried out properly. Even in cases in which recurrence does take place, this is considerably delayed, and those patients enjoy a considerable interval of good health. Repeated operations such as were necessary after the old operation are now quite rare, recurrences, when they take place, being usually in inoperable situations. The results in the cases reported show that the chance of recurrence is extremely slight after extensive operation in patients who have remained well for from one to two years, and after three years there is only one example of fresh carcinoma, and in that case evidence is wanting that there was recurrence of the original disease rather than a fresh development. The conviction is expressed that the patient's chance lies in the first operation. If this fails, either from imperfect removal of the disease or on account of the extent of the disease in the first instance, further operation, however extensive, is seldom successful.

Ovarian Cysts in the Negress.—As the result of an analysis of the cases of ovarian cyst of various kinds operated on at the Johns Hopkins Hospital for six years, from 1892 to 1898, Brown (*Johns Hopkins Hospital Bulletin*, January to March, 1899, p. 44) found that while simple retention cysts and unilocular and multilocular cysts are much less common in the negress than in the white woman, they occur relatively much more frequently than is universally supposed; while from both a clinical and a pathological point of view the dermoid ovarian cyst seems to be relatively the more common in the negro race. Among 3,996 white patients in the gynecological service there were 88 with simple cysts, 53 with unilocular and multilocular cysts, 17 with dermoid cysts, 14 with papillary cysts, 4 with parovarian cysts, and 3 with intraligamentary cysts; while among 589 colored patients there were 3 with simple cysts, 2 with unilocular and multilocular cysts, and 7 with dermoid cysts.

Auto-Intoxication.—One of the aspects of auto-intoxication has been reviewed by Dr. Beattie Nesbitt ("On the Presence of Neurin and Cholin in the Intestinal Canal during its Complete Obstruction," *Journal of Experimental Medicine*, vol. iv., 1899, p. 1) in a thorough and practical manner. He shows that complete occlusion of the small intestine at its lower end will give rise to the occurrence of cholin and neurin and perhaps other bases, provided the food taken contains any considerable quantity of lecithin. Other poisons are probably formed by bacterial action from other food constituents in cases of intestinal obstruction. While cholin would have to be absorbed in relatively large amounts to produce any toxic action on adults, such is not the case with neurin, which is an exceedingly active poison. Neurin is very readily formed from cholin, as has been shown by numerous observations, and its poisonous action is similar to muscarin, with which body it has close chemical affinities. The paralysis of the heart is a symptom of primary importance, and the intense intestinal irritation which produces numerous evacuations is of clinical moment. As a practical summary it should be borne in mind that food stuffs which yield large amounts of lecithin are, from this point of view, undesirable, since it is assumed that lecithin breaks up in the intestinal canal into cholin, glycerophosphoric acid, and fatty acids. If this assumption should be shown to be correct, such food as eggs should be avoided.

Acokanthera, a New Arrow Poison.—Thomas R. Fraser and James Tillie, of the University of Edinburgh (*Archives Internationales de Pharmaco-Dynamie*, vol. v., 1899, fascicles 5, 6, p. 349) present the completed report of a new drug, used in Africa as an arrow poison. This is closely allied to other members of the same family, the Apocynaceæ, which give us strophanthus, oleander, and apocynum. The drug is derived from the wood of the root and stem of Acokanthera Schimperi, Benth and Hooker, by boiling, and it contains an active glucoside which the authors propose to call acokantherin. In most respects its action is similar to strophanthus, in the animals thus far experimented upon. It acts primarily upon the heart, and produces, in over-doses, a paralysis of that organ with permanence of the ventricular systole. This action on the heart is principally due to its effect on the heart muscle; the contractions are prolonged, and may ultimately be rendered continuous. In frogs this action on the heart is independent of any influence exerted through the cerebro-spinal system, as it occurs after the destruction of the brain and spinal cord. Pulmonary respiration, in cold-blooded animals, continues after the paralysis of the heart. The striped muscles of the body are acted upon, and they may twitch; their tonus is exaggerated, and their functional activity is destroyed. These muscular effects are due to the direct contract of the glucoside with the muscular substance, and must be considered independent of the cardiac nervous mechanism.

The Erect Position and Menstruation.—It is to the acquired upright position that Dr. Gehrung (*Denver Medical Times*, January, 1899) attributes the excessive sanguineous discharge at each menstrual period. A gradual transformation has been going on for a number of years, but is not yet complete. Artificial support is a legitimate means of counteracting deficient conditions. An excess of blood, or over too long a period, is radically wrong—a pathological condition which should be diminished, especially by vaginal tampons.

The Bacteriology of the Non-Gravid Uterus and its Bearing upon Operative Procedures.—As the result of a bacteriological study of the body of the uterus in sixty-eight non-pregnant women Miller (*Johns Hopkins Hospital Bulletin*, January to March, 1899, p. 29) has reached the conclusion that in uncomplicated cases of hysteromyomectomy, hysterectomy for inflammatory conditions, or ovarian tumors, operations for extra-uterine pregnancy, and in all such cases in which the vagina and cervix are normal, except probably for the invasion of the gonococcus, the safest route, so far as infection is concerned, is the abdominal. On the other hand, in operations for carcinoma, especially when the cervix is necrosed, in submucous myomata, especially if the tumor encroaches on the cervix, and in similar cases of polypi, etc., in puerperal cases in which hysterectomy is to be performed, and in circumscribed pelvic abscesses which are liable to secondary infection from the intestine, the safest route with regard to infection is the vaginal. As the external genitalia and the surrounding parts are even more liable to be the seat of certain pathogenic bacteria than the abdominal wall, cleansing and disinfection of these parts are as imperative as the cleansing of the abdomen preparatory to operation. Drainage through the vaginal vault in cases of cœliotomy, unless imperative to arrest hemorrhage, or in cases of wound of the intestine in which the suturing is unsatisfactory, is almost as much to be deprecated as drainage through the abdominal wall. The vaginal vault should, when possible, be left intact.

Bloodless Treatment of Phimosis of Children.—In several cases of infantile phimosis severe enough to afford a serious obstacle to urination, and when complicating hernias make the indication for relief imperative, Schilling (*Münch. med. Wochenschrift*, March 4, 1899) was forced to attempt non-operative measures owing to the refusal of the parents to permit radical treatment. Although the preputial orifice was constricted to such a degree as to make urination very slow and difficult, and was accompanied by ballooning of the prepuce, by gradual dilatation of the opening with probes of increasing diameters and a careful peeling back of the foreskin a cure was effected, in the cases referred to, in three or four sittings. This happy result has convinced the author that in all cases, however severe apparently, a tentative effort should be made to overcome the difficulty in this simple way. If unsuccessful, recourse may still be had to the scalpel: cases likely to require circumcision are those of cicatricial stenosis, intimate agglutination of the preputial surfaces, or with a tendency to retraction of the tissues. The technic of the operation is as follows: The patient is placed on a firm support and the shoulders and thighs are held by assistants. The prepuce is gradually worked back over the glans penis as a wedge with the thumbs and forefingers of both hands, the other fingers partly supporting the penis, partly resting on the symphysis. The procedure usually succeeds at the first sitting, but should be repeated at progressively longer intervals. Minute lacerations of the skin and mucous membrane are likely to be produced, but may be disregarded, and a little boracic-acid ointment is usually effective for after-treatment. By this method permanent cures were effected in the author's ten cases, and in view of the serious local and general conditions apt to be produced by this deformity, such as pain, balanitis, hernia, onanism, convulsions, and owing to the damming back of the urine, changes in the bladder and even in the kidneys, its correction is often of the greatest importance, and this means should be tried in all cases.

Fatal Hemorrhage from Early Rupture of Ectopic Gestation-Sac.—Benham (*Lancet*, March 25, 1899, p. 827) reports a case of tubal gestation in a nullipara, with rupture in the third week and fatal hemorrhage. The patient was a woman, twenty-three years old, who had been married for three and one-half months. Two menstrual periods had been missed; the third was profuse, lasting for three weeks, and being followed, after a week, by the next, which was normal. Two days later, after indiscretion in diet, the patient was seized with severe abdominal pains without nausea, vomiting, or diarrhœa. The pulse was weak and compressible. There was diffuse pain over the abdomen, especially the lower part, and it seemed greater on the right side than elsewhere, but there was no abdominal distention or abnormal note on percussion. The patient grew gradually worse, went into collapse, and finally died. Upon post-mortem examination, three or four pints of blood and a mass of clot were removed from the abdominal cavity, and after careful search a small, smooth, elongated swelling, about three-quarters of an inch in length and of the size and shape of a small bean, was discovered in the left oviduct about two inches from the uterus. At one spot on its upper surface the swelling was rough, soft, and red, and blood exuded on gentle pressure. This projection was seen to be the chorion of an early pregnancy exposed by rupture of the oviduct. The ovum seemed partially movable in the stretched duct and could be rolled about in it. The uterus was a little enlarged and lined by a thin, reddish adherent membrane that might have been decidua. Each ovary was enlarged, about two inches in length and full of cysts as big as peas. In the left ovary was a recent corpus luteum, about one-third of an inch in diameter, with a corrugated yellow capsule and a red interior. Minute examination of the ovum led to the conclusion, from the size of the chorionic vesicle and the development of its villi, which were of considerable length and decidedly branched, that the age of the ovum must have been nearly three weeks.

Distinguishing Tests for Nucleo-Albumin and Serum Albumin.—Samuel West (*British Medical Journal*, February 25th), in his second Lettsomian lecture, gives the following: (1) Nucleo-albumin gives with acetic acid and dilution a distinct cloud, while albumin gives at most a haze or nothing at all. Acetic acid alone precipitates both albumin and nucleo-albumin, the former less rapidly; but on dilution the nucleo-albumin reaction is not diminished, or may be somewhat increased, while the haze with albumin becomes less distinct in proportion to the dilution. (2) Heller's test gives a distinct line with albumin at the junction of the two fluids. But with nucleo-albumin the ring forms 0.5 to 1 cm. above the junction, or, if there is no ring, a haze is produced throughout the solution. (3) A saturated solution of sodium chloride with acetic acid, when heated, gives a faint reaction with nucleo-albumin, but a distinct one with serum albumin. (4) Ferrocyanide of potassium and acetic acid, which is very sensitive to serum albumin, give a reaction with nucleo-albumin only if it is present in considerably more than a trace. (5)

A saturated syrupy solution of citric acid precipitates nucleo-albumin much more readily than serum albumin. The ring method, as in Heller's test, is the most satisfactory way of making this test. Mucus also gives some of the above reactions—for example, with heat and acetic acid, salicylsulphonic acid, and picric acid, as well as acetic acid in the cold—but it is present only in very slight amount. It does not give the ferrocyanide-of-potassium test if performed in the right way—that is to say, if the urine be added to the ferrocyanide and acetic-acid solution, and not, as the test is often made, by adding the ferrocyanide solution to the urine or by adding acetic acid first. There is no single test upon which reliance can be placed to distinguish absolutely between nucleo-albumin and serum albumin, but these tests systematically used in order will suffice to make the distinction quite clearly in most cases.

Spread of the Plague.—G. V. Poore (*British Medical Journal*, February 25th) enumerates the following as the most important items in the spread of the plague: (1) Filthy habits of the people, such as spitting over the floor. (2) Filthy houses. (3) Overcrowding, and consequent rapid increase of contagious disease when once imported. (4) Presence of rats, insects, and other vermin. (5) The naked condition of the people going about, such people presenting almost unlimited opportunities for the entrance into their tissues of plague poison by inoculation and through abrasions. (6) Pollution of soil and houses with the excretions of man and animals. (7) Filthy clothing and absence of bodily hygiene.

Painful Menstruation.—Lawrence (*International Journal of Surgery*) concludes as follows: (1) Painful menstruation is not a disease, but merely a symptom found in various pelvic diseases. (2) Those classifications which place it as a disease are misleading and should be discarded. (3) The physiology of menstruation, a thorough knowledge of pelvic pathology, and a broad, careful habit of study and thorough case-taking are necessary in order that menstrual pain be rightly construed. (4) Many of the cases due to the uterus, tubes, or ovaries may be cured in the early stages by simple means, whereas neglect places them in a position demanding serious operative treatment. (5) Painful menstruation in a sterile patient is strong evidence that there is tubal inflammation with occlusion of tubes. (6) Operative procedures should be reserved for those cases in which there is a positive pathological indication; neurotic and anæmic cases being treated by other and more appropriate measures. (7) As a symptom, menstrual pain is often of such grave import that it should always receive the most painstaking study. If this should be the rule, many patients will be cured without operation.

Smallpox versus Varicella.—The Texas *Medical News* (March, 1899) contains an interesting article on "The Diagnosis of Smallpox," by Dr. F. W. Wright, in which he says: "The disease which most frequently simulates modified smallpox [varioloid], and from which it is most difficult to diagnosticate this disease, is varicella. In many instances the constitutional symptoms in modified smallpox are no more severe than in varicella. To the eye, the eruption is often identical. The chief diagnostic points are that in varicella the stage of invasion is very short—only a few hours. There may be headache and backache, of the same character as in variola, but usually less intense and of shorter duration. The location and appearance of the eruption are the same in both diseases. Even the occasional appearance of the eruption in the mouth and fauces, also in the palms of the hands and upon the soles of the feet, is common to both complaints. The latter are not attacked so frequently or to such an extent in chickenpox as in smallpox. We must depend almost entirely for diagnosis upon the history, the course of the eruption, and the sense of touch. In obtaining the history it is essential to ascertain the date of the last vaccination, if there has been exposure to, or if the patient has ever had, either smallpox or chickenpox, and the length of the prodromal symptoms. In varicella the papular stage is very short and is seldom seen by the physician, except in those with thick skins. This may lead to an error in diagnosis, on account of the time that elapses between the appearance of the papule and the vesicle. In chickenpox the vesicles are not so full or round, are easily ruptured and empty themselves. Around the edges the skin may be thickened, but not indurated as in variola. In the latter disease the size of the vesicle is nearly uniform, while in varicella it varies greatly. In this latter disease the vesicle soon begins to dry in the centre, giving the appearance of being umbilicated, but close observation will reveal a small black spot, the beginning scab, which gives this appearance but which is not present in smallpox. In variola the vesicles upon the palms of the hands and soles of the feet become pustular and disappear by the integument breaking down and healing by granulation, while in the other complaint they are either absorbed or ruptured. In smallpox the papular stage is from one to three days, and then vesicles with a central depression at the apex are formed. This depression is never absent in the vesicle, and is highly characteristic of the disease. In varicella some vesicles appear umbilicated and some do not. In this disease there may be both papules and vesicles at the same time, in all degrees of development and showing in successive crops, while in the former disease they are all nearly equally developed. In varioloid, after the pustule forms, there is an exacerbation of temperature. Soon the pustule ruptures and forms a yellowish crust with indurated edges, which strongly contrasts with the dark scab of chickenpox. Not infrequently a certain portion of the eruption of modified smallpox aborts during one stage or another, and is absorbed. To the eye the two diseases are much the same, but can be distinguished by the touch, as in varicella there is only a thickening of the skin, while in varioloid there is induration that gives the shot-like feeling. The points, then, to be borne in mind are that in smallpox we have two days' prodromal symptoms with headache and backache; the third day the eruption appears and the temperature remits. The eruption is first macular, soon becomes papular, and feels like shot under the skin, never becoming vesicular under twenty-four hours. The vesicle is always umbilicated, does not rupture easily, and becomes pustular in four or five days. The same eruption is found in the mouth and throat."

Nephritis, Arterio-sclerosis, and Apoplectiform Pseudo-Bulbar Paralysis.—Dr. Ulrich Rose (*Allgemeine medicinische Central-Zeitung*, March 18th) makes the following remarks: Instances of apoplectiform encephalomalacic pseudo-bulbar paralysis may be divided, for the most part, into two large groups. The patients are either old persons, fifty or sixty years old, in which cases a severe senile arterio-sclerosis is the foundation of the disease; or they are young persons, and then syphilis is almost always the etiological factor. During the past few years a number of these cases have been observed in young persons at the clinic in Strasburg; these patients were not syphilitic, but had contracted kidneys. The question then arose, whether in addition to the two above-mentioned groups a third, that of "the apoplectiform bulbar paralysis in

chronic nephritis," could not be reckoned. From a close study of two of the instances observed in Strasburg and thirteen cases collected from literature the following statements may be made: The apoplectiform pseudo-bulbar paralysis, which generally occurs in early life in nephritic subjects, depends in most instances upon the same kind of cerebral degeneration, and shows the same symptom complex as in the primary arterio-sclerotic form. This coincidence is due to the fact that in both instances the circulatory apparatus influences the cerebral affection and gives rise to its extent as well as its location. In a small number of cases the nephritis leads to a peculiar form of cerebral hemorrhage, to multiple small areas, to a progressive, disseminated, apoplectic cerebral softening, which, on account of its situation and extent, may give rise to the severest and most complicated pseudo-bulbar paralysis. Clinically, this form is distinguished from the first by the greater number of mild attacks, and reaches the acme, as a rule, by gradual elevation, whereas numerous instances of the large-area type are characterized by few severe attacks and develop more suddenly. Another though rarer form of cerebral paralysis which occurs in nephritis is the uræmic. This may occur without convulsions and resembles for the most part the ordinary hemiplegia; still, aphasia, anæsthesia, difficulty in moving the tongue and the muscles of deglutition, as well as paralysis of the external eye muscles, occur, so that it may resemble, to the highest degree, the apoplectic pseudo-bulbar paralysis. In nephritic patients with cerebral paralysis, then, the possibility of an uræmic pseudo-bulbar paralysis must be kept in mind. Anatomically in these cases, apart from some œdema or anæmia, the cerebral tissue is normal. Wagner and Senator, however, speak of the possibility of finding minute capillary hemorrhages or softening, upon microscopical examination. If this is accepted as true, then the cerebral lesions might be divided anatomically as follows: (1) Purely uræmic, without apparent structural change in the brain; (2) uræmia with capillary, microscopic hemorrhages; (3) nephritic apoplexy with numerous small areas; (4) nephritic cerebral hemorrhage of medium degree (large-area type). The prognosis of nephritic apoplectic pseudo-bulbar paralysis is just as unfavorable as that of the senile arterio-sclerotic form, inasmuch as both primary conditions cannot be cured. The prognosis is somewhat better in the syphilitic form, at any rate in mild cases, in which perhaps only one attack has occurred. In this case, an energetic anti-syphilitic treatment may often cure, or at least markedly improve, the condition. In severe and advanced cases with extensive arteritis, arterio-thrombosis, and cerebral softening, even an anti-syphilitic course of treatment is useless.

Chronic Serous Peritonitis.—Dr. N. Filatoff, of Moscow, contributes an interesting article on this subject in the *Archiv für Kinderheilkunde* (Bd. 25, Hefte 1 and 2, 1898). By chronic serous peritonitis he understands a primary and entirely independent disease, not the result of a peritoneal tuberculosis or of malignant disease or tumor of the abdominal viscera, which from the outset is chronic in its course, and therefore not the sequel of an acute peritonitis. He presents the three following questions for consideration: (1) Does a chronic serous peritonitis ever exist, independent from tuberculosis? (2) If it does exist, can its symptoms be differentiated from those of a tuberculous peritonitis? (3) What is its treatment? As a result of literary research he gives a positive affirmative answer to the first proposition. He also answers the second question in the affirmative; although many of the symptoms are very similar, nevertheless it is possible to make a differentiation during life. The signs in common are: in both the disease develops unnoticed, so that its beginning is hard to ascertain; in both the ascites may be associated with a slight fever, and an irregular intestinal function, constipation alternating with diarrhœa; severe abdominal pain and vomiting are usually absent. He gives the following differences between the two conditions: Etiology: Tuberculous peritonitis usually develops in delicate children, or in children of tuberculous antecedents, or in those in whom signs of tuberculosis in other organs or of the bones are manifest. On the other hand, chronic simple peritonitis develops in children in whom there are no tuberculous manifestations in other organs, and who are free from hereditary taint. Anamnesis: A history of previous diarrhœa is often obtainable, but not in all cases; occasionally, in particular instances a history is elicited of a cold (caused by lying on the damp ground, or by wet underclothes) or of an acute infectious disease (typhoid, measles) preceding the development of the ascites. Symptoms: The general condition is much better in simple chronic peritonitis than in the tuberculous form; two or three months after the beginning of the abdominal distention the patient looks pale and thin, yet has a sufficient amount of fat. The skin on the inner side of the thigh does not hang in folds; and the face is not so characteristically pale. The facial expression and the feel of the abdomen are the chief points in differentiation. In tuberculous peritonitis the marked distention of the abdominal wall and the oval form (not bullet-form) of the abdomen are very characteristic; portions of the abdominal wall are sensitive to pressure; here and there hardened nodules are felt through the wall; further, on palpation fluctuation is distinct, indicating fluid. Since in tuberculous peritonitis adhesions form early between the intestinal and parietal peritoneum and between the loops of intestine themselves, it can frequently be demonstrated that the encapsulated fluid does not seek the lowest level when the position of the patient is changed. In simple chronic peritonitis in its fully developed stage no complications are manifest; the single symptom is a marked ascites; all the other features are negative characters. The abdomen is neither tense nor painful, its form round (bullet-form) as in obstruction ascites; hardened nodules and adhesions are absent; the fluid level, therefore, varies with the position of the patient. The patient retains a fair appetite, has normal stools (now and then cases with occasional diarrhœa are observed); no temperature elevation (a very slight elevation is noticed, in the beginning of the disease only, but not always, while in the tuberculous variety fever is usually present), and for months the patient is able to get about, notwithstanding the amount of ascites. In a word, this chronic peritonitis resembles an ascites due to stasis rather than to tuberculosis.

The course of the two diseases differs in that tuberculous peritonitis when left to itself terminates lethally after from six to twelve months, while the chronic serous form remains stationary after two or three months, and then almost always disappears entirely.

As regards treatment, the best authorities (Vierordt, Galvagni, Henoch) are in accord that in the majority of cases a cure can be effected without resorting to any medicines, simply by rest in bed and light nutritious diet. Baginsky recommends close attention to the regular action of the bowels and especially to the cure of existing diarrhœa. Many regard warm compresses, painting with tincture of iodine, inunctions of soft soap, etc., as of value. When there is a large accumulation of fluid Henoch has seen good results follow puncture with the trocar; and when the exudate has recurred he has performed laparotomy as in the tuberculous form.

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THE THERAPEUTIC VALUE OF THE *X*-RAY.

THE inestimable benefits surgery has derived from the discovery of skiagraphy were well exemplified in the unprecedented results of bullet-wound surgery during the late war. The diagnostic value of the method has been established beyond all right of question. The suggestion was made over a year ago in these columns that the rays might also come to be of decided therapeutic worth. Recent literature contains some references to attempts in this direction, which indicate at least that the use of skiagraphy is not to be restricted to the detection and depiction of injuries to, deformities of, and the presence of foreign bodies in the tissues.

In a recent issue of the *Journal des Maladies Cutanées* there is an account, by Drs. Castel and Foveau de Courmelles, of lupus of the cheek benefited by the rays to such a degree as greatly to encourage these observers. Séances of ten minutes, three times a week, each extending over a month, were without result; but when currents of greater frequency were employed, an energetic revulsion was noticed and decided improvement took place.

Albero-Schönberg refers, in the *Fortschritte der Roentgen-Strahlen*, Bd. i., Hefte 2 and 3, to two instances of lupus—one completely cured after eight months by the ray not exceeding twenty volts five amperes, applied daily for from twenty minutes to half an hour. After twenty days suppuration began, and there was an intermission of application. The process was thus repeated with intervals to permit healing. In the second case skin reaction occurred after the fifth séance, and after six months there was a cure of visible lesions. The time of cure, it is thought, might be shortened if the rays should be omitted as soon as skin reaction has taken place, instead of being continued until dermatitis has been produced.

Kümmell has had no less than ten cases of lupus under *x*-ray treatment, and in an article (*Archiv für klinische Chirurgie*, Bd. lvii., Heft 3) describing the method, regards the latter as a decided advance in the treatment of this obstinate affection. He, too, says the skin should not be burned, and that such severe effects are to be regarded as accidents necessitating interruption of the application. He considers that the rays have some peculiar action directly upon the nodules, and that the dermatitis set up plays little or no part in the beneficent process. Whether the action is due to trophoneurotic or to electro-chemical effect, is not clear. It is said that the cicatrices are much less pronounced and objectionable than are those occurring after older methods of treatment, and, so far as his observations go, subsequent disfiguring contractions of scar tissue do not occur.

Passing to the internal or more generalized forms of tuberculosis, instances of improvement and even of cure have been recorded. Among recent reports is that of Ausset and Bedart (*Echo Médical du Nord*, November 13, 1898), who treated a young girl for chronic tuberculous peritonitis which had been uninfluenced by previous therapeutic attempts. After fifty sittings of half an hour average duration, the tube being placed at twelve centimetres from the surface of the abdomen, all evidence of the disease had vanished.

Turning to the condition of hypertrichosis, numerous reports have been made, among those in which sufficient time has elapsed to make sure that the hair does not grow again being a number out of the forty instances reported by Jutassy, in which after a year there had been no return. Schiff and Freund place on record in the *Wiener medizinische Wochenschrift*, Nos. 22–24, 1898, seven cases. They advise that the strength of current should not exceed two amperes, the time of action ten minutes, and that the source of light be placed at from twenty to twenty-five centimetres from the surface. Upward of thirty sittings are required. The skin is said to show a brownish discoloration a few days before the hair falls.

Thomson, writing in the *American X-Ray Journal* of November last, maintains that the effects upon the skin are produced chiefly by those rays of the *x*-ray order which are most readily absorbed by the flesh. Such rays are sent out when the vacuum in the tube is too low or when the tube is "soft," while a hard tube or one with a high vacuum will give rays that pass freely through the flesh.

Dr. C. L. Leonard, writing in the same journal, thinks we should not attribute therapeutic results to the unknown rays which may be explained by the well-known laws of electrical stimulation, and destructive effects to its devitalizing action. After a somewhat extended experience this observer has arrived at the following conclusions in regard to the matter:

1. Static electric currents are capable of producing all the therapeutic and destructive changes ascribed to the Roentgen ray.

2. A static field of sufficient strength is always present, when a tube is said to be capable of producing these results.

3. Why should we ascribe to the Roentgen ray therapeutical and pathological effects which the static charges, always present, are capable of producing?

4. It is impossible to produce a "burn" when a protecting shield of aluminum is employed, which collects the static electricity and conducts it by a grounding wire to the earth, although the Roentgen efficiency of the ray is unaltered.

5. It is therefore reasonable to conclude that the

devitalizing action attributed to the Roentgen ray is due to long-continued or intense static charges or currents, while the therapeutical action is the stimulating effect of a mild and judiciously employed amount of the static charge.

6. The therapeutical results obtained are of undoubted value, but that value will be enhanced and its employment facilitated by the recognition of its true physiological source.

PSYCHOLOGY AND PRACTICAL LIFE.

When an author puts into clear language thoughts that have been vaguely oppressing us, we appropriate him as if he were a mouthpiece of our own choosing to voice our hitherto unuttered opinions. During the last few years we have been conscious of a feeling of distress at the actions, nay almost the antics, of our sister science, psychology, which not only has arrogated to itself, somewhat like the new woman, all the rights and privileges of an established science, but has flouted the laws and restrictions which the older, hard-working sciences have learned to respect.

In the March number of *The Psychological Review* there is a thoughtful and suggestive paper by Prof. G. Trumbull Ladd, of Yale, on "Certain Hindrances to the Progress of Psychology in America." It is a calm and critical little essay, very modest in its manner and very straightforward in its purpose. Coming frankly from one who is of the science, it expresses exactly the position which psychology seems to hold, as viewed from the outside, by men of other sciences.

Professor Ladd suggests that all sciences have advanced by virtue of the quality of mind and personal characteristics of the men that have developed them, and that of all sciences psychology is especially influenced by the kind of mind that studies it. "Sympathy with all that is really human and experience which covers all which is essentially human" he claims as indispensable qualifications of a high-class psychologist.

With apology to his brethren, he states that psychology is not making the progress that the increase of teachers and investigators and laboratory equipment would lead one to expect, and the reasons he gives for this are, we think, wholly to the point. The first hindrance he describes as "an excessive aloofness from, and ignorance of, the real mental life of the average human being." In other words, the psychologist is satisfied to read, to teach, to experiment, without making it his business to study human nature at first hand as a successful doctor or lawyer must do. As the teachers of to-day are men trained in laboratories and in class-rooms, they are in danger of being shut out by their scholastic isolation from the knowledge of what is "in man."

A second hindrance, he says, is "an absurd surplusage of attempts to render the science popular" by inexperienced teachers attempting to write easy superficial books for the "plain people."

Another hindrance which he clearly sets forth is the manner in which the discussion of psychological problems is conducted; the one-sided, narrow, and personal way in which students of any branch of psychology claim to hold the key of the science in their particular branch, without any conception of the science as a whole; much, he adds, "as the new recruit to the missionary force when he proclaims loudly the differences of his sect from all others that bear the common name of Christian."

In his fourth hindrance he makes a plea for the unselfish pursuit of the study, and regrets the commercial spirit that makes a man adopt science "for what he can make out of it." To this spirit he attributes much of the premature publication on the subject of psychology, as well as the practice of "saying really commonplace things in strange and unfamiliar ways," and adds: "A time-honored truth is no better, a time-worn fallacy is no more acceptable, because either is presented in language calculated to deceive the laity in thinking it is the very latest thing in psychology."

In his conclusion he deplores the attitude of psychology toward the older but closely allied positive sciences, and intimates that a certain wilful disregard like that of the *nouveaux riches* toward the recognized aristocracy often leads its followers to show less of that scientific reserve than is becoming, and he hits the nail on the head when he suggests that "psychology must be respectful and teachable toward all truth, in order to enter more intimately into the circle of the affiliated sciences."

THE SUBCUTANEOUS INTRODUCTION OF BLOOD SERUM FOR NUTRITIVE PURPOSES.

There arise at times contingencies under which it becomes necessary to supply nutriment through other than the usual channels—as after some operations and in the presence of grave disease of the digestive organs, or other condition attended with impaired nutrition—and the possession of some substance or substances that could be safely injected into the blood-vessels or the serous cavities, or the subcutaneous tissues, and would be consumed and utilized, would under such circumstances be a great boon.

Some proteid substances, such as egg albumen and casein, even when introduced into the blood stream in minimal quantities, are eliminated but little changed; while others, such as alkali albumin, syntonin, and conglutin, while assimilable when injected beneath the skin, cause objectionable irritation. Any material to be used successfully in this way must be assimilable, non-toxic, and germ-free; and Friedenthal and Lewandosky (*Berliner klinische Wochenschrift*, March 20, 1899, p. 249) relate some observations that go to show that blood serum can be readily prepared so as to be serviceable for this purpose. With suitable precautions such serum can be obtained and be kept in a sterile state; and its globulicidal activity can be overcome by exposure for from half an hour to two hours to temperatures of from 55° to 62° C., although if used in excessive amounts some degree of toxicity may be manifested. Of the assimilability of the serum, evi-

dence is afforded by the fact that only an insignificant portion escapes with the urine.

These observations illuminate but another phase of serum therapy, and suggest further yet unknown possibilities in this special field of experimental and practical medicine. The knowledge gained would be unattainable without vivisection, whose limitations and restrictions only calm, dispassionate scientists and those engaged in its practice are best capable of determining.

News of the Week.

The Microbe of Cancer?—An account is given in a recent issue of the Paris *Figaro* of the discovery by a Dr. Bra of the specific micro-organism of carcinoma, and the author of the alleged discovery holds out the hope that, the cause being found, the cure will speedily follow. Dr. Bra claims to have isolated from cancerous neoplasms, and cultivated, a specific microbe, inoculations with cultures of which have been followed by cancerous growths in animals. The germ is said to be a bacterium and not an animal organism. Assuming for the moment that this improbable, though not impossible, story is true, it by no means follows that we are appreciably nearer the invention of a definite cure of malignant neoplasms by means of internal remedies.

The Practitioners' Club, of Jersey City, has inaugurated a feature which adds to the interest in the proceedings of this flourishing organization. The chairman appoints three members on a side to debate some leading medical question of the day, *pro* and *con.*, and two judges to decide upon the merits of the arguments. A vote of the members is then taken to decide upon the merits of the question itself.

Become a Part Owner and prescribe your own goods! This is the advice given in a prospectus of a manufacturing chemist, now being widely distributed among the doctors, appealing to them to purchase stock in the concern. This city is now being investigated on the supposition that there are too many "part owners" of corporations whose goods they are prescribing to the public.

Malpractice Case and Snap-Judgment Rendered.—On April 12th, the New York *Press* announced that Dr. Thomas H. Manley had been sued by a woman for the maltreatment of a thumb, and that $2,000 was the sum ordered in verdict, there being no defence. It appears that last February a complaint was sent to the doctor from a lawyer about this case, inviting him to answer certain allegations and turn over $2,000. This was answered, and Dr. Manley heard nothing more about the case until newspaper reports appeared. Now the courts have ordered the judgment nullified and directed another trial. This case impresses the importance of always referring all legal documents from lawyers to your own counsel, and thus avoiding troublesome litigations.

Philadelphia Pediatric Society. — At a stated meeting, held April 11th, Dr. J. H. Jopson read a communication upon "Gastrostomy for Stricture of the Œsophagus," and presented a child, four years old, on whom he had performed gastrostomy for the relief of such a condition due to the accidental ingestion of lye. It is contemplated to attempt dilatation of the œsophagus by the use of metallic balls of progressively increasing size, which, securely attached to a string, are to be swallowed and retained nightly. Dr. J. P. Crozer Griffith exhibited a case of harelip with complete detachment of the intermaxillary bone. Dr. Emery Marvel read a paper entitled "Nephrectomy for Hydronephrosis in a Boy, Four and One-Half Years Old." The patient had been the victim of a shotgun accident at the hands of a comrade, receiving into his body more than three hundred shot, one or more of which it is supposed had perforated the ureter or the pelvis of the kidney on one side, with possible cicatrization, urinary obstruction, and accumulation, which was in course of time followed by infection. At a primary operation the kidney could not be reached, but considerable fluid was evacuated. At the second operation the kidney was readily removed, and the child recovered happily. Dr. T. S. Westcott reported a case of acetanilid poisoning in an infant, resulting from the application of the drug in powder form upon the surface of the body, which had been chafed during the heated term, the drowsiness and cyanosis passing off with the removal of the cause. Other members of the society referred to similar cases. Dr. Alfred Hand, Jr., exhibited the hypertrophied heart and kidneys from a child, twelve years old, who had presented symptoms of nephritis. The kidneys were in part in a state of chronic inflammation, and appeared to be the seat of gummata. Dr. Hand exhibited also an intensely tuberculous spleen. The society adopted the report of a milk commission appointed at a previous meeting, providing for the inspection of dairies, herds, and milk therefrom, as to chemical purity, nutritive value, and freedom from bacteria in excessive numbers, to be carried out in cooperation with dairymen, in order to increase the sources of supply for a reliable product for infants' needs.

The New York State Medical Association.—The next meeting of the third district branch of the New York State Medical Association will be held at Elmira, N. Y., June 1, 1899. Several members of the association from other parts of New York State, including the president, are expected to be present. Members are requested to send to the acting secretary, without delay, titles of papers to be presented at this meeting.

A German Hospital in Brooklyn.—The new German Hospital at St. Nicholas Avenue and Stanhope Street, Brooklyn, was thrown open a few days ago.

Gift to a Baltimore Hospital. — Benjamin F. Newcomer, of Baltimore, has given the Hospital for Consumptives in that city $10,000 for the purchase of a hospital site.

The Hospital Ship "Relief," according to a cablegram received by Surgeon-General Sternberg, arrived safely at Manila on April 12th. The ship has a large supply of medical stores and also a corps of trained hospital nurses.

Six-Day Races Forbidden.—Governor Roosevelt has signed a bill prohibiting six-day contests. The bill provides that "in a bicycle race, or other contest of skill, speed, or endurance, wherein one or more persons shall be a contestant or contestants, it shall be unlawful for any contestant to continue in such race or contest for a longer time than twelve hours during any twenty-four hours." The proprietor of the place where such race takes place, and the manager of the contest permitting the same to take place, will be held to be guilty of a misdemeanor.

Pennsylvania State Medical Examinations.—The annual examinations of candidates for license to practise medicine in the State of Pennsylvania will be held simultaneously at Philadelphia and Pittsburg between June 2d and 23d.

Cecil County (Md.) Medical Society.—At the annual meeting, held April 13th, Dr. Henry Thomas, of the Johns Hopkins Hospital, read the address on nervous diseases, and the following officers were elected for the ensuing year: *President*, Dr. John H. Hardcastle, of Cecilton; *Secretary*, Dr. Harry P. Hinchliffe, of Elkton; *Treasurer*, Dr. John H. Jamar, of Elkton.

New York Neurological Society.—At the annual meeting of the New York Neurological Society the following officers were elected to serve for the ensuing year: *President*, Frederick Peterson, M.D.; *First Vice-President*, Joseph Collins, M.D.; *Second Vice-President*, L. Stieglitz, M.D.; *Recording Secretary*, Pearce Bailey, M.D.; *Corresponding Secretary*, L. A. Conner, M.D.; *Treasurer*, Graeme M. Hammond, M.D.

College of Physicians of Philadelphia—Section on General Surgery.—At a stated meeting, held April 14th, a symposium on the uses of skiagraphy in surgical practice was held. Dr. A. C. Buckley exhibited skiagraphs illustrative of foreign bodies in various situations; Dr. Francis T. Stewart, illustrations of fractures and dislocations; Dr. C. Lester Leonard, renal and vesical calculi; and Dr. Arthur W. Goodspeed, normal and deformed bones. Dr. W. W. Keen discussed the question of the diagnosis of urinary calculi, pointing out the importance of a proper interpretation of the results of skiagraphy and the assurance given to operation. Dr. G. G. Davis considered the application of skiagraphy to orthopædic surgery.

Smallpox still prevails in many parts of the country, constantly appearing in new places while being stamped out in others. Several mining-towns in Pennsylvania are isolated on account of outbreaks of the disease. Among the Indians also its ravages are very destructive. It is reported from Guthrie, Okla., that the Sac and Fox Indian tribe is being rapidly depleted by smallpox. There were 300 members in the tribe, and since February 1st 132 of them have died of the disease. The steamship *Lahn* recently arrived from Bremen with 13 cases of smallpox aboard. The steerage passengers were detained at quarantine, the patients having been transferred to North Brothers Island. Most of the patients were Russian immigrants. While we have so much smallpox in America, London is remarkably free from it, only one death from the disease having occurred there in 1898. In 1893 there were 2,546 cases and 190 deaths.

Resolutions in Honor of a Nurse.—The trustees of St. Luke's Hospital recently passed a resolution, expressing their appreciation of the heroism displayed by Miss Frances C. Troop, a graduate of St. Luke's Training-School for Nurses, in saving the life of her patient, the daughter of Mr. Leland, at the Windsor Hotel fire.

Philadelphia County Medical Society.—At a stated meeting, held April 12th, Dr. W. S. Spencer read a paper entitled "The Dangers from Hydrogen Dioxide in Surgical Cases," referring especially to the infiltration of adjacent tissues with the gas evolved and the detritus set free when the solution is injected in cavities and inadequate provision is made for its escape. Dr. W. Reynolds Wilson read a communication entitled "Extraperitoneal Effusion Due to Spontaneous Rupture of the Uterus; Death from Pyæmia." There was slight hemorrhage from the uterus following delivery of the fœtus, but other indications of rupture of the uterus were wanting. Death resulted on the forty-fourth day. Dr. M. B. Hartzell presented a paper entitled "Some Unusual Forms of Tricophytosis," and he exhibited a number of illustrations. Dr. C. L. Leonard read a communication entitled "Electrical Heating Applied to Steam Sterilization and the Production of Dry Hot Air for Therapeutic Purposes," and he demonstrated the apparatus. At a cost of about seven cents an hour it is possible within fifteen mintues to obtain temperatures of above 300° F., exposure to which is readily borne by reason of the constant circulation of air, which is thus kept always dry. The heat is generated by resistance interposed to the passage of the electric current derived from usual sources.

Dr. Joseph Muir has been appointed attending laryngologist to St. Mark's Hospital, New York.

Congenital Myxosarcoma of the Sacro-Coccygeal Region.—At a meeting of the Orleans Parish (La.) Medical Society, April 8, 1899, Dr. E. D. Martin reported a case of congenital myxosarcoma of the sacro-coccygeal region, that had been successfully operated upon four years previously, and exhibited the patient. The child was fifteen days old; the tumor weighed fifteen ounces, was ovoidal in shape, and had a base about two inches square, extending from the third division of the sacrum to the anus. Half the tumor, from the base up, was covered with skin; the remaining part resembled the covering usually noted in spina bifida. By two lateral incisions and dissection, the growth was found to be solid and attached to the coccyx by a small pedicle. The parts

were very vascular, but bleeding was easily controlled. After the growth was removed, a large space remained and the rectum was exposed. A portion of the coccyx was removed. The ends of the sphincter muscle were united with catgut, and the glutei muscles from each side were drawn together and sutured. Sloughing occurred, but the final results were satisfactory. The pathologist reported the tumor to be a myxosarcoma.

Dr. Walter Bensel has been appointed pathologist to the New York City Hospital.

A Centenarian Suicide.—The suicide is reported of a French centenarian, who took his life because he was afraid that he would live forever.

The Operation on the Pope.—The operation on his Holiness the Pope, concerning the character of which there has been so much speculation, now proves to be nothing more than the enucleation of a fatty tumor situated in the gluteal region.

The Dispensary Bill, which provides that hereafter in this State all dispensaries shall be incorporated and governed by the State Board of Charities, has now become a law, having been duly signed by the governor. This is the first step toward remedying the gross abuses of medical charity which have been the subject of so much discussion by the profession of this city. The committee on legislation of the New York State Medical Association, of which Dr. E. Eliot Harris is chairman, was actively supported by the committee on legislation of the Medical Society of the State of New York in the work of securing the enactment of this very useful measure.

The Insane Pavilion at Bellevue Hospital is to be reconstructed so that there will be sixteen rooms on the first floor for the male patients, each accommodating two persons, as well as a reception-room, an examination-room, a doctors' room, and a nurses' room. On the second floor will be the women patients' rooms.

The Brain of Helmholtz.—Dr. Hausemann, of Berlin, has made an examination of the brain of the late Professor Helmholtz. He reports that it weighed fourteen hundred and forty grams, which is less than one hundred grams above the average weight of a man's brain; that the frontal convolutions were very numerous, and of an unusual degree of development.

The Hospital for Bread-Winners is the name of an institution now being organized in Brooklyn, under the active supervision of Dr. Alexander J. C. Skene. It is designed to benefit self-supporting women who may be in need of medical or surgical assistance. Work will be begun on the building as soon as the guarantee fund of $300,000 has been fully subscribed. Dr. Skene will be surgeon-in-chief of the hospital, and in order to be able to devote himself fully to the work has resigned, as previously announced, the presidency and the chair of gynæcology in the Long Island College Hospital Medical School.

The Hospital Saturday and Sunday Association.—The distributing committee of the Hospital Saturday and Sunday Association has apportioned about $70,000 to the various hospitals, the apportionment being based on the number of free days' treatment in each hospital. About $9,000 was disposed of in accordance with special bequests. After deducting $3,000 for general expenses, $58,000 was distributed to different institutions as follows: Montefiore Home, $5,800; St. Luke's Hospital, $5,420.19; Mount Sinai Hospital, $5,318.39; Roosevelt Hospital, $3,728.85; German Hospital, $3,728.43; Hospital for Ruptured and Crippled, $2,357.33; St. Mary's Free Hospital, $2,257.62; Nursery and Child's Hospital, $2,206.64; Home for Incurables, $2,063.15; Isabella Heimath, $2.005.90; Colored Home and Hospital, $1,844.66; Mothers' Home of the Sisters of Misericorde, $1,832.84; French Hospital, $1,717.32; Orthopædic Dispensary and Hospital, $1,706.99; Lebanon Hospital, $1,453.27; House of the Holy Comforter, $1,153.87; Woman's Hospital, $1,049.38; Infirmary for Women and Children, $1,007.57; J. Hood Wright Memorial Hospital, $947.94; Flower Hospital, $805.60; St. Mark's Hospital, $765.42; Ophthalmic Hospital, $736.20; New York Eye and Ear Dispensary, $720.80; Babies' Hospital, $726.10; Mothers and Babies' Hospital, $705.26; Beth Israel Hospital, $703.70; Manhattan Eye and Ear Hospital, $671.40; Skin and Cancer Hospital, $665.90; Cancer Hospital, $656.85; New York Polyclinic Hospital, $607.32; St. John's Guild Hospital for Children, $533.90; Hahnemann Hospital, $526.20; Post-Graduate Hospital, $514.15; Ophthalmic and Aural Institute, $310; Old Marion Street Maternity Hospital, $250; College and Hospital for Women, $250; Convalescent Home, $250.

The Laboratory Committee of the American Public Health Association.—At the meeting of the American Public Health Association, in 1898, it was decided to organize a standing committee of the association, composed of those actively engaged in laboratory work in connection with health boards. Within a few years, the number of laboratory men actively engaged in hygienic work and research has increased a hundred-fold. The necessity of some central organization which could further the development of sanitary laboratory work in both scientific and practical directions seems obvious, and it is hoped that as many as possible of the sanitary laboratories on this continent will be represented on the laboratory committee, by some one who will be able to attend the meetings of the association. The intention of the laboratory committee is not to overlap or interfere with the work of other committees, but as far as possible to help them in their work. It has been found at the meetings of the association that there is a practical difficulty in introducing papers and discussions of a technical nature into the general proceedings, while, on the other hand, those matters which most interest laboratory men must be essentially of a technical nature. It has therefore been decided to hold sessions of the committee during the day or two preceding the general meeting or in spare time between the regular sessions. A temporary organization has been effected, and the first general

session of the committee will be held on October 30, 1899, the day previous to the opening session of the general meeting in Minneapolis. The line of work proposed is as follows: (1) Original short papers upon laboratory work and research. Summary reports of work accomplished during the year in the various laboratories. (2) Co-operative investigations, as on disinfection, water analysis, etc. (3) Short summaries of progress during the year in special lines of work. Those engaged in laboratory work bearing upon hygiene are eligible as members, and those wishing to become members may address the chairman, Dr. Wyatt Johnston, 74 Shuter Street, Montreal.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 15, 1899. April 7th.—Medical Director G. A. Bright retired April 9th, section 1,444 Revised Statutes. Medical Director J. H. Clarke retired April 16th, section 1,444 Revised Statutes. Assistant Surgeon W. M. Garton detached from the *Supply*, when put out of commission, and ordered to temporary duty at hospital, New York. April 8th.—Surgeon J. R. Waggener, order of April 3d modified; ordered to San Francisco when the marine battalion is ready for passage to Manila. April 11th.—Surgeon S. H. Griffith detached from duty as a member of the marine examining-board, Washington, and ordered to the *Prairie*. Surgeon C. G. Herndon detached from the *Prairie* and granted sick leave for two months. Assistant Surgeon J. J. Snyder detached from hospital, Newport naval station, and ordered to the *Wabash*. Surgeon J. W. Ross, retired, detached from duty at army hospital, Havana, and ordered home. April 12th.—Medical Inspector W. S. Dixon detached from the naval academy and ordered to Washington, April 15th, for duty a member of the retiring-board. Surgeon N. H. Drake ordered to duty as member of the naval medical examining-board, New York. Surgeon T. H. Streets detached from duty as member of the naval medical examining-board, New York, and ordered to the *Philadelphia* as fleet surgeon, by steamer of April 19th. Surgeon W. R. DuBose, detached from the naval hospital, Brooklyn, and ordered to the naval academy. Surgeon J. H. Gaines, retired, granted leave to go abroad for six months from May 6th.

The Late Dr. T. J. McGillicuddy.—At a regular meeting of the New York Celtic Medical Society, the following resolutions were adopted:

"The New York Celtic Medical Society has learned with profound sorrow of the death of our fellow-member, Dr. Timothy J. McGillicuddy, who died of pneumonia on the seventeenth day of January, 1899, after a few days' illness, and before many of his old friends realized that he was ill. The society has suffered a great loss in his death, and the profession a blow that it has keenly felt; he was one of the founders of this society, and we its members, who live to-day to enjoy its associations, feel greatly indebted to our deceased brother for bringing the organization to its present standing. The doctor was a constant attendant at our meetings, and participated in the various discussions with a zeal peculiarly his own. He was a man of rare attainments, wise judgment, and honest purposes, 'with charity to all and malice toward none.' His writings and contributions to medical literature stand out to-day in bas-relief to his memory, and we his fellow-associates feel proud of him as a member.

"*Resolved*, That in the death of Dr. McGillicuddy the Celtic Medical Society has lost one of its ablest and most valued members, and the science of medicine a scientific laborer and faithful investigator, and that the deep feeling of sympathy of this society be extended to his family in this hour of their deep sorrow; and that a copy of this memorial be forwarded to his family, and also be published in the medical journals.

"M. C. O'Brien, M.D.; F. J. Quinlan, M.D.; G. D. McGauran, M.D."

Obituary Notes.—Dr. Robert Loughran died of heart disease, at Kingston, N. Y., April 11th, aged sixty-four years. He was graduated from the Albany Medical College in the class of 1857. During the civil war he was surgeon of the eightieth New York volunteers. For many years Dr. Loughran was one of the pension examiners of the Kingston district, and also health officer of the city of Kingston.—Dr. Peter Pyrne, of Herkimer, N. Y., died on April 13th, at the age of seventy-nine years. He was a graduate of the Geneva Medical College in 1846. He held the appointment of surgeon to Sing Sing Prison from 1860 to 1870, and from 1871 to 1873.—Dr. D. L. McDonald, a well-known physician of southern Pennsylvania, died at Shiremanstown, on April 11th, of pulmonary tuberculosis, aged fifty-seven years. He was a graduate of the Columbus Medical College in the class of 1881.—Dr. Arnold Naudain, one of the oldest practising physicians in Westchester County, died suddenly at his residence in Tremont, on April 16th. Heart disease was the cause of his death. He was born in Dover, Del., seventy years ago. He was graduated in medicine from the University of Pennsylvania in 1852, and went to Mount Vernon to practise. Later he removed to Tremont, where he had since lived. A wife and one daughter survive him.—Dr. William Blackwood died at Lancaster, Pa., on April 12th, in his seventy-second year. He was graduated from Jefferson Medical College, and for a time practised his profession at Germantown, removing to Lancaster in 1866. He had been physician to the Lancaster County Hospital, a member of the pension examining-board, secretary and president of the Lancaster City and County Medical Society.—Dr. William G. Stewart died at Newville, Pa., on April 13th, at the age of fifty-nine years.—Dr. H. T. Lechner died at Boyertown, Pa., on April 16th, at the age of thirty-two years.—Dr. Thomas Wister Flanner died at Philadelphia, on April 16th, at the age of seventy-nine years, as a remote result of wounds received during the war of the rebellion. He was graduated from the medical department of the University of Pennsylvania in 1840, and he served in both the army and navy during the Civil War, being advanced to the rank of commander in the navy.

Reviews and Notices.

SELF-EXAMINATIONS OF MEDICAL STUDENTS. Cloth. Second Edition. 189 pages. Philadelphia: P. Blakiston's Son & Co. 1899.

THIS little volume contains three thousand questions on medical subjects, with references to the authorities where the answers may be found. The ridiculously low price is explained by the fact that the works referred to are publications of the same house.

BULLETIN OF THE MEDICO-LEGAL CONGRESS, Held at the Federal Building in the City of New York, September 4, 5, 6, 1895. New York. 1898.

MEDICO-LEGAL STUDIES. By CLARK BELL, Esq., LL.D. Volume IV. New York. 1898.

THESE two volumes, both under the editorship of Clark Bell, consist of reprints, for the most part, from the *Medico-Legal Journal* of this city. They contain a large number of interesting and valuable studies on medico-legal matters which will undoubtedly appeal to the general practitioner, because of their clear and easy style.

A MANUAL OF BACTERIOLOGY. By HERBERT U. WILLIAMS, M.D., Professor of Pathology and Bacteriology, Medical Department, University of Buffalo. With 78 Illustrations. 263 pages. Philadelphia: P. Blakiston's Son & Co. 1898.

TO the beginner in the laboratory this volume may be highly recommended. As the author states, the work is a compilation, and as such we consider it a success. The technique of bacteriological research is concisely and clearly described, and the distribution, classification, and products of bacterial life afford us interesting subjects treated in an interesting way. The chapter on pathogenic bacteria is the most exhaustive and takes up in order the important forms. The book is well worth reading and owning.

BRAITHWAITE'S RETROSPECT OF MEDICINE. Edited by JAMES BRAITHWAITE, M.D. Lond., and E. F. TREVELYAN, M.D. Lond., B.Sc., M.R.C.P. Cloth. Volume 118, 445 pages. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. 1899.

THIS half-yearly periodical, which comes out in London and New York simultaneously, keeps on its even course with little change from year to year. A fair proportion of the advances are recorded, some at greater length than would seem necessary; others being too briefly described. Periodicals printed in the English language are chiefly drawn upon. The Retrospect always makes interesting reading, and despite the many year-books fills a place peculiarly its own.

TRAUMATIC SEPARATION OF THE EPIPHYSES. By JOHN BLAND, F.R.C.S. London: Smith, Elder & Co. 1898.

THIS is in several respects a remarkable production. In the first place, for a monograph upon one restricted subject to embrace nearly a thousand pages is in itself noteworthy; second, when we consider that three hundred and thirty-seven illustrations and skiagrams elucidate the various chapters it can be inferred how far this production goes toward clearing up the subject of injuries and resulting deformities which have often been too little understood. Most of the illustrations are from original sources, some photographs of cases having been contributed, while a few cuts only are taken from published works. It is a most complete work, and one which will interest all surgeons, especially those engaged in orthopædic practice.

PRACTICAL URINALYSIS AND URINARY DIAGNOSIS. A Manual for the Use of Physicians, Surgeons, and Students. By CHARLES W. PURDY, M.D., LL.D. Fourth Revised Edition. With Numerous Illustrations, including photo-engravings and colored plates. Philadelphia, New York, Chicago: The F. A. Davis Company. 1898.

THE facts that three large editions of this work have been exhausted within three years of its first appearance, and that the work has been adopted as a text-book in many medical colleges in the United States, show the appreciation of the profession for this excellent work. The present edition has been improved, and is thoroughly up to date.

THE MICROSCOPY OF DRINKING-WATER. By GEORGE CHANDLER WHIPPLE, Biologist and Director of Mt. Prospect Laboratory, Department of Water Supply, Brooklyn, N. Y., Formerly Biologist of the Boston Water Works. First Edition, First Thousand. New York: John Wiley & Sons. London: Chapman & Hall, Limited. 1899.

THIS is a work of three hundred and thirty-eight octavo pages, with illustrations scattered throughout, while in an appendix are found nineteen full-page half-tones of praiseworthy execution and of extreme interest and importance to all who make a study of potable waters. The various groups of animal and plant life commonly found in New England waters especially have been chosen for these illustrations. While most of the pictures are reproductions from life or from photo-micrographs, some have been borrowed from standard works. There are twenty-four chapters, covering the whole questions of microscopic technique, storage of water supplies, organisms, their description, classification, etc. All in all, it is one of the best books obtainable on the subject-matter covered.

THE PRACTICE OF OBSTETRICS BY AMERICAN AUTHORS. Edited by CHARLES JEWETT, M.D., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital, New York. Illustrated with 441 Engravings, 34 of which are in colors, and 22 colored plates. 768 pages. New York and Philadelphia: Lea Brothers & Co.

THIS work will serve as an excellent text-book and practical guide for the student and practitioner. Dr. Jewett, in his careful editing, has avoided the usual errors in systems of medicine when written by many authors. The omissions, repetitions, and contradictions are wonderfully few considering that nineteen writers are represented in its compilation. Part I. treats of the Anatomy of the Female Pelvic Organs and the Mammary Glands, and contains many excellent plates and diagrams. Part II., the Physiology of Pregnancy, has been consigned to Drs. Manton, Palmer, and Dickinson, the article on the diagnosis of pregnancy being especially worthy of notice. Parts III. and IV. treat of the Physiology of Labor and the Puerperium, and are by Drs. Jewett, Buckmaster, Robb, and Bartley. The succeeding three parts contain the Pathology of Pregnancy, of Labor, and of the Puerperium, by Drs. Manton, Etheridge, Van Cott, Vineberg, Henrotin, Cameron, Webster, Jewett, Clifton Edgar, Hamilton, Whitridge, Williams, and Chapin. The final division contains most excellent articles on Obstetric Surgery, by Drs. Hunter, Robb, Jewett, and Davis, many of their conclusions on these interesting points being at variance with the usual practice of physicians. The volume is well printed and the illustrations are well selected, and it makes a most valuable reference book, which, being thoroughly up to date, affords us food for thought on many points. Certainly all evidence for or against douching, curettage, and the repair of cervical tears, is more than welcome to obstetric practitioners, who are much confused by the various conclusions which have been reached by the leaders in the art. Dr. Jewett's articles show that he is a practised teacher and bedside worker, and he is to be congratulated upon his excellent editing.

A TEXT-BOOK OF OBSTETRICS. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania. With 653 illustrations. 846 pages. Philadelphia: W. B. Saunders. 1898.

IT is a genuine pleasure to find that the subject of obstetrics has not yet been exhausted in spite of the annual output of systems and compendia. Fresh and vigorous treatment of the theme with which he is so familiar was expected of the author, and he has not disappointed us. Although the volume before us is unusually condensed, no important subject is slighted, and the impression is constantly given that the writer might have said a great deal more if space had permitted. The book is divided into seven parts, the first being the largest, as it includes seven chapters (259 pages). These deal with anatomy, the development of the embryo and fœtal appendages, diseases of the fœtus, and the physiology and pathology of pregnancy. A lucid exposition of the subject of extra-uterine gestation concludes Chapter VII. Part II., on the management of normal labor and the puerperium, is full of admirable suggestions. We cannot recall any text-book on obstetrics which contains a more thorough and practical description of the duties of the accoucheur. Part IV., on

the pathology of labor (pages 401 to 584), is exhaustive. The summary of the management of labor in contracted pelves is unusually clear and helpful. The sections on placenta prævia,. accidental hemorrhage, and rupture of the uterus, are entirely up to date. The careful attention paid to the treatment of lacerations of the soft parts shows that the author rightly believes that obstetrics and gynecic surgery go hand-in-hand—in fact, this is the central idea of the book. Part V., on the pathology of the puerperium, contains a scholarly exposition of the subject of puerperal sepsis from the modern standpoint. Especially interesting are the paragraphs on abdominal section.

The sixth division of the book is devoted to a consideration of obstetric operations, and is marked by the same originality and common sense which pervade the entire work. The application of the forceps, version, and embryotomy receive due consideration. Symphyseotomy and Cæsarean section are treated in a satisfactory manner. Two short concluding chapters deal with the physiology of the new-born infant.

The illustrations are numerous and are works of art, many of them appearing for the first time. The arrangement of the subject-matter, the foot-notes, and index are beyond criticism. The author's style, though condensed, is singularly clear, so that it is never necessary to re-read a sentence in order to grasp its meaning. As a true model of what a modern text-book on obstetrics should be we feel justified in affirming that Dr. Hirst's book is without a rival.

Therapeutic Hints.

Acute Laryngeal Catarrh and in Pseudo-croup.—

℞ Ichthyol 2
Cold water 100
Use as a spray by means of a Richardson atomizer from three to five minutes once or twice daily.

—Cieglewicz, *Praglad Lekarski.*

Vomiting of Pregnancy.—

℞ Menthol 20
Ol. oliv 100
Twenty drops on sugar whenever nausea occurs.

—Wiel.

Bronchial Catarrh after measles and pertussis:

℞ Creosoti 1
Ol. morrhuæ 90
Saccharin 0.05
M. S. One dessertspoonful up to six daily.

—Hock.

Neuralgia.—

℞ Ichthyol ..... ʒ i.
Mercurial ointment ..... ʒ i.
Chloroform ..... ʒ vi.
Spirit of camphor ..... ʒ vi.
Shake well before using, and rub over the affected part.

—Eulenburg.

Neuritis.—

℞ Ammonium bromide ..... gr. xv.
Ammonium salicylate ..... gr. ij.
Solution of potassium arsenite ..... ♏ i.
Simple syrup ..... ♏ x.
Peppermint water ..... ʒ i.
This dose to be given every three or four hours.

—Curran Pope

Lupus.—

℞ Acidi salicylici,
Liq. stibii chlorati ..... ää 2
Creosoti,
Extr. cannabis indicæ ..... ää 4
Adipis lanæ 8
M. ft. ungt.

—Unna.

Trachoma.—

℞ Cupri sulphatis,
Acidi salicylici,
Cocainæ ..... ää 0.1
Petrolati 10

—Bloebaum.

Tuberculous Laryngitis.—Cough can generally be controlled by insufflations of morphine, one-fourth of a grain, with ten grains of powdered acacia, applied to the larynx with a powder-blower every four or six hours; or, if this is impracticable, the following prescription will be found of service:

℞ Codeinæ sulphatis ..... gr. iij.
Sodii bromidi ..... gr. cxx.
Syrupi prun. virginian ..... f ʒ iv.
Aquæ ..... q.s. ad f ʒ ij.
M. S. A teaspoonful every four hours for cough.

—Dr. P. S. Donnellan.

An Excito-Motor of the Stomach.—Ipecac in small dose is one of the best. Two to five centigrams in divided doses at half-hourly intervals after meals; or—

℞ Tinct. ipecac.,
Tinct. calumbæ,
Tinct. nucis vomicæ,
Tinct. gentian ..... ää 5 gm.
M. S. Gtt. xv.-xx. in water after meals in divided doses.

—Mathieu.

Or:

℞ Tinct. ipecac ..... 6 gm.
Saccharin ..... 0.10 cgm.
Menthol ..... 0.25 "
Spt. vini rect ..... 40 gm.
Syrupi ..... 120 "
M. S. ʒ ij.-iv. in divided quantities after meals. The menthol diminishes the emetic qualities of the ipecac.

—Blondel.

Or:

℞ Pulv. ipecac ..... 0.02 cgm.
Potass. sulphat.,
Potass. nitrat ..... ää 0.05 "
Sod. bicarb ..... 0.30 "
For one cachet to be taken with water five to ten minutes before eating.

—Robin, *Journ. de Méd.*, January 10th.

Acute Tonsillitis in Children.—

℞ Tinct. aconiti ..... ♏ viij.
Liq. ammonii citratis ..... ʒ ij.
Syr. aurantii ..... ʒ iss.
Aq. dest ..... q.s. ad ʒ ij.
M. S. Teaspoonful every three hours for a child of five years.

—Ashby.

An Agreeable Antiseptic Dentifrice.—

℞ Salol ..... gr. xlv.
Ol. anisi,
Ol. geranii ..... ää ♏ viij.
Ol. menth. pip ..... ♏ xv.
Alcoholis ..... ʒ v.
M. S. Dentifrice.

—Nogue.

Asthma in Pregnancy.—

℞ Potassii bromidi ..... ʒ iij.
Chloral hydrat ..... ʒ ss.
Aquæ ..... ʒ i.
M. S. Teaspoonful to be used as required.

Or:

℞ Potassii bromidi ..... ʒ i.
Iodi ..... gr. i.
Tinct. gentianæ comp ..... ʒ i.
Aquæ ..... ʒ ij.
M. S. Teaspoonful three times a day.

—Henry C. Moir.

Treatment of Typhoid Fever by Chlorine.—After four years' observation I am ready to reiterate the conclusions which I presented to you in my former paper, viz.: (1) That in the treatment of typhoid fever, chlorine can be safely administered until disinfection of the alimentary canal is obtained. (2) Under its use the tongue becomes clearer, the appetite and digestion better, the fever lower, and the stools devoid of odor save that due to chlorine. (3) The general strength, intellectual processes, and nervous conditions improve.

(4) The disease is shortened in duration, and the patient usually proceeds to a rapid and complete recovery.—RAYNOLD W. WILCOX, *Medical News*, February 11, 1899.

Bronchiectasis, with Fetid Expectoration.—

℞ Plumbi acetatis ..... gr. ½-½
Terpin. hydrat..... gr. ij.-v.
Pulv. opii et ipecac..... gr. iss.-iiss.
M. ft. pil. No. i. S. Three or four pills daily.

Occasionally suspend this and give:

℞ Guaiacol,
Liq. potassii arsenitis .....āā 3 ij.
Eucalyptol ..... 3 i.
M. S. Ten to twenty drops morning and evening.
—PORCELLI.

Acute Infectious Gastro-Intestinal Catarrh, with high fever, protracted course, and typhoid manifestations:

℞ Tinct. iodi..... gtt. xv.-xviij.
Syr. simplicis ..... 20 gm.
Aquæ destillat .....ad 150 "
M. S. Dessertspoonful every hour or every two hours.
—GROSCH, *Berliner klin. Woch.*, No. 25, 1898.

Clinical Department.

PERFORATING ULCER OF CORNEA; PROLAPSE OF IRIS TWELVE TIMES; VISION NORMAL.

BY H. D. JAMISON, M.D.,
PITTSBURG, PA.,
EX-HOUSE SURGEON, MANHATTAN EYE AND EAR HOSPITAL, NEW YORK.

MR. JOHN G——, aged thirty-two years, came under my observation last March with the following history: He has had repeated attacks of inflammation in both eyes for the past two years. The last attack in his right eye began two weeks ago.

Present condition: His constitutional condition is not good. The right eye shows photophobia and lacrymation, with pain over the eye radiating back over the temple, with circumcorneal injection, especially to the outside. There is a deep localized ulcer about a half line in diameter above and to the outer side of the cornea, with a hernia of Descemet's membrane.

Treatment: The patient was put to bed; instillation of muriate of pilocarpine, four grains to the ounce, morning and evening. Compress bandage, whiskey punch three times a day.

The following morning the patient complained of a sharp pain in the eye, and on removing the bandage there was found to be a perforation of the cornea and prolapse of the iris in the wound; no anterior chamber.

Treatment: Instillation of a solution sulph. eserine, one grain to the ounce, two drops every ten minutes for six instillations. A compress bandage was applied. Evening: medium anterior chamber, pupil central and circular.

Treatment: Instillation of eserine.

The following morning the conditions were exactly the same as the morning previous, viz., perforation of the cornea with incarceration of the iris in the wound.

Treatment: Same as day previous.

This same condition occurred for twelve consecutive days, occurring when the tension of the eyeball would be near normal, due to the secretion of aqueous humor. The treatment was the same throughout, except that on the last two days the margin of the ulcer was also cauterized with pure carbolic acid. The patient was under my observation for three months, and when last seen had central and circular pupil. Vision $\frac{20}{40}$ + with +0.50 cylinder, axis 90°.

515 PENN AVENUE.

A CASE OF SPINA BIFIDA.

BY ALBERT C. COBB, M.D.,
SOUTHAMPTON, MASS.

THE following singular case of "spina bifida" occurred in the person of the seventh child of middle-aged, respectable Polish parents. The previous children were all well formed, five living. This child, a female, weighing eight pounds, was born at full term, November 24, 1898.

The laminæ and spinous processes of the seventh, eighth, ninth, tenth, eleventh, and twelfth dorsal, the first, second, third, fourth, and fifth lumbar vertebræ were wanting, and the spinal cord could be distinctly felt through the layer of very soft, spongy, muscular tissue which covered it. The cutis over the last six dorsal vertebræ was wanting. In a photograph taken the day after death, the lesion presented a peculiar appearance, like the face of an old man, and the body also could be made out with but little imagination.

I had intended to photograph the child while living, but put it off one day too long. Miss Suzanye Koustiya Cuchenski died December 12, 1898, with no apparently good excuse for doing so. The cause was probably inanition, as she lost weight, although her appetite was good and her name substantial.

REFRACTION VERSUS STAINS IN MICROSCOPY.

BY LOUIS C. PETTIT, M.D.,
NEW YORK.

THE most minute particle of matter is vastly larger than the ray of light. Likewise matter has density proportionate to certain other physical properties, one of which is refraction. It is my aim to bring to the attention of the profession a few facts recently observed in the matter of "the atomic refractive powers of paraffin and turpentine."

All admit that stains are troublesome and sometimes contrary, and, while beautiful things can be elucidated and constructed, the time and patience required almost baffle the busy practitioner. In my recent investigations in the laboratory of this hospital in the line of the amyotrophies of paresis, the Weigert, Marchi, and Nissl methods have received more or less attention. I believe, however, that their doom is about sealed, and that the atomic refracting properties of paraffin and turpentine will bring better results with vastly reduced labor. In preparing chrome sections cut from paraffin for the various stains, turpentine—itself a highly refractive hydrocarbon—was used for dissolving and clearing the same of paraffin. The solvent properties of this reagent were taken advantage of at the proper moment, and the process was stopped by placing Canada balsam on the section while on the slide, thereby producing a partly-cleared specimen. If the manipulation is carried out adroitly, there is no histological element in the ganglion cell or its processes that cannot be clearly and accurately defined. Axis-cylinder processes can, without the least difficulty, be traced from the anterior-horn cells to the nerve roots. Achromatic bodies appear as "incrustations" on the smallest processes, and the final subdivisions of these processes into primitive fibrils is clearly revealed.

Short protoplasmic or sustentacular processes stand prominently out from the cell body. Reticular structure can be easily made out, and the nucleolus and its satellites are shown highly refracted. In addition to the refraction from nerve elements, the same is true of leucocytes and other migrating corpuscles, and of the spider cells and capillaries. It appears that the higher the function of the atom, the more brilliant the refraction. This is prominently shown in the germinal matter of the nucleus and the cortex of the cord. The paraffin used as the embedding agent has a melting-point of 54° C., and specific gravity of 0.886. Care must be taken to let the clearing process only partially affect the section under examination. In the sections from the lower cord previously hardened in potassium bichromate, a wealth of structure was revealed around the margin of the anterior horn, such as has never been portrayed by any combination of stains I have ever used. Such specimens have but one disadvantage—that is, they are not permanent, but after some hours the refractions caused by the solution of paraffin disappear, and the section is completely cleared. The process, however, can be easily repeated until the proper degree of refraction is produced at the desired point.

The above matter is not entirely new, as others have extolled the "half-clear" method. I only desire to proclaim the beautiful results obtained from atomic refraction in the use of the two common substances in solution, viz., turpentine and paraffin.

Male Department, Manhattan State Hospital, Ward's Island.

ICHTHYOL FOR PRURITUS.

By MYRON E. FISHER, M.D.,
DELEVAN, N. Y.

A short time ago Mr. C—— came into my office complaining of a rash which had appeared on several parts of his body, particularly on the hands, arms, chest, and back. The pruritus was intense, so much so that he was unable to sleep at night. I made the diagnosis of poisoning by rhus toxicodendron, and prescribed the usual treatment, without relief. Finally I made a lotion of one drachm of ichthyol in four fluid-ounces of water, and directed that this be thoroughly applied to the affected parts upon retiring at night. The patient was at once relieved of the pruritus, and after three or four days the rash had entirely disappeared. I report this case because I have never before heard this drug recommended for this affection.

SKIN-GRAFTING ON A LARGE SURFACE.

By C. F. TIMMERMAN, M.D.,
AMSTERDAM, N. Y.

In the Medical Record of October 8th, I noticed a communication from Dr. Overton, of Patchogue, N. Y., in which he relates a case where he performed "Skin-Grafting by Unusual Methods." I am pleased to have him refer to this case, insomuch as great stress is laid on the *modus operandi* of skin-grafting in some of our surgical works, whereas but little is said of the ease in which large surfaces can be covered by a painless, safe, and practical method. On November 15, 1895, I transplanted twenty-two grafts, twenty-one of which adhered, from a leg amputated between three and four o'clock in the afternoon, at the Amsterdam City Hospital, of which fact I was not aware until in the evening; after my evening office hours I called at the hospital, secured the leg, and drove to the patient's home. Without any assistance, except a sister of the patient, who held the lamp, I made twenty-two irregular clippings from the leg, from one-half to three-fourths of an inch in width by one to two inches in length; and as I could not choose as to the thickness, doing the work alone, the skin was thick and thin, part epithelium and mostly deep layers of derma.

It was after ten o'clock—over six hours after the amputation—that the first graft was laid, and twenty-one of these irregular pieces, thick and thin alike, adhered and are now part of the patient. I used only decinormal salt solution, and covered with rubber tissue, changing the same each morning and washing the wound with salt solution, again covering with the rubber tissue and a layer of cotton, and bandaging.

The surface on which the grafts were made was at the side of the chest—the result of a very severe burn, some four months before, about ten inches in diameter, which refused to heal. I used other methods also, but the surface being so large it was a very slow process. I refer to this case simply to add my testimony to Dr. Overton's, thinking possibly it may induce some other physician to avail himself of this comparatively safe and easy method.

35 Market Street.

LIGHTNING STROKE CAUSING EYE DISEASES.[1]

By G. STERLING RYERSON, M.D.,
PROFESSOR OF OPHTHALMOLOGY IN TRINITY MEDICAL COLLEGE, TORONTO, CANADA

I wish briefly to report two cases of lightning stroke affecting the eye, which may prove of interest to the association. These cases are quite rare. Seven or eight years ago a farmer, with his wife and child, was asleep in bed in an isolated farmhouse near Lindsay, Ontario. A thunderstorm came up during the night; lightning struck the house, passing through the bed, which it knocked to pieces, in which these people were sleeping. It killed the child instantly, paralyzed the man so that he died shortly afterward, and blinded the woman. The loss of sight was not instantaneous. Next day she noticed that objects were indistinct; this haziness gradually increased until she was unable to distinguish objects. It was at this time that she was brought to me. Examination showed an imperfectly developed soft cataract in each eye. As she was only twenty-five years of age, I needled the lens and removed the cataract by a linear corneal incision two days later. I removed the lens of the other eye in the same way a few weeks later. I saw this patient last August, when she told me that her sight remained excellent.

My other case I saw at the Toronto General Hospital, two or three years ago. The patient was a woman aged fifty years. She was standing at her door, watching a thunderstorm which was in progress, when a flash of lightning struck quite close to her. She was not burned or injured, but was instantly blinded. When brought to the hospital a few hours later, I found wide dilatation of both pupils, intense congestion of the conjunctiva, sclera, and eyelids. There was no burning or excoriation of the parts. There was no perception of light nor pupillary reaction, nor was there any considerable pain. With the ophthalmoscope the media were seen to be clear, but the optic nerve entrance and region of the yellow spot were hazy. There were marked engorgement and turgidity of the retinal veins. In three days the patient began to perceive light and the pupil to contract. In eight weeks she was discharged cured, but with a sensitiveness to light and difficulty in near vision. I did not see her afterward.

[1] Read before the American Electro-Therapeutic Association at its annual meeting at Buffalo, September, 1898.

I have already mentioned the rarity of these cases of lightning stroke affecting the eye. An examination of the text-books of Noyes, Soelberg Wells, Fuchs, Berry, and others failed to add any information on the subject. In Norris and Oliver's work I find, on page 287, a brief account. From it I learn that Leber has collected eighteen such cases. As in the cases I now report, the injuries were various. In nine there were cataracts; in others ptosis, corneal haze, hemorrhages of the retina, and rupture of the choroid. Silex relates the case of a child who was rendered senseless for five hours, and who recovered with a cloudiness of the cornea and lens, from which he made a partial recovery. It would appear, therefore, that: (1) Lightning, when it strikes sufficiently close, may cause eye troubles without affecting the general health to any extent; (2) that these injuries are of a greatly varied character; (3) that the lens suffers more frequently than do other structures; (4) that the prognosis is not unfavorable; (5) and that the lens may be successfully extracted in these cases.

Society Reports.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

One Hundred and Forty-Sixth Regular Meeting, Held on Friday, March 3, 1899.

W. GILMAN THOMPSON, M.D., PRESIDENT, IN THE CHAIR.

A Case of Ventral Hernia Fourteen Years after Abdominal Section.—This case was presented by DR. WILLIAM T. BULL. The patient was a man, forty years old, with a ventral hernia resulting from an abdominal section done fourteen years ago. The operation was performed by Dr. Bull in November, 1884, for a penetrating wound of the abdomen caused by a pistol-bullet. The incision extended from the umbilicus to the pubes, and the wound healed by granulation. The man left the hospital on December 24, 1884, and two or three months later resumed his work as a truckman, at which he had been engaged ever since. During this time the patient stated that he had worn six abdominal belts of the cheapest possible construction. He had a ventral hernia of very moderate proportions; the cicatricial tissue covering the wound was dense and strong. In the centre was a small area in which the cicatrix was thin, the intestine lying directly under it. Dr. Bull said he presented this case because it had a bearing on the general subject of hernia occurring after the performance of abdominal section. Most surgeons, after such operations, were in the habit of instructing their patients not to make heavy lifting efforts; women, especially, were usually told not to do any washing or make any effort which particularly involved the abdominal muscles. In this man, in spite of the fact that the incision was a very long one and the wound healed by granulation, the hernia is very moderate in size. Dr. Bull said this case was interesting from another point of view. At the time of operating, in searching for intestinal perforations, the intestines were completely lifted out of the abdomen, and after they were replaced a number of drainage tubes were inserted, in addition to a glass drain in the pelvis; consequently, when the wound healed there must have been a considerable amount of fibrinous peritonitis, and yet the patient had never complained of abdominal pain or of any interference with the functions of the bowels. This showed that even very extensive adhesions might exist in the peritoneal cavity without necessarily causing pain or interfering with the functions of the intestines. It was also very probable that such adhesions, no matter how dense at the outset, were gradually absorbed. Over a length of seven inches of small intestine in this case, four perforations were found. Instead of excising this part of the intestine, the perforations were sutured, and at the close of the operation the lumen of the intestine was certainly diminished one-half in size; it must subsequently have undergone considerable stretching, in view of the fact that no interference with the function of the bowels had ever occurred.

DR. CHARLES MCBURNEY said that the occurrence or non-occurrence of a ventral hernia after abdominal section was sometimes difficult to explain. In Dr. Bull's case, for example, he was unable to explain why the wound had behaved so well, although he thought it probable that the formation of false or new tissue within the abdomen prevented the intestines from being brought to bear very strongly on the cicatrix. The speaker said he felt confident that if the bowels were entirely free and loose, and if the usual intra-abdominal pressure had been brought to bear on the cicatrix without hindrance, the usual ventral hernia would have occurred long ago. Such pressure had probably been prevented by a shortened mesentery, or by the formation of strong tissue within the cicatrix.

Dr. McBurney said he still thought it a wise precaution to warn these patients not to make violent efforts. The occurrence of large ventral herniæ after abdominal section was very common, especially in the umbilical region, in which there was no formation of new tissue within.

DR. V. P. GIBNEY asked whether Dr. Bull regarded this as an exceptional case, or whether he intended to throw out the suggestion that persons who have been subjected to these operations should be permitted to do hard work with more or less impunity.

DR. WILLIAM M. POLK said the question raised by Dr. Bull regarding the treatment of the abdominal wall after section had interested him for a long time, and he had been rather led to the conclusion that the judicious employment of the abdominal muscles after such operations was a better guarantee against the occurrence of a hernia than mere external support. The speaker said he had in mind several cases in which the wound had been treated by the open method, thus inviting hernia, and no such complication had occurred, the result being so encouraging that he had been led to advise certain forms of exercise for these patients, bicycle riding for example, and the practice of movements which brought into play the abdominal muscles, such as doubling themselves up, etc., with a view to increasing the strength of the abdominal wall.

Dr. Polk said that while he did not think the use of abdominal supports should be discarded entirely after these operations, especially when the wound has been treated by the open method, he was inclined to believe that such supports should be used temporarily rather than permanently, and that the value of properly exercising the abdominal muscles should not be overlooked.

In regard to the danger incident to narrowing the lumen of the intestine, Dr. Polk said he had been led to look upon this condition with much solicitude, owing to the fact that in the only case in which he had ever narrowed the lumen of the bowel, fatal obstruction rapidly ensued. That this was the cause of death was proven by autopsy. In that instance, the lumen of the gut was diminished a little more than one-half. Since then, the speaker said, he had resorted to other measures in order to prevent any material narrowing of the intestinal channel. So far as adhesions within the peritoneal cavity were concerned, we knew that even

after an enormous number of such adhesions there might be comparatively few symptoms.

Dr. Robert F. Weir said he had resorted to narrowing the lumen of the intestine in its longitudinal axis to a considerable extent without having any trouble result therefrom. Senn has recently made the statement that narrowing the lumen of the bowel in its transverse diameter was less harmful than when it was done in its natural axis. Dr. Weir said he was rather surprised at this statement, on account of the kinking which was apt to occur when the transverse suture was made. Of course, the lumen of the bowel should not be narrowed to a dangerous degree, but if the narrowing did not exceed one-half the speaker said he would not expect any serious mishap to follow.

Dr. Polk said that in the case he had just referred to, in which the lumen of the bowel had been narrowed by about one-half, he was struck at the time of operating by the thinness of the intestinal wall. The autopsy showed that death had resulted from obstruction produced by a twisting of the bowel at the point of narrowing.

Dr. G. L. Peabody said he not infrequently came across hospital patients in the medical wards who showed large abdominal scars, and who as a rule were not wearing any efficient support. During the past six weeks he had seen two such patients, one with a large, deep abdominal scar, the wound having evidently healed by suppuration. She stated that her wound never gave her any trouble or discomfort, in spite of the fact that she was doing heavy work daily and had never worn any support. The other patient had two long parallel cicatrices, the result of two laparotomies. Both wounds probably healed primarily, and had never given the patient any discomfort. Dr. Peabody said that if these patients could safely dispense with the various forms of abdominal support, even of the best pattern, it would certainly greatly add to their comfort. In hot weather the support was most objectionable; it often gave rise to a feeling of constriction, and, like the tight belt worn in the German army, produced marked over-activity of the heart. Some patients also complained that it occasionally caused attacks of colic and a disagreeable sensation of fulness. In different positions, the belt had a different effect; it might feel comfortable while the wearer was lying down, but became tight and uncomfortable on his getting up.

Dr. Bull, in closing, said he did not mean to draw any conclusions from the case he had shown. It was certainly interesting that this man, fourteen years after an extensive abdominal section, should have suffered such slight discomfort and inconvenience from his wound, in spite of the fact that he had been continuously engaged at heavy manual labor and had worn no efficient support. The case suggested the thought that perhaps the rôle of the abdominal muscles in supporting the viscera was underestimated. This reasoning applied more particularly to incisions made in the median line than to those in other parts of the abdominal wall, especially where they caused paralysis of the muscles by the division of nerve fibres. It was a fact, Dr. Bull said, that the largest and most voluminous ventral herniæ were seen in people who did not use the abdominal muscles at all, or in women whose muscles had been weakened by inactivity or childbirth. This indicated that after abdominal operations the proper exercise of these muscles should be encouraged rather than restricted.

Notes on Cysts of the Breast.—This paper was read by Dr. William T. Bull (see page 557).

Dr. George F. Shrady said Dr. Bull had gone so fully over the subject that he could add only a few words in a corroborative way. The speaker said it so happened that his last three cases of tumor of the breast, seen in private practice within the past month, were cystic in character. In one of them it was so difficult to make the diagnosis that he was willing to commit himself in favor of carcinoma, and at first to advise complete removal of the breast. In that case he introduced an aspirating-needle twice without result; the tumor seemed to be adherent to the wall of the chest; it was deeply seated and irregular in outline, with the hard feel occasionally met with in carcinoma. The family physician was inclined to regard the growth as cystic, and another surgeon who saw the case was of the same opinion. Dr. Shrady said that the peculiar globular shape of the tumor which became very apparent after the patient was etherized caused him to make an exploratory incision, and after cutting through about an inch and one-half of mammary tissue he encountered the thick wall of the cyst and had the gratification of saving the breast.

As a rule, Dr. Shrady said, the diagnosis of cystic tumor of the breast was not very difficult to make. If palpation was made in the centre of the tumor while the patient was in the recumbent position, a sense of fluctuation was generally felt. The peculiar shape of the tumor was also suggestive. The speaker said his practice had usually been to exsect these cysts, the operation being a comparatively easy one; by exposing the cyst wall and introducing the finger as a guide, it was not difficult to remove the entire cyst without encroaching much on the surrounding mammary tissue. A small gauze drain could be introduced, and the wound healed by first intention.

In dealing with multiple cysts of the breast, Dr. Shrady said he agreed entirely with Dr. Bull that they would better be left alone, because it took a long time for them to grow, and we had no evidence that they became malignant. They mostly appeared after the period of the climacteric, and were part and parcel of the degenerative changes in the breast which occurred at that time.

The speaker said that in one of his cases already referred to, in which he was in doubt as to the true nature of the tumor, there were two enlarged glands high up in the axilla which were quite hard and evidently indurated from inflammatory changes. They were left undisturbed, and had since entirely disappeared.

Dr. Shrady said he had seen two cystic tumors of the breast disappear spontaneously without treatment. One was about the size of a small orange, the other that of an egg. In one of the cases there was a suspicion that the cyst had been injured and had possibly ruptured; the patient had gone out of town, and upon her return home the tumor was found to have disappeared. The speaker said he had never employed injections in the treatment of these tumors, relying rather upon aspiration or complete removal.

Dr. Charles McBurney said he was inclined to think that more errors of diagnosis were made in differentiating between certain cysts of the breast and carcinoma of the breast than between any other two classes of tumors. The speaker said he had seen many instances in which it was difficult to make the differential diagnosis with certainty, and in some he was in doubt until the operating-table was reached. Only two or three days ago such a case had come under his observation. The patient had a tumor of the breast, about the size of a lemon, with the characteristic elastic feel. The physician who brought her said that within a week a surgeon of experience had inserted an aspirating needle, but had found no fluid; he had pronounced the growth non-cystic, but did not make a diagnosis. Her family physician had also used the needle with a like result. Dr. McBurney said that he had then inserted a needle into the centre of the growth, and found it filled with pus, showing that the growth was a sup-

purating cyst. Those cases in which the cyst was situated deep in the substance of the gland were easily confused with carcinoma; being surrounded by glandular tissue, their elasticity could not be made out. When they were situated near the surface, fluctuation was more easily obtainable.

Dr. McBurney referred to another case which he recently saw, in which the tumor was situated very deep, practically in contact with the thoracic wall, and gave the sensation to the finger of a dense, hard growth. The patient was a very sensitive woman, about fifty years old. She had lost flesh and strength and complained of a good deal of pain. In this case, the speaker said, he felt so confident that he had to deal with a carcinoma that he refrained from using the aspirating needle. After hearing his opinion, the patient consulted Dr. Bull, who regarded the growth as cystic, but on aspiration failed to find any fluid, and he thereupon agreed with Dr. McBurney that they had to deal with a carcinoma. The patient was then brought back to Dr. McBurney for operation, and upon incising the breast he found a simple cyst.

The speaker said that unless the characteristics of carcinoma were pretty clearly defined, he thought one should in every case keep the possibility in view of having to deal with a cyst. So far as the treatment of cysts by aspiration was concerned, he thought the method to be of rather doubtful value in many cases, for the reason that the cysts were so frequently multiple, and recurrences were so common. If the woman was young and anxious to retain the breast, free incision was much more certain to result in cure.

Dr. Andrew H. Smith said that within two years he had under his observation a woman with a tumor, about the size of a large egg, in the upper part of the left breast. No fluctuation could be elicited, and it did not have the feel of a cystic growth. The patient told him that she had had a similar growth in the breast about three years previously, which had disappeared spontaneously; her physician confirmed this statement. Dr. Smith said he had seen this woman again a few days ago, and she told him that the tumor had decreased to the size of a chestnut. It was probably cystic in character. In another case, the wife of a physician, there was a small tumor in the upper and outer segment of the right breast, which had appeared very suddenly and was attended by exquisite pain. She had been told that it was a cancer, but it disappeared within ten days under local remedies and had not recurred since. In that case the growth was not closely circumscribed, like a cyst, but diffuse, like a phlegmon.

Dr. Weir said Dr. Bull's paper was interesting from another point of view which had not been touched upon, namely, the occurrence of cystic carcinoma of the breast. He had seen about six or eight cases of this kind. In two of these, puncture revealed a dark, greenish fluid; no blood. By making an incision, the character of these growths could be more definitely learned. The diagnosis between a simple cyst and a cystic carcinoma was sometimes very difficult, and the aid of the pathologist must be invoked, with the immediate use of a frozen section if possible. In some cases which were regarded as benign, incision revealed such a thickening of the breast beyond the cyst wall that he was at times puzzled as to whether he was dealing with a benign or malignant growth. For this reason, these cystic tumors should always be regarded seriously until a positive diagnosis was made.

Dr. Weir said he had also seen a lactocele of the breast, which is a rare variety of cystic tumor. In the treatment of the ordinary cystic tumors, when the growths were multiple and the breast was seriously involved, it was wise, the speaker thought, to remove the entire gland, especially when they occurred at a time of life when changes of a serious character were to be expected; by doing this, we not only averted the possibility of future trouble in that breast, but also soothed the mental condition of the patient.

Dr. Weir said that frequently after the aspiration of a small simple cyst he would, in addition, inject a small quantity of tincture of iodine, in order to prevent a recurrence.

Dr. Bull, in closing, said he was thoroughly in accord with what had been said with reference to the advantage of incision in some of these cases. In aspirating, a reasonably stout needle should be used; the ordinary hypodermic needle was too small and might deceive one. The fact that these cysts tended to disappear and were of very slow development justified the general principle that treatment by aspiration should first be given a trial; then, if they refilled, excision could be resorted to. Dr. Bull said he knew of only one instance in which a tumor of the breast was diagnosticated as cystic which proved afterward to be carcinomatous; in that instance, the feel of the tumor was absolutely characteristic of an ordinary benign cyst, but, upon incising it, it proved to be a soft carcinoma.

Simple cysts of the breast, the speaker said, were of much more frequent occurrence than the writings on the subject indicated. Gross calculated that only two per cent. of all tumors of the breast were retention cysts, and a more recent writer had repeated that statement and justified it by figures of his own. Dr. Bull said that, according to his own experience, at least one-half of all tumors of the breast which had come under his observation during the past five or six years were of the cystic variety.

Notes of a Case in which a Piece of Brass Wire was Removed from the Abdomen by Abdominal Section: with Specimen.—This case was reported by Dr. W. T. Bull. The patient was a man, twenty-five years old, who first came under observation on December 20, 1898. He stated that six days previously he had swallowed a piece of brass wire, about one-half the size of spectacle wire, with a cotton swab attached, with which he was swabbing out the posterior nares through the anterior nares. Since the occurrence of the accident, the patient's bowels had moved regularly, but he complained of a feeling of weight and abdominal discomfort. On the second day he said he could "feel" the wire in the right iliac region, and once since then on the opposite side. In order to "push the wire along" he had swallowed three or four pledgets of cotton, which were passed within twenty-four hours. He was then directed to partake freely of potatoes, milk, bread, and cheese for forty-eight hours, and then take a dose of castor oil. This did not produce the desired effect. When the patient entered the hospital, he complained of scraping sensations and pain in the right hypochondrium; the pain was sharp and constant, without definite accompaniments, and was increased by exertion, defecation, coughing, deep breathing, and the erect posture; it was decreased by heat locally, as well as cold, rest, and assuming a stooping attitude. Tenderness was noted in the same locality as the pain, and there was ill-defined soreness at times over a larger area of the abdomen. He had first felt the pain after lifting and heavy work, its onset being rather sudden. At times it was almost absent, recurring with any of the factors above mentioned as increasing it. More recently the pain had been so severe that the patient voluntarily stayed in bed.

Abdominal section was performed by Dr. Bull on January 23, 1899. Through a vertical incision opposite the ninth costal cartilage, four inches in length, the margin of the right lobe of the liver was exposed. A mass of thickened omentum was found uniting the

liver, abdominal wall, and the pylorus. The first part of the duodenum was encountered in the lower end of the cut, pus was seen issuing from a small abscess cavity in the omentum. In this the end of the wire could be felt. On withdrawing this with the forceps, it was observed, from its length and direction, that the major part of it must have been in the lumen of the first part of the duodenum and the pylorus. The small abscess cavity was stuffed with an iodoform tampon, and the upper part of the incision was closed with layer sutures of catgut and silkworm gut. The patient was discharged cured in three weeks.

In connection with this case, Dr. Bull showed the specimen removed. Two *x*-ray pictures of the case had been taken previous to operating, both with a negative result.

A Nickel Five-Cent Piece Removed from the Œsophagus after Four Months' Impaction. — Dr. Bull showed a nickel five-cent piece which he had extracted from the œsophagus of a child, six months old, by means of the ordinary coin-catcher. The child had swallowed the coin four months previously—that is, when it was two months old. The patient was at once taken to the outdoor department of one of our large hospitals, where the œsophagus was explored with the ordinary œsophageal bougies, but nothing could be felt. The mother was thereupon assured that the coin was not there. Subsequent to the accident, the child swallowed pretty well for two or three weeks; then difficulty in swallowing was noticed, and the case was referred to Dr. Bull by Dr. P. A. Johnson, of this city, who, suspecting the coin to be still in the œsophagus, had an *x*-ray picture taken, which demonstrated its presence about the middle of the canal. On account of the time the coin had been in place, Dr. Bull advised an external œsophagotomy. The operation proved unnecessary, however, as he succeeded, rather unexpectedly, in extracting the coin with the coin-catcher. The case was interesting as showing the tolerance of the œsophagus in so young a child.

Dr. Weir referred to a case where a silver five-cent piece remained lodged in the lung for twenty-seven years, and was then forced out by a violent fit of coughing.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 10, 1899.

Charles N. Dowd, M.D., Chairman.

Hernia Operation—Introduction of Silver Wire into the Inguinal Canal.—Dr. A. M. Phelps presented several cases of large hernia upon which he had operated. He said they served to demonstrate the fact that one could insert into the inguinal canal from twenty-five to one hundred or more feet of silver wire without causing any disturbance. He had called the attention of the section, he said, to this mode of operating just five years ago. In his cases the inguinal canal had been entirely obliterated, and the mass of buried silver wire could be plainly felt. In the paper referred to, three cases had been reported. In the discussion on that paper it had been stated that the principle of the operation was wrong and that the silver wire would have to be taken out, but time had not substantiated these statements. There was no novelty in the introduction of silver wire, but a great deal of it had had to be taken out because it had been inserted in the form of interrupted loops. If silver wire or any other non-irritating substance was placed in the tissues and anchored there, it would give rise to no trouble. He had been of the opinion that relapses of hernia cases were owing to loss of substance in the abdominal walls and the elongation of the cicatricial tissue. If the new material deposited in the canal by McBurney's method had been fortified by the insertion of silver wire, he thought it would have been an ideal operation. If the entire inguinal canal was laid open, a mass of wire inserted, the transversalis fastened over it, and over that another mass of wire, the wire would remain *in situ* without causing any disturbance. A specimen was presented, consisting of a mass of wire and scar tissue, which had been buried in the inguinal canal for two years and a half, and had been removed at autopsy. Dr. Coley had reported one case in which six inches of wire had been taken out. This patient had been discharged with a sinus still open, and the case had not relapsed. Of the eighty-one cases treated by this method, eighteen had been cases of relapse of hernia, many of them following the McBurney operation. He was now getting relapses from the Bassini operation, and he predicted that the Bassini operation would follow the course of all the others. His relapses had been from the use of absorbable material or of fine kangaroo tendon. The wire employed in this hernia operation was a very fine silver wire, which had been thoroughly sterilized, immersed in carbolic acid, and then passed through the flame of an alcohol lamp just before being used. He had introduced in this way as much as three hundred feet in one case.

Dr. W. B. Coley said that he had been present at the time of the presentation of Dr. Phelps' paper five years ago, and had not been convinced of the value of the operation. The evidence that had accumulated since then regarding the operation had still failed to convince him of its merit. With one exception the cases just presented had been recent ones. The one of longest duration—the one in which the operation had been done last October—had a sinus from which pus was exuding. This seemed to him to be the chief objection to the operation. He had seen two other cases of this kind. The implantation of any quantity of non-absorbable material in the inguinal canal seemed to him objectionable. He cited one case, operated upon by Dr. Phelps in December, 1894. The patient had remained in the hospital three months—a very long time, and in itself an objection. On November 26, 1895, this man had appeared at the Hospital for Ruptured and Crippled with a sinus three inches deep, which he stated had existed most of the time since leaving the other hospital. About six inches of silver wire had been removed from him by Dr. Weir. At that time the hernia had not yet relapsed, but he could not say whether or not relapse had occurred since then. In another case, the operation had been done on November 25, 1893. Three weeks after having left the hospital a sinus had appeared, and had been open pretty constantly for two years and a half, or up to the time of his coming under the speaker's observation. Non-absorbable material did not always cause trouble, but it did so sufficiently often to constitute a distinct objection to its use. The presence of a large mass of fibrous tissue in the inguinal canal, moreover, seemed to him a positive disadvantage, for he believed that, after a sufficient time had elapsed, the fibrous tissue would be absorbed, as in the McBurney operation, and the hernia would relapse.

Dr. George E. Brewer said that up to about two years ago he had never tried Phelps' method. In one particular case of hernia in which there had been a very large ring, he had first tried the operation, and without attempting to bring the surfaces together he had endeavored to make a lattice work of silver wire. The wound had healed primarily, but as he had not seen the patient subsequently he was unable to say whether or not the hernia had relapsed. He could not see, however, how it could relapse. He had operated

upon two other cases by this method, and with entirely satisfactory results. He had seen quite a number of Dr. Phelps' cases one or two years after operation, and they had been in excellent condition, although he would admit that he had met with a few in which a sinus had formed.

Dr. Robert T. Morris spoke of the question of the comfort of the patient in connection with these operations. The question of relapses and of sinuses could be settled in due time only by the proper collection of statistics. It seemed to him that the introduction of a mattress of silver wire between the transversalis fascia and the transversalis muscle was mechanically correct, and was well suited to patients with poorly nourished and flabby tissues. The specimen shown by Dr. Phelps seemed to him too loose and to call for too much plastic exudation for its encapsulation. If a thin screen of finely woven wire were substituted, it should be possible to obtain an excellent support with much less wire. He thought most surgeons had been pretty well satisfied with the Bassini operation. Out of a series of one hundred or more Bassini operations he knew of only two recurrences.

Dr. Robert Abbé did not think the presence of silver wire in the tissues need be dreaded if inserted with strict regard to surgical asepsis. The method originally proposed by Dr. Phelps he had understood to be the darning up of the canal by silver wire, and this had seemed to him a very rational method—indeed, a better one than that described this evening. He was free to confess, however, that he had found the Bassini operation satisfactory for all of his cases, and some of them had been very severe ones. He had been accustomed to use buried sutures of silkworm gut, and had never known of the sutures coming out in any case.

Dr. Coley said that he had operated upon over five hundred cases of hernia by the Bassini method, and although he had carefully followed his cases he had been able to find only five relapses.

Gangrenous Femoral Hernia; Intestinal Anastomosis.—Dr. George E. Brewer presented a man who had been admitted to the surgical department of the City Hospital with a diagnosis of inguinal adenitis. There was a fluctuating swelling in the groin, apparently an adenitis. On incising it there had been a distinct fecal odor, and the floor of the wound had been formed by peritoneum. At the bottom was a mass resembling a sloughing appendix. The wound was cleaned and packed, and after a week or two an incision had been made from above with a view to removing the appendix, but the latter had been found normal. Further examination had shown that the original condition had been a femoral hernia containing a loop of ileum, and that there was a large rent in the bowel. The gut had then been resected, and an anastomosis effected with the aid of the Murphy button. The latter had been passed on the eighteenth day, and since then the patient had been perfectly well.

Tuberculosis of the Hernial Sac.—Dr. W. B. Coley presented a woman, twenty-three years of age, who had had a right femoral hernia about the size of an English walnut, and irreducible. On March 1, 1899, the hernia had been operated upon. The sac had been found greatly thickened and more or less eroded on its serous surface. The sac had been carefully examined and a provisional diagnosis made of tuberculosis of the hernial sac. Only twenty-two cases of tuberculosis of the hernial sac had been found on record. The tuberculous process had been found in the hernial sac in twenty of these cases. In fourteen it had been confined to the hernial sac alone, and four times to the omentum. Most of the cases had also presented evidence of tuberculosis elsewhere.

Dr. Brewer said that he had recently met with an acute miliary tuberculosis of the peritoneal pouch in an ordinary scrotal hernia.

Dr. C. N. Dowd said that he had seen a case of double inguinal hernia in a child in which both the hernial sacs had been studded with tubercles. The child had made a slow recovery. There had been a mild febrile movement—a temperature of 100° to 101° F. every afternoon.

Permanent Cures after the Bassini Operation.—Dr. Coley presented three young men who had been subjected to the Bassini operation several years previously. In the first case, a Czerny operation had been first done, and in spite of wearing a truss afterward the hernia had relapsed. Six years ago the recurrent hernia had been operated upon by the Bassini method, and since then there had been no relapse. The second patient had been operated upon the first time by him on January 15, 1892, according to the Czerny method. Silk sutures had been used, and some of them had subsequently come away through sinuses. Seven years ago a Bassini operation had been done on him. He had worn no truss since the operation and had remained free from recurrence. The third patient had become badly infected at the time of operation, through some fault in the technique, and, in spite of suppuration and healing by granulation, he had remained for six years without a relapse.

Laryngeal Stenosis—Special Tube.—Dr. John Rogers presented a young woman with specific laryngeal stenosis, whom he had first seen in the Gouverneur Hospital in August, 1896. Tracheotomy had been done at once, and she had worn the tube for about two years. She had then returned because of the coughing up of granulations. After various attempts a uterine probe had been passed down into the larynx. Subsequently a thyrotomy had been done, and then rapid dilatation with sounds had been practised. In this case the intubation tube had been tried, but it had been repeatedly coughed up. Finally, a specially constructed intubation tube had been used with entire success. The special feature of this device was a perforation opposite the swell of the intubation tube, into which a plug was screwed. This plug projected through the tracheotomy wound. In the event of impending suffocation from occlusion of the intubation tube, the patient could remove the plug and secure the necessary opening for respiration.

Rapidly Recurring Sarcoma.—Dr. John F. Erdmann presented a woman who, thirteen years ago, had been operated upon in Germany for a tumor of some kind on the right leg. When seen by him, about two years ago, there had been a large ulcerating surface on the calf of the right leg. This had been dissected away, and examination had shown it to be a myxosarcoma. Two years ago he had removed a tumor from Scarpa's triangle, and by means of a large transplantation flap had endeavored to fill in the denuded area. A portion of the flap had sloughed, but by further skin grafting the wound had healed satisfactorily. Eight months ago another tumor had formed in the right groin, and had been removed. Six weeks ago another operation had been demanded, and already the flap had become extensively involved in the sarcomatous change, and the pathologist now reported it to be a spindle-cell sarcoma.

Anastomosis of Steno's Duct.—Dr. Robert Abbé reported a case of anastomosis of Steno's duct. The patient was a man who had had a large sarcoma of the cheek, which had rested upon and involved Steno's duct. It had been necessary in removing this tumor to remove more than one inch of this duct. Usually after such operations a very troublesome sinus remained. In this case he had found it possible to anastomose the ends of the duct. More than half an inch had been left between the opening in the cheek

and the duct itself at either end. The outer end had been stretched, and by means of a suture one portion of the duct had been drawn within the other. This had been given further support by deep sutures of catgut and by placing a large Thiersch graft directly over the duct. The parts were bandaged snugly for several days. Absolute primary union took place throughout. During the operation the duct had discharged its secretion copiously.

DR. MORRIS said that the method described by Dr. Abbé was an exceedingly ingenious one, but hardly practicable in some cases in which much of the duct had been removed. In two cases of sarcoma of the face he had fastened the proximal end of Steno's duct to the cheek, and in neither one had there been any fistula, although there had been no anastomosis—simply close suturing of the duct.

General Prognosis in the Injuries of the Spinal Cord.—DR. P. R. BOLTON read a paper on this subject. He said that it was customary to divide these cases into two groups, viz., (1) those in which there was total division of the cord, and (2) those in which there was only a partial lesion. It was found in practice that wounds of the cord seldom resulted in its complete division. When there was a total lesion of the cord there was absolutely no hope of regaining any of the functions destroyed. The duration of life, other things being equal, depended upon the proximity of the lesion to the medulla. Injuries of the upper four segments of the cord resulted in death within a few minutes from paralysis of respiration. Patients with total lesions in the dorsal and lumbar regions might live indefinitely, but generally extensive bedsores or genito-urinary infection led to a fatal termination after some time. There were two general classes of injuries to the spinal cord, viz., (1) those causing division or destruction of fibres by agents acting from without, and (2) those in which nearly the same effect followed from hemorrhage within the cord itself. In the first class the injury was usually produced by bullet wounds or lacerations from other foreign bodies, such as spicules of bone. Regeneration of some of the cells and fibres beyond the injury might occur, with resultant improvement in the symptoms. In the second class the hemorrhages occur as a rule in the gray matter, spreading for variable distances through the same. They were usually due to overtension of the cord in the direction of its long axis during forced flexion of the spine, and, therefore, occurred opposite the most movable portion of the vertebral column. The cells and fibres of the cord into which the hemorrhage occurred were at once destroyed. In many cases the functions at first suspended were regained, particularly when the hemorrhage was slight and distinctly localized. But a hæmatomyelia might be the beginning of a syringomyelia. Partial lesions of the cord were quickly fatal in the upper four segments of the cord because of respiratory paralysis. To summarize: (1) All total, and practically all partial, lesions of the upper four segments were immediately fatal; (2) all total and the majority of partial lesions of the lower cervical and four dorsal segments caused death in about two weeks; and (3) total lesions in the lower dorsal, lumbar, and sacral segments were often survived for a long period without improvement, while with partial lesions there was often great improvement, and the issue was rarely fatal.

DR. MORRIS asked in what proportion of cases it was considered advisable to open the membranes of the cord when there was marked extravasation. When there was hæmatomyelia he would like to know if it was allowable to open the central canal and drain. This certainly seemed to be very radical surgery, but the question had occurred to him because of a recent case of injury, in which the meninges had been found greatly distended with blood. Because of the very free venous oozing on opening the meninges he had been compelled to desist from the attempt to reach the central canal, and to suture the meninges very quickly. In the case referred to, there had been dislocation of the eighth dorsal vertebra, and it had required the combined strength of three men to effect the reduction of the dislocation.

DR. BOLTON replied that in cases of hæmatomyelia the hemorrhage never occurred in the central canal, but in the gray column, and in order to reach this it would be necessary to destroy many fibres in the white portion of the cord. Such operative interference, therefore, would seem to add to the injury already received.

DR. BREWER asked if it was not true that these cases of hæmatomyelia did well when left alone.

DR. BOLTON replied affirmatively.

DR. BREWER said that he had been led to ask this question because of a case seen by him at one time. The case had seemed almost hopeless, but Dr. Pearce Bailey, the neurologist, had given a favorable prognosis, and in a few weeks the patient had been able to leave the hospital.

DR. MORRIS cited a case in which the cord had been apparently completely crushed by a fragment of bone, yet restoration of function had taken place.

DR. ROGERS said that he had seen three of these patients operated upon, and all had died, so that he was inclined to coincide with the opinion expressed in the paper; *i.e.*, that there should be no interference unless there was a wound present. It had always seemed to him that dislocation of a vertebra without fracture occurred by the processes being pulled apart and then sliding under each other. By flexing the spine and making extension, reduction could usually be easily effected.

Surgical Suggestions.

Local Anæsthesia.—

℞ Cocain. hydrochlorat ..... .04 cgm.
Spartein. sulphat..... ..... .05 "
Dissolve at time of using in one or two cubic centimetres of boiled water.

—BAGOT.

Ear Anæsthetic.—

℞ Cocaine hydrochl.,
Phenol,
Menthol..... .....āā 1
M. S. Apply to the tympanic membrane after incision.

The internal surfaces may be rendered anæsthetic by means of a long syringe carrying two or three drops of a one-tenth-per-cent. solution.—BONAIN.

Prophylaxis against Infection.—If you are about to examine a septic case or one in which you suspect syphilis, wash your hands in vinegar or dilute acetic acid, and you will soon discover by the smarting any little scratches or abrasions in your skin which might become the starting-points of infection.—*Medical Sentinel*, September.

To Remove Tattoo Marks.—In an elaborate historically and otherwise interesting article, Dr. Félix Brunet (*Archiv. de Méd. Navale*, October, 1898) proposes a somewhat complicated method to replace the empirical means recommended, which are either inefficacious or dangerous, while the scientific expedient of repricking with various caustics is insufficient. His plan is as follows: (*a*) delimitation of site to be operated on, by diachylon plaster, anæsthesia by cocaine; (*b*) vesication by ammonia; (*c*) removal of epidermis,

free rubbing of exposed design with nitrate of silver pencil; (*d*) after five minutes salt or boricated water dressing, to be renewed the next day, when also the diachylon may be removed; (*e*) cicatrization under a powder formed of equal parts of iodoform, red bark, charcoal, and salicylate of bismuth.

The Surgical Treatment of Microcephalic Idiots.—So far as our experience guides us at present, we may formulate the following conclusions: (1) That the operation of craniotomy, if performed in four or five stages, is devoid of any special risk. (2) That in the congenital cases, in which there is probably always a maldevelopment of the brain, the operation is of no avail. (3) That in certain pathological cases the operation may be of some use in improving the child's condition, such as: (*a*) cases in which blood-clots or cysts are present in or upon the surface of one cerebral hemisphere, as in some cases of infantile cerebral hemiplegia; (*b*) cases in which it is found on trephining that there is increased intracranial tension; (*c*) cases in which epileptic fits form a prominent feature are generally much improved or the fits considerably modified by the operation; (*d*) cases in which, during a temporary arrest of the development of the brain, the cranial sutures have permanently ossified. (4) That in certain pathological cases the operation is of no avail, such as, (*a*) marked atrophy and sclerosis of the brain; (*b*) conditions of porencephalus and hydrocephalus. (5) That it is impossible to determine the exact pathological lesion unless an exploratory operation is performed, with opening of the dura mater. (6) That in many cases by systematic training the mental condition can often be much improved without operation.—Dr. Henry Percy Dean.

Surgical Hints.—Never leave an unrepaired rent in the omentum, as it is likely to give rise to intestinal strangulation. . . . In wounds of the abdomen, always remember the part played by concussion of the solar plexus, which may be so great as to lead to the mistaken belief that very serious visceral injury has taken place. . . . In catheterizing a woman, do it by sight, not by touch. It is of no advantage to sweep the end of the catheter over a possibly infected surface before introducing it within the bladder. . . . Pruritus ani is often promptly relieved by the application of an ointment of calomel, eighty grains to an ounce of vaseline. For pruritus vulvæ this is also efficient. . . . It is often much more difficult to diagnose fracture of the ribs than is commonly thought to be the case. If you cannot satisfy yourself that a rib is broken, but get many of the subjective signs of such a fracture, treat the case as if you were sure that the solution of continuity really existed. . . . In deep abscesses of the neck, incision is at times followed by severe and even fatal bleeding from eroded vessels, immediately or some time after the operation. In dealing with these abscesses it is well to be prepared to tie the large vessels during the course of the operation. The patients should be carefully watched. . . . If you expect to get much shock from an operation, remember that here again prevention is better than cure. Use a little morphine before operating to quiet the nervous system; keep the patient very warm during the operation, as well as beforehand. Small doses of strychnine before the operation are also indicated. . . . In various ulcerations of the skin and mucous membranes, we often prescribe iodide of potassium in order to ascertain whether we are in the presence of cancerous or syphilitic lesions. It is to be remembered, however, that cancerous ulcerations very often show a marked temporary improvement under the iodide, and we must not be led astray by this circumstance. . . . In gunshot wounds in which the bullet has remained in the tissues, it is better to consider how safely it can be allowed to remain in position, than what risks we are justified in taking for its removal. The indications for extraction comprise the ease with which it may be done, as well as the interference with the functions and integrity of important structures which the bullet may bring about.—*International Journal of Surgery*, December, 1898.

Dermatitis has been caused in a number of men in England of late by the chloride of zinc used as a mordant in the manufacture of the clothing they wore.

Nausea after Anæsthesia.—Inhalation of acetum aromaticum, continued for an hour if necessary, acts as a preventive.—E. B. Frick, *Assistant Surgeon U. S. Army.*

A Rubber Band, three millimetres thick by nine inches diameter, is stretched and slipped over the umbilical stump to within a centimetre of the abdominal wall instead of tying the cord.—Kouzmine.

To Remove a Foreign Body from Under the Nail.—Alternately soften the nail with the end of a match dipped in caustic potash and scrape with a piece of glass until the object is reached.—*Journal de Méd. de Paris.*

Empyema.—The existence of an empyema in the adult is a sufficient indication for the performance of a radical operation. Puncture and removal of the pus by aspiration may succeed occasionally in mild cases of suppurative pleuritis in the case of children; seldom, if ever, in the adult. Operative treatment should be instituted as soon as a diagnosis can be made. Unless the signs and symptoms are conclusive, the diagnosis should be verified and the pus accurately located by an exploratory puncture.—Dr. N. Senn.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PRESIDENCY OF COLLEGE OF PHYSICIANS—PARLIAMENT—PATHOLOGY OF THE THYROID—OPERATION IN ABDOMINAL ANEURISM—SERIES OF SUCCESSES OF PYLORECTOMY—RESEARCH LABORATORIES' DIRECTORATE—COLLEGE OF SURGEONS' CENTENARY—DEATHS OF DRS. PORT AND J. BRUNTON.

London, March 31, 1899.

Dr. W. S. Church, senior physician to St. Bartholomew's Hospital, was elected president of the Royal College of Physicians at the statutory meeting on Monday last. Dr. Church is an Oxford man and took his M.D. in 1868. He taught anatomy at Christ Church, became a fellow of the college in 1870, and has filled various offices there. For some years he edited *St. Bartholomew's Hospital Reports.* Sir S. Wilks, in his farewell address, declined to be a candidate for re-election, and reviewed the college history of the year, including the obituary of deceased fellows.

Parliament has separated for the Easter recess without accomplishing any medical legislation, and on reassembling the budget will push aside many good intentions. There is a bill in the Lords to prohibit medical or dental work being carried on by a company, but it does not seem intended to suppress the abuse of the "aid associations." There is also one for regulating pharmacy. In the Commons questions were asked about vaccination in various institutions,

at early ages; whether subscribers could require protection as a condition of admission, and so on—all with a view to harass the government—and serves them right for their cowardly concession to the agitations as the price of a few votes.

The bill for extending notification has passed a second reading, so it is just possible we may be on the eve of a new era in which all infectious diseases will be notified; the first step being to make those already scheduled by various local authorities universally subject to notification.

The food and drugs bill was referred to the committee on trade, so that its effects on public health may receive only secondary consideration.

The Goulstonian lectures at the College of Physicians this year were delivered on the 7th, 9th, and 14th inst. The subject was the pathology of the thyroid gland, and special interest attached to the occasion, as the lecturer was Dr. George B. Murray, whose work in this field is so well known. He began with a sketch of the development and structure of the gland and the method in which its secretion is produced. Then followed the consideration of the loss or diminution of this function, leadihg up to the supply of the secretion from other sources as a means of treatment. The results of athyroidism in the young, in adults, and in animals were examined, and then the effects of a renewal of secretion by grafting and of a supply by means of thyroid extract. The preparation originally used by the lecturer was a glycerin extract, and this has been adopted in the new British Pharmacopœia under the term "liquor thyroidei," and this is the form in which Dr. Murray mostly administers the remedy. The treatment of myxœdema and of cretinism by thyroid extract was illustrated by cases. The effects of the loss of the thyroid and parathyroid glands were considered in the light of experiments on monkeys, which led to the conclusion that the symptoms resembling primary myxœdema in man are produced by the loss of the thyroids, while certain nervous symptoms are caused by removal of parathyroids. It is not surprising that these latter symptoms are not removed by the extract.

In the third lecture Dr. Murray treated of compensatory hypertrophy and exophthalmic goitre. In both these conditions there is increase in the secreting structures, and the epithelium is changed from a cubical to a columnar type, while the secretion stored in the alveoli is less in quantity and more watery in consistence. Excessive formation and absorption of the secretion, which may or may not be altered in composition, leads to a constant excess in the blood and affects the metabolism of the tissues, especially of the centres in the medulla. Thus exophthalmic goitre is the opposite condition of myxœdema; the former being due to excess of thyroid secretion in the blood, as the latter is due to an insufficiency of the same. Thus to give thyroid extract to a patient with exophthalmic goitre would only add fuel to the flame. Though by no means free from risk, removal of one lobe and ligature of supplying arteries are operations which have been done and followed by steady improvement. When the risks of operations are diminished, they may be resorted to in severe cases which medical treatment has failed to relieve.

There are not many cases on record of successful operation for abdominal aneurism. Mr. Langton (president) communicated one to the Clinical Society on Friday. The patient was a woman who had lost two stone in weight in twelve months and had a pulsating tumor three and one-half inches in diameter in the epigastrium. It was movable laterally, not vertically, and there was a loud systolic murmur over it. Laparotomy was performed in April, 1898, and the tumor was proved to be aneurism of the upper part of the abdominal aorta. A trocar was introduced, and not much blood came through the cannula. Five feet of silver wire were introduced and the puncture was secured with a silk ligature. There were some vomiting and restlessness after the operation, and a month later alarming symptoms (rigor, collapse) resulted from manipulation. But consolidation was occurring, the symptoms abated; progress has been uneventful until the present time, and now there is only a hard mass in the middle line; thrill and bruit have disappeared, and the woman is in excellent health.

This striking opening of a surgical evening was followed by a series of successes of pyloroplasty and pyrolectomy by Mr. Rutherford Morison, of Newcastle-on-Tyne. He brought with him five patients who had undergone pyrolectomy for malignant disease, and all five looked in good health. One of them had had half of his stomach removed for colloid cancer, and on the journey partook of a good dinner which Mr. Morison provided for him and his companions. The specimens removed and microscopic sections were also submitted to the inspection of the society. In one of the cases the operation was performed eighteen months ago, and there is no sign of a recurrence or of distal infection in any of them. Their future will be observed with special interest. No wonder Mr. Morison prefers this operation to gastro-enterostomy, which leaves the malignant growth behind to complete its deadly work, but which has, nevertheless, been found to give relief in a number of cases in which removal was impossible.

Mr. Langton and Mr. Morison were both congratulated on their cases. As it happened, the surgeons were not present in great force to discuss these operations, though if they had been it does not seem as if they would have been able to add much more than further congratulations.

Dr. Herringham brought before the Pathological Society the results of experiments on the toxicity of urine. You will remember that Bouchard rejected the view which ascribed this toxicity to the potash salts, and put forward a notion that a narcotic body is secreted in the day, producing our nightly sleep, while a convulsant body is secreted during sleep and leads to waking. Such bodies have not been isolated, nor have others which Bouchard suggested upon rather fanciful grounds. Dr. Herringham's experiments and those of Beck in Germany are utterly opposed to Bouchard's conjectures, and both these observers accept the conclusion that the poisonous substance is the potash salts. Auto-intoxication, a term of confused meaning, has been largely supported by the fact of urinary toxicity; but as this toxicity is due only to potash salts the theory receives a great check which may turn out to be the *coup de grâce.*

Dr. Charlewood Turner remarked that, so far as injections into animals were concerned, Dr. Herringham's experiments seemed decisive, but the conditions were not the same as in uræmia, in which the blood received the poison gradually instead of suddenly. In uræmia, too, there was not merely retention of substances, but the secreting substance of the kidney was altered so that the production of urinary ingredients was prevented.

Dr. Bradford did not think that uræmia could be due to the retention of any single substance, for ligaturing the ureters or excising the kidneys produced "obstructive suppression," as Sir W. Roberts termed it, the symptoms of which differed from those due to structural disease of the kidney.

Dr. T. G. Brodie succeeds Professor Woodhead as director of the research laboratories of the Royal Colleges.

There is talk of getting up a celebration of the centenary of the grant of the charter to the College of

Surgeons. The best celebration would be to give a vote and so a personal interest in the college to the members, who at present have no voice in anything.

The deaths are announced of Heinrich Port, M.D., F.R.C.P., physician to the German Hospital, on the 25th inst., and of John Brunton, M.D., M.A., on the 25th, aged sixty-three years, a familiar figure at the Medical Society, of which he had been vice-president. He contributed many papers to this and other societies as well as to the journals.

"GIFTS OF HEALING—HELPS."

To the Editor of the Medical Record.

Sir: You remember that verse of St. Paul's, where he follows "Gifts of healing" by "helps." Now, I don't suppose by that word he meant "wives," but it might be used instead of helpmates; and that is what I choose to interpret it in this paper, and to go a little further yet, and mean doctors' wives in particular. All the medical journals are full of "gifts of healing" (as they should be), but not a word do we hear about "helps." I wonder if any of the doctors' wives take peeps into the Medical Record, as I do occasionally. We see so many articles on the "Ideal Doctor," "The Duties of the Profession," etc., that I am thinking a little talk about the duties of the doctor's wife would not be amiss. I have been a doctor's wife less than ten years, but a doctor's daughter more than three times that number, so that I have seen a little of a doctor's life and know that it is a hard one, and that he needs plenty of help and comfort from his home-life. In the first place, it is very fortunate if his family is well and strong, because, as he has to expend so much sympathy and patience on other people's ails, it is a relief to find healthy people at home. Therefore let me exhort the wife to make as light as possible of her own and the children's aches and pains.

Then, don't ask him about his patients. Sometimes it's a comfort to talk over a "case" with his wife, but unless he does it of his own accord, he respects the wife for asking no questions, and sometimes she will find it very convenient to be able to say, "I don't know." A country doctor's wife will have a great many questions asked her by the curious public.

Another little thing—very little perhaps—don't overwhelm him with "calls" and "medicines to be put up," the minute he comes home (this, of course, applies especially to the country practice). When you go to meet him talk about something else rather than the patients he has visited. Then there are responsibilities about messages, and people coming in the doctor's absence, known only to the wife herself, and she can best attend to them. I don't believe in her dispensing drugs, although it is well to be able to dress a wound in case of an emergency.

The family thought they had a good joke at my expense a while ago. One day when my husband was away I heard quite a commotion in the office, and found my sister had let in some people who had brought a little girl who had been bitten by a dog; and they were terribly frightened, having the usual horror of a dog-bite, even if he was not mad. I tried to quiet them, saying if the dog was not mad the bite was no worse than any other wound, if it was carefully dressed. They were fully reassured, and asked if I could "do it up," as they were so far from any other doctor, and my husband was off for the day. There was a bite on the shoulder and one on the face, in an especially hard place to keep the bandage on, but I dressed it the best I could, and told them they must surely come back the next day to have the doctor dress it properly. We never saw or heard of them again, and my husband said I reassured them so fully that they felt perfectly safe without more care. I always felt a little guilty about that "case."

There is one "duty" I would not neglect, and that ought to be a great privilege—that is, the chances we have of doing little kindnesses—sending an orange or a book to a sick child, giving a cup of hot coffee to the cold messenger, and encouraging our own children to share their little comforts with the unfortunate children who come in their way.

Can I close this little talk better than by quoting three or four verses from Lowell's "My Love"? If the doctor can apply them to his own wife, can he give her greater praise?

"She doeth little kindnesses,
Which most leave undone or despise;
For naught that sets our heart at ease,
And giveth happiness or peace,
Is low esteemed in her eyes.

"Blessing she is: God made her so,
And deeds of week-day holiness
Fall from her noiseless as the snow,
Nor hath she ever chanced to know
That aught were easier than to bless.

"I love her with a love as still
As a broad river's peaceful might,
Which, by high tower and lowly mill,
Goes wandering at its own sweet will,
And yet doth ever flow aright.

"And, on its full, deep breast serene
Like quiet isles my duties lie;
It flows around them and between,
And makes them fresh and fair and green
Sweet homes wherein to live and die."

A Doctor's Wife.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 15, 1899:

	Cases.	Deaths.
Tuberculosis	202	173
Typhoid fever	8	4
Scarlet fever	227	4
Measles	270	12
Diphtheria	199	39
Laryngeal diphtheria (croup)	15	2
Cerebro-spinal meningitis	0	16
Chicken-pox	30	0
Smallpox	20	0

Comparative Mortality.—According to an annual published by the city of Buenos Ayres, Madrid has 1.20 deaths from variola, against 0.06 in New York, for every one hundred deaths. On the other hand, New York shows 1.29 from scarlatina to Madrid's 0.48. Typhoid is much more prevalent in Madrid than in New York—1.89 to 0.77—while phthisis has about 12.5 in each hundred in both cities. St. Petersburg has a larger percentage of fatal scarlatina, typhoid, diphtheria, and phthisis than either of the other cities, five per cent. of the deaths being from diphtheria.

The Population of London.—The density of the population of London has been doubled since 1887. "It is truly wonderful," says the *Lancet*, commenting on this, "that its vast population of 6,291,667, located on only 693 square miles, should have in 1897 so low a death rate as 17.7 per 1,000. This rate is not greater than that of a fairly healthy rural district."

England well deserves the name she has received as the birthplace and home of sanitary science and practice.

Foreigners in France.—In France there are 1,130,241 foreigners, while in foreign countries there are but 517,000 Frenchmen. The Europeans of various nationalities residing in France number 1,112,072; there are, on the other hand, but 217,000 Frenchmen disposed through Europe. Of Belgians 465,870 have emigrated to France; only 52,000 Frenchmen have settled in Belgium. The hospitality of France is accorded to 286,042 Italians; while in Italy there are only 11,000 Frenchmen. Of Germans there are in France 83,333; the number of Frenchmen living in Germany is 24,000. France has within its borders 14,337 Russians, but in Russia itself there are but 5,200 Frenchmen. The number of Austrians in France is 12,000; the number of Frenchmen in Austria, 3,000. For Spain and Switzerland the figures are more nearly equal. There are 77,000 Spaniards in France, and 25,000 Frenchmen in Spain; 83,117 Swiss in France, and 54,000 Frenchmen in Switzerland.—*Scientific American.*

Infanticide.—The law assumes, until it is proved to the contrary, that every child is born dead, on account of the fact that so many children are brought into the world who are either dead or die shortly after birth. Inasmuch as this is the law, the prosecution, and not the defendant, must prove that the infant alleged to have been murdered was born alive. For this reason great difficulty is usually experienced in convicting a woman charged with the crime of infanticide. Apart from this difficulty she is often delivered in the absence of witnesses, or the child is concealed or destroyed. The jury also sympathizes to such an extent with a woman accused of this crime that conviction cannot easily be secured. Medico-legally, to be born alive implies complete expulsion of a living child from the mother. A child, for instance, is not born alive if any portion of it, except the umbilical cord, is retained within the vulva. By this figment of the law, therefore, the destruction of a living child, if only partly born, does not constitute murder.—Dr. Henry C. Chapman.

Midwinter Heat of Mexico.—Perhaps the most trying sun on the table-land is the midwinter sun, so intense that the native expression is that "it bites," and yet men perform great journeys on foot or horseback under the sun of winter without injury. This may be the classic land of *mañana*, of delay and procrastination, but the people have stronger nerves, and life, though led on simpler lines, is happier in many ways. Nobody goes mad here from the heat, nobody tumbles down a corpse in the streets from the effects of the sun, and rarely any one remarks about the weather. Americans have never wearied of praising the incomparable climate of Mexico's tableland.—*Mexican Herald.*

The Contagiousness of Whooping-Cough.—Weill, who in 1894 expressed the opinion that whooping-cough is contagious only during the premonitory catarrhal stage, has since put his opinion to the test on various occasions. He permitted nearly one hundred young children who had not previously suffered from whooping-cough to be associated in the same ward for twenty days or more with children suffering from the disease during the stage of whooping. In only one case was the disease contracted, and in this instance the patient from whom the infection was derived was in the very earliest period of the whooping stage. In three small epidemics Weill was able to satisfy himself that infection was contracted from children who had not yet begun to whoop. He concludes that infection ceases very soon after the characteristic whoops commence, and that in a family it is not the patient who is already whooping, but his brothers and sisters who have not previously had whooping-cough, who ought to be isolated.—*Monthly Encyclopedia.*

Insomnia.—A Russian remedy is to have a dog sleep in the room, and preferably in the same bed. It may be through a sense of companionship, or one of security, or it may act suggestively; at any rate, it is said at times to prove of value when other means fail.—*The Public Health Journal.*

Treatment of Mental Condition in Childhood.—Dr. Henry Rayner, at a meeting of the Childhood Society held in London, delivered a lecture on "The Early Recognition and Treatment of Mental Condition." Dr. Rayner enumerated the many causes and signs of mental disorder in children, and asserted that the value of care in preventing a defective mind could not be too strongly insisted upon. Among the poor a defective mental condition was intensified very frequently by defective nutrition. Later on children suffered from having meat and other articles of food which they had not the power to masticate. Children who were supposed to be suffering from imbecility were frequently cured by proper diet. Among the well-to-do classes dangers arose from over-feeding or feeding of too stimulating a character. Special attention should always be paid to the teeth, and if they became decayed they should be disinfected or removed. The air breathed and the mode of breathing was scarcely less important than the proper mastication of food. Nasal breathing was of the utmost importance for the health and development of infants. Adenoids were often the cause of defective mental condition, and their removal was invariably accompanied by a great development of mental and physical vigor. Among the poor neglect of children was often very great, and he was of opinion it would be most advantageous if there were centres where young imbecile children could be received for a week or two and attended by efficient nurses, who could demonstrate to mothers how much good could be done their children by proper care.—*London Times.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending April 15, 1899:

Smallpox—United States.

		Cases.	Deaths.
Alabama, Mobile	April 1st to 6th	3	
Dist. of Columbia, Washington	April 3d	5	
Florida, Key West	March 30th	1	
Illinois, Chicago	April 7th	1	
Indiana, Evansville	March 31st	1*	
Louisiana, New Orleans	March 26th to April 1st	42	2
Maryland, Baltimore	April 1st to 8th	1	
North Carolina, Newbern	April 6th	1	
Texas, Galveston	April 1st	4	
Zapata County	April 1st	Present.	
Virginia, Newport News	April 2d to 8th	13	
Norfolk	April 2d to 7th	31	
Portsmouth	April 1st to 7th	9	

* Total, 17 cases.

Smallpox—Foreign.

China, Hongkong	February 18th to 25th	5	4
England, London	March 11th to 18th	1	
Greece, Athens	March 18th to 25th	31	23
India, Calcutta	February 25th to March 4th	..	1
Madras	March 4th to 10th	..	1
Mexico, Chihuahua	March 18th to 25th	..	1
Mexico	March 26th to April 2d	2	2
Russia, Moscow	March 11th to 18th	24	4
Odessa	March 18th to 25th	1	
St. Petersburg	March 18th to 25th	13	1
Warsaw	March 11th to 18th	..	3
Turkey, Constantinople	March 6th to 13th	..	7

Cholera.

India, Calcutta	February 25th to March 4th	..	16

Plague.

India, Calcutta	February 25th to March 4th	..	23
Mauritius	February 14th	1	

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Original Articles.

INSANITY IN CONNECTION WITH DISEASE OF THE DUCTLESS GLANDS.

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THE student of modern pathology must be impressed with two important facts in relation to degeneration of the important ductless glands. First, with the prominent part played by the thyroid, especially in its relation to other organs; and, secondly, the importance and frequency of the development of mental symptoms of greater or less gravity in connection with such special degeneration.

Cyon has advanced the theory that even in acromegaly—that rare and curious involutional disease—the hypertrophy of the pituitary body is accompanied by more or less disturbance of function of the thyroid, and the collected cases of others bear this out, as both the thyroid and thymus are degenerated in a considerable proportion of subjects. The careful study of many general diseases of nutrition in which glandular degeneration exists must also force one to the conclusion that some secondary disturbance is produced in the cerebrum, and whether this is due to a definite toxin or not, or to the absence of some necessary agent of repair, or to some disturbance of the circulation due to the involvement of the sympathetic nervous system, which is the older and more popular explanation, is a mooted question. Certainly modern physiology and the experiments of Schäfer, Oliver, Rolleston, and advanced pathologists favor the deprivation theory, through the absence of certain required internal secretions, a view which is entertained by those who have tested the effects of the internal administration of the organic extracts in cases of myxœdema, when not only the physical but the mental symptoms were promptly relieved and in various chronic insanities. Though the present state of knowledge supports the doctrine that disease of the thyroid is expressed by hyperthyræic and atheraic disorders (exophthalmic goitre and myxœdema), it must be also conceded that adrenal diseases and even degeneration of the spleen and other ductless glands are connected with changes in the character of the blood, and as a result there may be a well-defined toxic insanity. Andreizer, of London, who has investigated autotoxis in relation to insanity and especially acromegaly, called attention to an important diathetic class of insanities which the textbooks as yet have not recognized. "He did not refer to the so-called gouty or rheumatismal insanities, but to those associated with, and growing in the soil of myxœdema and acromegaly, with a very constant and distinct physiognomy of their own, and with a pathogenesis that could be harmonized and well explained by the morbid changes present, changes which lay at the root of the mental as well as the bodily conditions. In the one case (myxœdema), a morbid process starting from the thyroid gland affected the whole capacity of the blood in regard to its power of taking up oxygen from the air. On examining the blood with the mercurial pump it was found that its oxygen and carbonic acid were much diminished, and by placing the individual in the apparatus for examining the gases of respiration, it was found out that he took in but little oxygen and correspondingly gave out but little carbonic acid during life. Thus he suffered from weakness and dulness, from subnormal temperature, and from a tendency to the accumulation of incompletely oxidized bodies (fat, etc.) in his tissues." That the mental changes in such affections as Hodgkin's disease, or pseudo-leukæmia, as well as true splenic leukæmia and Addison's disease, are too superficially regarded would appear to be true, for the text-books quite casually refer to "irritability, depression, delirium," and various inexact conditions, while personal experience and the analysis of many reported cases reveal classical psychoses with all the elements of consistent mental disorganization and symptomatology. The writer has elsewhere referred to his own researches and those of others in the direction of intestinal conditions and the production of insanities formerly erroneously ascribed to simple psychic and other causes, and in such insanities the sulphate ratio of the urine was found to be greatly changed and the hæmoglobin destroyed. In the psychoses under consideration, notably that of Addison's disease, the urine has been found to contain indican, just as it does in the simple intestinal toxic cases, and quite probably this indication of autotoxis plays a part in the glandular degeneration, for in most of them the common characteristics of impaired metabolism and hæmoglobin destruction exists. How far all these things are factors in a common process of toxæmia further observation must decide, and doubtless, when more definite solution of special points is established, the determination of the genesis of these rare psychoses will be a matter of ease. It is necessary in all of them to separate the ordinary irritability, depression, or mental apathy, which may be the result of simple asthenia, from more or less definite mental states seen in well-observed cases, and to determine that insanity and the organic degeneration are not simply phenomena in families where hereditary predisposition exists, as Emminghaus and Spitzka have pointed out. One of these observers found that both melancholia and periodical insanity existed in two cases of exophthalmic goitre, and it is to be assumed that the conclusion arrived at by them was reached through the recognition of the latter disease, which usually occurs in Krafft-Ebing's congenital class, but which I believe may be due, as it often is, to the variation in the progress of the fundamental Basedow's disease. Many of the forms of glandular degeneration exist in persons in whom there is no "neurotic vice" or predisposition. The elimination of the factor of inherited influence can be dismissed in so large a number of cases of insanity of this kind, that the bulk of them may be said to be acquired, so far as the connection with the two diseases is concerned. Insanity occurring in the course of exophthalmic goitre has so far received more attention than any other form, and while a few years ago the mental aspects of this disorder were dismissed in a

few words, modern writers give due weight to the very prominent mental changes that arise in the course of the thyroidal disease. The reported cases of mania or melancholia are especially numerous, and the former are usually acute and fatal and in many respects resemble the *délire grave* of the French writers, by reason of the sudden intense prostration and violence of the mental excitement. Six of these cases seen by the writer developed in women who were the subjects of Basedow's disease and presented a rather rapid development of symptoms and a train of mental changes which consisted in highly confused mania with violence, personal defilement, and exhaustion and death in a very few weeks.

Jacobs, of the Johns Hopkins University, reports two cases of his own besides eight others seen by Drummond, Savage, and Roberts. The patients in every case developed acute mania, usually after the exophthalmic goitre had lasted several years, with a rapid fatal termination. One of Jacob's cases is of great interest because of the fact that the thyroidal condition and mania were both short-lived, the patient dying in a few months. In some of these cases there was no apparent hereditary predisposition, but in both of those of Savage there was a strong family history. Rhys-Williams reported a case which developed in ten weeks after the appearance of the goitre, the patient dying two months later in collapse. In the beginning there were vomiting and diarrhœa and the depression so often seen, and subsequently acute mania. In Mackenzie's case the mania rapidly followed a condition of hebetude, during which the woman refused food, became confused, indulging in ceaseless verbigeration, repeating verses of hymns over and over; she grew filthy, daubing herself with fecal matter, and finally died in a comatose condition. Andrews' case, though lacking in detail and value the description of those reported by Rhys-Williams and Mackenzie, resembled them very much in the violence of the delirium.

In the cases seen by the writer of this paper, there was always depression followed by irritability, restlessness, and erratic behavior preceding the mania, the disorderly association of ideas becoming more and more difficult and confused, and the early mental clearing being largely affected by the patient's surroundings and physical condition, the connection of excitement and exhaustion always being of necessity features of causation. Shock is given as a frequent cause of exophthalmic goitre, but it does not appear to have anything to do with the insanity which subsequently develops, although Rhys-Williams and Mackenzie refer to it as a possibility, and the latter ascribes the commencement of thyroidal insanity in his patient—who was a comely young woman—to mortification and distress created by the disfigurement of the exophthalmos. For several years the writer has been in the habit of examining all melancholic patients to see if there existed any enlargement of the thyroid, and very often has been surprised to detect its existence in that disease, and to regard it as an important pathological condition, especially in connection with disturbed circulation and blood changes.

Sometimes thyroidal insanity may simulate hallucinatory paranoia, and its duration may arouse a doubt as to its true nature. And again the elemental periodicity may be laid to an error of diagnosis. A recent interesting case of this kind was that of a middle-aged woman, whose health had been good until about twelve years ago, when, without apparent cause, she suffered symptoms indicative of neurasthenia, irregularity in her menstrual functions, and gastric and enteric disorders. Her circulation was decidedly affected, she would often have attacks of tachycardia, and about the same time an enlargement of the thyroid was noticed and within a year her eyeballs became prominent and her pupils were dilated. As the result of unknown treatment the goitre became reduced, but it returned about nine years ago, when her disposition underwent a marked change: her ordinary amiability and placidity were followed by a certain amount of depression, querulousness, "crying spells," and irritability, a disposition to take offence, and a certain amount of suspicion of her neighbors. This increased to such an extent that she complained to her husband that people in the house in the next street were seeking to annoy her by ribald remarks and were making signs to people in her back yard, when such was not the case. She would stand for hours at the window listening to imaginary voices, and had the fear that she was to be arrested or "ruined." She also declared that the neighbors in the adjoining house were seeking to injure her and had spoken insultingly to her on the sidewalk, which was also a delusion. In the expression of these morbid ideas she was extremely loquacious, her mental condition upon one or two occasions amounting to incoherence. This, however, disappeared and she became perfectly clear when an improvement in her general health occurred. When I saw her two months ago, in consultation with her physician, Dr. McIntyre, she had had a fresh attack, and had been unusually persistent in her delusions and hallucinations, and declared that the people in the next house had some secret apparatus concealed in the walls of her bedroom through which they were talking and forcing her to use improper language. She heard these voices frequently and even at the time of my visit. She declared that the neighbors had pointed to her in the street, that people had talked about her in public conveyances, and in an active and confused manner manifested lively delusions of suspicion and persecution and visual and auditory hallucinations. Her appearance was characteristic, there being double exophthalmus, with throbbing and the characteristic cushion feeling upon pressure, and the Moebius symptom. Her neck was the seat of a large goitre, which could be somewhat reduced by pressure. The heart was enlarged and the sounds were distinctly exaggerated. Her pulse was 120 to 130, and I was informed that this tachycardia had existed for some time. The patient's hands and feet were cold at times and she perspired profusely, although the skin was somewhat dry and of a dusky color. There were no distinct spots of bronzing, but the hair on the right side of the head was distinctly white, while the left had retained its normal dark color. As in cases of ordinary paranoia she preserved a fair amount of ordinary intelligence in regard to abstract subjects, but the special delusions just referred to could not be overcome by any argument, and she became violent when remonstrated with, and has struck her children. She has also had delusions of defilement, and has spent much of her time in cleaning things and getting rid of what she calls dirt.

In myxœdema, which is the pathological antithesis of exophthalmic goitre, the disorders of the nervous system are conspicuous and almost universal, and it is doubtful if even one true case exists in which there are not some psychical disturbances. In Ord's one hundred collected cases, besides minor disorders such as insomnia, slowness of thought, abnormal persistence in action, imperfection of the mental processes and irritability, as well as apathy and even dementia, nineteen per cent. had true insane delusions and fifteen per cent. hallucinations, the former being almost exclusively of suspicion, persecution, or of grandeur, some of which led to attempts at homicide or suicide. These were sometimes associated with visual hallucinations alone, or with visual and auditory, and in three cases there were hallucinations of smell and

taste. It does not appear that cutaneous hallucinations are common, although in a case of the writer's recently reported by Hunn, very interesting tactile hallucinations existed which were the bases of delusions. Psychoses described as melancholia and mania were often mentioned. In at least forty cases loss of memory of recent events or actual dementia was detected. Since Ord's communication was made, numerous other cases have been brought forward, many of which showed mental aberration. Hunn tabulates one hundred and fifty cases, and in only nine out of one hundred and two was the mental condition normal. In thirty-four failure of memory was shown, and in twenty hallucinations and delusions. My experience has been extensive considering the small number of American cases, and I do not remember one in which there was not more or less mental weakness, and sometimes decided insanity.

In the case of Mrs. B——, reported by Hunn, the patient was an elderly woman in whom pronounced myxœdema appeared several years after the climacteric. Her antecedents were neurotic so far as her own history and that of her family were concerned, but she had been in fair mental health until her myxœdema actually developed. One of her sisters died insane, and a son, who subsequently came under my care, is at present a subject of secondary dementia. This woman showed all the familiar signs of myxœdema: the characteristic swelling of the face and hands, dryness of the mouth and skin, suppression of tears, clumsiness of speech, with slight deafness; sluggishness of movement, and limitation of the field of vision, with absence of the thyroid. For six or eight months previous to September, 1886, when she was fifty-four years old, she manifested slight mental impairment, was more or less nervous and hysterical, and with it there was general resentment against her family. When seen by us she became apprehensive and more or less excited, when she had impulses to scream. On the 20th of September she manifested decided delusions and hallucinations, being afraid to go to sleep because she was convinced that she would wake entirely blind, and insisted that her eyes had no longer their normal appearance. The expression of her face was that of a bewildered and insane person, and she was talkative and at times confused. She declared that she could not see, that her throat was rapidly closing so that she could not swallow or talk. When commencing to speak she used a few words distinctly, and then repeated such sounds as ga ga ga ga ga, ge ge ge, ka ka ka, ve ve ve, etc. She was restless and excited and was constantly in action, and continued to refuse food. Since the first of the month she had become stupid and bewildered, her mind acting slowly, and she replied hesitatingly to questions, not appearing to comprehend what was asked her. After a few days of this she grew more excited, declaring that the dead bodies of her children were lying upstairs and that she could smell them. The delusion of being poisoned existed, so that she was afraid to eat or drink. This delusion influenced her for some time and was supplemented by another, that she was very poor and had no right to eat food which she could not pay for, and acting upon this she constantly tried to pack up a few of her things and leave the house. The symptoms of her myxœdema continued, although the extreme dryness in the mouth was followed by a free discharge of water, and at times she perspired. Her mental condition became more and more marked, and she was unmindful of the calls of nature. In January, 1887, she had been restless and at times violent and delirious, and sank into a condition of exhaustion and coma, in which she finally died.

An autopsy was made, which showed that although there existed a certain amount of œdema of the brain and a general narrowing of the convolutions, which was especially marked at the posterior part of the subparietal lobule on the right side, the cortex and cerebellar folia were normal. And it would appear there were no intracranial lesions to account for the mental condition, or at least for those manifestations that for a long time existed.

Although Rolleston is not inclined to consider the mental symptoms of Addison's disease to be at all important, and he does not refer to the cases of insanity arising therefrom, several have been reported by Munson and McPhail which certainly prove that we may have a decided insanity occurring in connection with the disease; even when no apparent hereditary or other predisposing causes are recognized. Adrenal disease, while it quite often gives rise to syncope and actual epilepsy, may without doubt end in a form of mental derangement somewhat analogous to that of thyroidal form. In Munson's two cases, which may be said to be uncomplicated ones, both were young persons and there were a primary depression, dulness, and apprehension. There were irritability and even violence at times in one patient who developed attacks of syncope in addition to the psychosis, and there were subnormal temperature and death from exhaustion. It is to be regretted that the brain was not examined. The other subject, after a long siege of developmental symptoms in which depression played a conspicuous part, became irritable, threatening, and finally violent, and later confused and incoherent. This case, like the first, presented periods of remission. In both cases seen by Munson there were always delusions of suspicion and apprehension; sometimes the fear of injury or of poisoning existed, and it was not uncommon to find hallucinations of sight and hearing.

The writer has seen one case in which, in addition to the skin discoloration, which was very general and characteristic, there were gastric disturbances, diarrhœa, attacks of vomiting, and an extensive, depraved appetite for food, with mental weakness and light delusions of persecution. The subject was a young man without any history of hereditary influences, who had always been more or less wilful and had given much trouble to his guardians and manifested evidence of moral weakness. He had been taken from school because of mischievous habits and laziness. During the latter part of 1884 the writer saw him and found that several months before he had developed conspicuous symptoms of Addison's disease, with much asthenia and attacks of syncope. His temperature was found to be subnormal, his pulse feeble and rapid (from 84 to 102), and his hands were usually cold. The bronzing was general and his skin was rough and scurfy, especially upon the dorsal aspect of the body. He was in a depressed melancholy condition, had had light delusions of persecution, and according to his teachers and physicians it was thought "that his head was not quite right." He improved slightly after January, 1885, but at times had attacks of purposeless angry irritability, ordering his nurses out of the room and becoming emotional and excited, and expressing suspicions when there was no reason. His asthenia became more developed, and he died on the 21st of April, 1885. An autopsy was made, and tuberculous degeneration of both suprarenal capsules and other evidences of Addison's disease were found.

McPhail's case was one in which hereditary predisposition existed, the subject being a man, forty-two years old, who, after a local injury to the knee, developed the general symptoms of adrenal disease, and became excited, his mania dating from attendance at revival meetings. He developed religious mania of a violent kind, preaching in an incoherent manner and talking to imaginary persons. After a remission a few

days after his admission to an asylum, he again became violent and cried aloud. His habits became filthy, and he lapsed into an acutely maniacal state. After several months he died of exhaustion, the end being preceded by attacks of syncope. His mental condition throughout was one of alternating depression and elation, the latter predominating. One of Osler's cases was a patient "who acted strangely as if silly."

Insanity in connection with acromegaly is, according to reports, extremely rare, although a condition of depression is common enough to be of interest in this respect, usually the mental condition in myxœdema. A case is reported by Jouffroy in which an actual dementia was observed. In others it would appear from the symptoms and morbid appearance that, in addition to the degeneration of the pituitary gland, the thyroid had undergone destructive disorganization, and the usual mental state was one of stupidity resembling adrenal dementia.

The results of the administration of organic extracts for the treatment of mental diseases of the kind described, and, in fact, of many psychoses with no such origin, have been, to say the least, interesting, especially when the thyroid has been administered either in the raw form or in powder. Babcock has had particularly happy results in cases having diverse characteristics, and his experience has been shared by many others. In his list of patients, which included examples of stuporous, melancholic, cerebral exhaustion, and chronic disturbed cases, there was a prompt clearing up and elevation in temperature, and in some cases an increase of hæmoglobin of at least twenty per cent. Occasionally there was more marked mental depression, which was followed by a stimulation of intelligence. Osler reports a series of cases in which the most wonderful transformation took place in cretinous and myxœdematous subjects, and in which a decided amelioration of the mental as well as the physical symptoms took place when large doses of the powdered thyroid were given. My own experience, while less extensive than that of others, has led me to believe that at least in chronic depressed states this organic extract sometimes does much good, and especially encouraging results were obtained in a case of chronic insanity with erotic delusions, seen in consultation with Dr. Dana. So fixed had been the patient's mental disease and so many plans of treatment had been tried unsuccessfully, that it was with slight hope that we prescribed the powdered thyroid, but the prompt subsidence of the symptoms, the greater or less improvement of general intelligence, and even the disappearance of physical indications of dementia fully justified the experiments. The patient during the administration of the powder improved, but after a time relapsed into her old stuporous condition, when it was discontinued. The duration of the beneficial results attending the use of thyroid extract does not appear to be so lasting in ordinary insanity as it does in the true thyroidal insanities, possibly because the cerebral malnutrition and cortical changes are too deep-seated. In the insanity of acromegaly Andrjezen has used powdered pituitary gland with benefit.

In stuporous melancholia and psychoses in which the katatonia symptom complex was present, it has been of use. Splenic glyceride has been recommended and used by Clark, of Scotland, who noted as much as fifteen per cent. increase in the pulse rate, with slight temperature elevation in depressed cases; with slight increase of weight and an improvement of the condition of the skin, together with a lightening up of the stupidity of the patient. This observer also noted that in all cases of insanity the weight of the spleen was below the normal. The interesting physiological results of Schäfer, who experimented with the adrenal extract, and demonstrated that when it was injected into the veins there was a decided if not lasting effect upon the arterioles, which were contracted as the result of its use, and if taken by the mouth a general diminution of the calibre of the arteries could be detected by Oliver's arteriometer, has led the writer to try it in mental cases. While it has been used as a substitute for cocaine as an application to the mucous membrane, as recommended by others for surgical operations, I am not aware that it has yet been administered internally, although Gilman Thompson has suggested its employment in hæmatemesis. I have used it in exophthalmic cases with decided benefit, and in two cases of hysterical mania it promptly reduced the excitement and produced sleep when divided doses of from five to twenty grains were taken. Its effect, while not lasting, are certainly preferable to those of some narcotics, and it is possible that it may be sometimes indicated as a substitute for morphine or hyoscine. When morbid mental states are the result of toxis, or the asthenia of many of them is possibly due to the absence of this agent in the system as Schäfer suggests, it may be administered. Just how important are the relations of the internal secretions to each other, and their variations likely to be followed by the development of psychic symptoms if not by actual physical change, is so far undeterminable, and can be tested only by experiment. It would appear that in the hands of Ringer, Phear, Lloyd-Jones, Dyson, Park, and others, adrenal extracts have done little good in Addison's disease, although a slight improvement in the mental dulness and weakened condition of the circulation followed. In a case reported by Dyson of a girl of thirteen years, in whom a progressive loss of memory and maniacal excitement and coma preceded death, the tincture of the adrenal gland was given without effect. It does not appear that thyroid extract was tried.

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DEVIOUS MANIFESTATIONS OF EPILEPSY.

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Perhaps there is no symptom complex which properly permits of a more concise and definite description than the consecutive pathological phenomena constituting a typical epileptic seizure, and consequently there are few subjects regarding which the student of medicine is likely to preserve a clearer and more perspicuous mental image. But while it is true that there is a very obtrusive similarity in the manifestations of the classical fit, as observed in different individuals, it is no less certain that there is an almost infinite number of deviations from this which are sometimes scarcely less diagnostic than the fit itself, but which are nevertheless quite frequently unrecognized. It is the purpose of this communication to call attention to some of these deviations, and in relation with them to enunciate a few general, pathological principles, which, if clearly comprehended, may in some cases contribute to an early diagnosis.

Without wishing to violate the sensibilities of those who have elaborated fine-spun theories anent modes of cerebral operations, I desire to express my conviction that the main pathological feature in epilepsy consists in a sudden disturbance of equilibrium between the several forces of the central[1] nervous system, this equilibrium being soon completely restored and a permanent tendency to recurrence remaining. These extremely general statements regarding the pathology correspond very well, I think, with the best descrip-

[1] I regard all neurons directly connected with end organs as peripheral; all others as central, though these latter are frequently further subdivided into projection, intermediate, etc.

tions of the classical fit, and also with the most characteristic deviations therefrom.

Few observers who have given the subject much attention will dissent from the view that by far the most potent etiological factor consists in a predisposition, inherent in the cerebral tissues, to undergo those changes which give rise to epileptic phenomena. Some ingenious arguments have been put forward, it is true, to the effect that the main causative element consists in a vice of metabolism, resulting in an excess of some noxious substance or substances accumulating in the tissues of the brain, and thus exciting this abnormal activity. But even if this is admitted, then it is not unreasonable to assume that this metabolic vice owes its origin mainly to influences derived from the nervous system, so that in either case an inherent pathogenic tendency of the central nerve elements has a similar etiological significance. The simple fact, however, that therapeutic measures projected on the basis of an autotoxic etiology have been notably barren of results, so far at least, rather discredits this theory. That individuals are frequently met with, however, who, on the one hand, have been repeatedly exposed to influences usually regarded as especially likely to act as exciting causes of epilepsy, without developing the disease, and, on the other hand, that innumerable instances are observed in which the disease develops without any appreciable exciting cause whatever, powerfully magnifies the probability of an inherent predisposition.

Case I.—Synopsis: Migraine, culminating in grand mal, with some hysterical complications; then, after a year of freedom, petit mal for a year; and, finally, permanent establishment of both major and minor attacks. Mrs. A. B——, first seen October 15, 1896; aged twenty-five; married six years; has had four children; family history good. She had been subject to occasional attacks of left migraine with left amaurosis for a year, when, in the eighth month of her first pregnancy, after such an attack had lasted several hours, her hands became numb and she went into epileptic convulsions, with tongue biting. She had eleven in three hours. Then she was well for a year, when she began to have "fainting spells," which lasted about half a minute, during which she suddenly became weak and entirely helpless; her mental state was dreamy, but she was able to tell correctly what transpired in her presence; she only once became entirely unconscious and fell from her chair. Immediately after one of these attacks she was overpowered with sleep. About a year later severe nocturnal attacks of grand mal appeared, and both forms have continued since. There were opisthotonos, hysterical moaning, and muttering with the first series of fits, and she still becomes very hysterical if molested during post-epileptic sleep.

Case II.—Synopsis: Nightmare, developing into epilepsy; retention of consciousness throughout seizures. Mrs. A. C——, first seen September 7, 1896; aged thirty-one; married three years; never pregnant; family history good. She had not menstruated till she came to this country from Ireland at the age of twenty-two; she has been regular since, but not quite so healthy. Three years ago she began to suffer, often several times a week, from nightmare; she would wake and see a spectre of her mother, who had been dead twenty-two years; would become greatly frightened, but could not move or speak. She does not know how long the attacks lasted, when they disappeared spontaneously, but she would recover instantly if any one touched her, as her husband frequently did, having been awakened by her moans. During same period she has often dreamed of rising and moving through the air (vertigo). For the past two years she has frequently had spells when for a moment she would lose all use of herself and could neither see nor speak; she gets either pale or flushed, but does not fall; sometimes she has short, general, clonic spasms, and sometimes brief, general tremor; she is almost sure to have an attack of some kind on waking if she falls asleep during the day; anger, laughter, or fatigue also favors their appearance; she has never lost consciousness during, nor been somnolent after, a seizure.

Case III.—Synopsis: Epileptic tremor; consciousness of impending seizure. Miss A. D——, first seen November 28, 1898; aged twenty-six. Her father is nervous, and her younger sister is subject to partial "faints," when her head suddenly falls to one side and she becomes powerless for a moment, but does not lose consciousness. The patient weighed one hundred and eighty pounds at ten years, but her health was good. When eighteen years of age, immediately after retiring, at the commencement of one of her menstrual periods, she was suddenly seized with nausea and intense pain in the epigastrium, whence a sensation rapidly rose to her head, and she became momentarily unconscious, after which she slept heavily for several hours. For three or four years she never had more than one of these attacks during menstruation, and only three or four a year; she did not regard them seriously.

One cold day, when she was twenty-two years of age, after becoming fatigued, she suddenly fell and was momentarily unconscious. She felt prostrated and sleepy for several hours after, but did not sleep. This was regarded as merely a faint. Soon after this, and almost nightly for about two months, she had attacks of violent tremor of the legs after retiring, lasting about five or ten minutes, after which she slept heavily; the attacks commenced and ceased abruptly; her arms and jaws were sometimes involved; she did not feel cold, and consciousness was not disturbed. For the past three years there have been frequent attacks of petit mal. When in a crowd she often has a sensation as if about to fall, which is much relieved by holding on to something; she frequently sinks down, however, for a moment, before she has time to hold on to anything, and is unable to move or speak. Sometimes consciousness is not impaired, at other times it is momentarily lost; at times she suffers from attacks of momentary disturbance of vision; objects seem distant and obscure, and there is left amaurosis, also sudden shivering, with break in consciousness; familiar places seem suddenly strange, etc. She has never had muscular spasms of any kind.

Case IV.—Synopsis: Slight, disregarded mental equivalent, followed by intense, post-epileptic cephalalgia instead of sleep. Miss A. E——, first seen May 27, 1898; aged twenty years. Her father and brother are tuberculous. For the past four years she has been subject to sudden attacks of intense cephalalgia, lasting from ten minutes to an hour; she occasionally wakes up at night with it. When an attack of the pain supervenes during waking hours, it is nearly always preceded by a momentary feeling that her appreciation of the environment is a repetition, and peculiarly familiar; the pain is most intense variously over the eyes, at the vertex or suboccipiut; she often has several attacks a week. About a month ago, just before rising, she had a severe attack of grand mal, with tongue-biting. In this case the sudden momentary mental change was undoubtedly of major importance.

Case V.—Synopsis: Strong exciting cause, long continued, producing slight manifestations, major attacks being long delayed, indicating that predisposing tendencies were not strong. Mr. A. G——, aged thirty; first seen December 27, 1897. At the age of twenty-three he came into property, and soon after fell into the habit of allowing depraved women to perform unnatural sexual practices upon him, in such manner that the orgasm was not only produced with excessive

frequency, but the excitement was unduly prolonged and intensified. In the course of a few years he began to have sudden attacks of diplopia, lasting a few seconds, sometimes accompanied by slight vertigo, sometimes momentary slight vertigo only; after a year or two, occasionally a very slight mental or emotional change was added. Then isolated momentary mental changes occurred, consisting either of sudden, strong, and vivid recollection of childhood experiences, or mental vacuity. These manifestations, though recurring several times daily or weekly, were disregarded, and while he had in the mean time married, he continued his unnatural sexual habits, till at the age of twenty-nine he had a severe nocturnal attack of grand mal, and in the following three months had seven such attacks. For the past two years he has taken bromide of potassium, gr. x., q.d., and has had only two severe attacks, and for the past year only a few attacks of slight vertigo. During the first year of treatment, after having improved very much, he relapsed into his former practices, when the epileptic manifestations promptly returned, notwithstanding the bromides. It might be stated incidentally that strong, transient homicidal feelings several times appeared during this relapse.

Probably there was a period, varying from several months to as many years, in each of these cases, in which the true character of the disease might have been quite readily overlooked, even if the patient had described his symptoms, and this has prompted me to emphasize the importance of considering this class of manifestations in relation to the pathological hypothesis above enunciated.

Cases I. and II. are interesting, as showing the relationship of migraine and nightmare to epilepsy. But while it is reasonable to suppose that disorder of the central nervous system is the most essential pathological factor in the two former conditions, as it is in epilepsy, the onset is much slower and of longer duration, and, judging from the symptoms, the cerebral changes are of a very different nature. Hence it may be argued that primarily they are not necessarily very intimately connected with epilepsy, but rather that the neuropathic condition which gives rise to their symptoms more or less strongly predisposes the nervous tissues concerned to take on that state of abnormal activity peculiar to the latter disease. If this was not the case, it would seem that their association might be very much more frequent than it is.

Some of the mental states which these cases illustrate might be set down as insignificant, because it is not a matter of very uncommon experience, for instance, to have the feeling that the environment is a repetition; to feel as if an individual, met for the first time, had been intimately known for years; to have familiar surroundings seem strange, and strange surroundings seem familiar, or even to have the scenes of childhood come rather vividly and unexpectedly before the mind. The suddenness, however, the strength, the brevity, the rapid and complete disappearance, and the recurrence of the manifestations, and the immediate subsequent phenomena, as sleep or violent headache, afford the principal diagnostic criteria. Indeed, I think there is a border-land—not very wide, to be sure—separating epilepsy both from the almost innumerable functional irregularities commonly designated as hysterical, and those oblique, dissociated, and even abrupt states of consciousness which have been an occasional experience with nearly every one. That is to say, cases are to be met with in which for months or perhaps years minor manifestations cannot be certainly classified. My personal experience has been, however, that in the majority of instances, in which the symptoms seemed a long time doubtful, positive signs of epilepsy finally appeared.

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"THE TEMPTATION OF SKILL" (WITH SPECIAL REFERENCE TO OPERATIVE GYNÆCOLOGY).

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THREE opinions upon specialists are to the purpose of my paper. One is from a bright society woman, knowing the before and after of surgery in her large acquaintance of women. Another is from an exceptionally keen lawyer, an adept at psychology, a searching dissector of men and motives. And the third is from a gynæcologist who has himself done considerable radical work.

Said the woman: "Do not female specialists often get beyond themselves in their anxiety to haul and cut and sew the internal organs of women?"

Said the lawyer: "The temptation of skill is so great that it cannot be safely disregarded in accepting the verdict of our leading surgeons. The general medical consultants defer so entirely to the specialist that no new light can be had from them. One knows not what to do." As family head he was debating whether to accept the opinion of leading specialists that an abdominal section was necessary for a relative.

Said the gynæcologist: "The operation of hysterectomy has become almost perfect. The French are so expert that child-bearing has become a grave question in France, and the government is giving pensions to those of large family. The government would do better to pension its surgeons, and thus save the child-bearing powers of the women."

Among medical men as well as among the laity the opinion is growing that specialists have been operating too much. The crowd and enthusiasm at a recent meeting of the New York Academy of Medicine, called to consider this very point, showed how warmly those qualified to judge the subject are feeling.

Do the general consultants abjectly defer to the specialists in deciding for or against an operation? Are surgeons unduly subject to the temptation of skill? And is this reaction and protest an unmixed good? No one comprehending the motive of my paper will call me an apostate to my specialty.

Woman's Debt to Gynæcology: The debt that woman owes to the surgical audacity of man is beyond computation. Disgusting troubles heretofore hopeless are now cured as daily routine. Life-threatening, life-taking afflictions—perils formerly not even known to exist—can now be diagnosed and removed by the

hospital interne. Take, for example, reports covering four years' work on the single life-menace of ectopic gestation: Hennig reports 122 cases; Campbell, 75 cases; Martin, 77 cases; Parry, 214 cases. As other operators throughout the world have fallen upon a like number of cases, formerly surely fatal and now entirely curable, the army of women now living who would be under the sod but for gynæcology can be calculated. The ability to attack this one malady would redeem the specialty if it had accomplished nothing else. The women saved from death by pedicle torsion and intraperitoneal ruptures would likewise make an imposing array. If we could assemble these women at Chickamauga camping-ground and marshal them into army corps—these lives literally given to the world by the new specialty—gynæcology would have militant numbers behind it when placed "on the defensive," as it now undoubtedly is.

Gynæcology a New Specialty: I emphasize the newness of the science of the diseases of women. Its newness will explain why some of its work has been tentative. It will repay one to hunt for the scant literature of the subject appearing before 1860. Formerly, the vaguely conceived troubles of females, not formulated in any text-book, were treated upon the medical divisions of hospitals, and were briefly discussed in the medical colleges at the close of the obstetric course, by the professor of midwifery.

Goodell, the First Professor in Gynæcology: Goodell, of Philadelphia—a contemporary—held the first chair of gynæcology ever established in a medical college. Other colleges followed the University of Pennsylvania in establishing the new professorship; text-books were written; a few hospital beds were set aside for diseases peculiar to women—and from the Marion Sims tent in Georgia the movement grew to the dignity of the Woman's Hospital in New York.

The French Academy on Ovariotomy: Germany, France, and England joined this American movement. Yet we read that in 1856 the French Academy condemned the operation of ovariotomy. Imagine the weight of the authority of the Academy, and the audacity of the pioneers who dared say that the respected leaders were wrong.

Operative Activity in the Virgin Field: Under presumptuous leadership the new science evolved. It transferred completely a large body of patients from the medical man to the surgeon. A crop of new specialists sprang up, all eager for skill and glory. The field was so virgin that each bright mind had a new device or a new instrument to carry his name down the surgical corridors of time. Operative activity became immense. The men with hospitals averaged about a hundred abdominal sections a year. Even small towns caught the enthusiasm, and young men felt the odium attaching to the inability to report a hundred "sections." Surgeons even paid the way of patients through hospitals for the privilege of operating upon them, and for a time all patients who did not die were reported as successes.

Changing Ideas: A living patient after operation was the primitive goal. A certain number of operations were required to establish how few women would die under abdominal section. And this is about all the information to be drawn from statistics. They cast no light upon whether the last condition is better than the first; whether benefit has been conferred upon the patient.

The reaction came. Women who had been led to expect so much from the new and miraculous operations found their way back to the dispensary or consulting-room. In one thousand cases applying to me for gynæcological treatment, nearly one-tenth were women who had already been operated upon. These ailing post-operative cases among the sick women form a tremendous propaganda against the operator and have much to do with placing the specialty "on the defensive."

The work of the statistic maker—a brave and priceless work—is done. He has established how many cases can live after operation. There it stands, this operative possibility, tried, justifiable, and ready for use. That question settled—the practicability of the procedure—the profession has passed to the next issue: What cases require this effective measure? Realizing how entirely tentative was much of the work reaching up to this point, the professional mind has been driven to the other extreme of conservatism. That this reaction is an unmixed good is far from true, as any one must feel who has stood beside a dying patient, lost for the want of a knife thrust.

What, briefly, may be considered the latest conservative view regarding operations upon women?

Reparative Work: There ought to be no dispute about any work of repair. Even the day-laborer will hunt the doctor to stitch a gaping wound. A woman should have the subject of repair presented to her in the same aspect.

Laceration of the Perineum: Take, for example, a laceration of the perineum. Authors differ in their estimate of its frequency. Some place it as high as one-third in primiparæ, no matter what device for its prevention is attempted. The writer, favored by the character of the cases, succeeded in getting as low a percentage as 4.5 per cent. at the Sloane Maternity Hospital, and this record was beaten in less than a year by a succeeding interne at that institution. In private practice ten per cent. is a good showing. These lacerations, too extensive to be remedied by nature or by the obstetrician's casual suture, should be carefully repaired; likewise, an over-distention of the vaginal wall. If it is neglected, there follow prolapse, erosion, varix, and all the disorders attending pelvic congestion. Pelvic congestion is a serious menace to longevity.

Lacerations at the Cervix: Lacerations at the neck of the womb have occasioned much hard feeling in the profession, and have given rise to many misunderstandings among patients. The profession would do well to enlighten women about lacerations at the neck of the womb. We should tell why it is beyond our power to prevent them, and why there is even no practical device known to the profession for so doing. We should teach that many will heal spontaneously if attention is paid to them during the months following confinement; that it is by no means settled as wisdom to sew them at the time of confinement; and that the doctor who tells a patient with such trouble that she was "neglected in confinement" is either dishonest, or means that the patient neglected herself after she dismissed her obstetrician, by failing to have local attention. If women were so enlightened, it would be less easy for a contemptible medical thief to poison the mind of a patient against the man who carried her conscientiously through a wearisome confinement. Nor would it be deemed a confession of bungling to tell of a laceration needing attention. Then all might receive attention, fewer would require operation, and none need be passed silently to avoid criticism. Such lacerations when neglected may bring catarrh, metritis, sterility, nervous troubles, tubal involvement, and pelvic congestion. And how often is this condition, which is a progressive development made possible by the patient's neglect of herself, charged years afterward to the carelessness of the obstetrician!

Result of Neglect during the Three Months Following Confinement: A soggy, subinvoluted womb will swell at times as much out of shape as a dropsical leg or abdomen; and a nick that would otherwise heal and leave no more trace than a shaving-wound of the

face, is thereby exaggerated, rendered indolent, and made to granulate into a scar. Lack of attention to the womb during the three months following confinement is where the neglect occurs. This point cannot be accented too strongly. When women know it, and act on the knowledge, trachelorrhaphy will be practically banished from gynæcology, and operations for retrodeviation will become rare events. But until this is thoroughly understood there will remain numerous cases needing repair. And no one who has seen the repair rightly made in proper cases will dispute the brilliant result. It puts to flight almost invariably the aching back and side dependent upon the trouble.

Curettage: Curettage is really reparative work, and when rightly done is the most important procedure in gynæcology, upon the basis of life saved. The name does not adequately describe the procedure. The scraping of the uterine walls is the least important point. Many blunder through misconception on this point. One could better dispense with the very instrument of curette which gives the operation its name, than to disregard the fenestrated forceps, or lose sight of the aim of each curetting. For the procedure is designed to examine for diagnosis, to empty, to irrigate, to drain, to pack for stimulation to contraction, as well as scraping, a relatively minor matter. In many of the most successful cases of "curettage" the curette is hardly needed, as for example the removal of matter in bulk.

Immediately after abortion this procedure—this examination—is imperative. Some obstetricians dissent and urge the expectant treatment. But the reply is that the expectant treatment guesses and hopes that nothing has been left behind, while the operative plan sees—with the instrument, of course—that all is well. Most of these cases treated expectantly come ultimately to the gynæcologist, and many demand formal curettage after months of exhausting blood loss.

In cases of sepsis after abortion, criminal or otherwise, there can be no possible debate about the immediate necessity of cleaning out the infected centre. The physician falling in with a case of criminal abortion is really imperilling good life chances if he waits to see whether the patient will die or get well before he decides whether his treatment shall be to notify the coroner or to continue in expectation. This is so self-evident that it is trite; yet it is what occurs all the time.

In sepsis after childbirth, the procedure should be resorted to as often as necessary, though with precision each time. Nothing could be more dangerous than simply stirring up foul matter in a soggy womb. Only the formal operation should be undertaken, and this with a thoroughness which implies something more than merely scraping uterine walls. The following case will illustrate: The writer was called to remove the uterus of a post-partum case green with sepsis. She had received curettage some days before from a prominent operator, who had since been called from town. It was therefore thought that ultimate benefit had been derived from curettage. Nevertheless she was once more formally curetted; the pulse and temperature came down; and the life seemed saved. A few days later, however, up went pulse and temperature, and the patient again became green. This time the first operator, having returned to the city, curetted the patient for the third time, and she recovered. The lesson is plain.

The Curette and the Pus Tube: While no one hopes to draw off pus tubes by curettage and drainage, it is surprising what huge perimetrial masses do disappear after the operation. Nature puts a hard fortress of induration between infection and the rest of the body, and any one who has seen the swelling of a beesting come down after the minute source of infection has been removed will comprehend the analogy in the broad ligaments. Frequently major operations—double salpingo-oöphorectomy for small fibroids—have failed to relieve uterine hemorrhage until the secondary operation of curettage has been done. The writer has often felt convinced that curettage at the start would in some cases have obviated the more dangerous procedure. Much of the benefit following plastic work and operations for retrodeviation can reasonably be credited to the accompanying curettage. In skilful hands the curette never endangers life.

Dilatation of the Cervix: This is another function-conserving, non-life-endangering operation. It gives brilliant results in anteflexion following infantile uterus; and in anteflexion and stenosis as a penalty of congestion and auto-infection, or following the infectious diseases, or from external infection—a condition of dysmenorrhœa, muscular cramp at the cervical bend, and sterility. While sterility is not always overcome by the procedure—for there is the male element involved as well as the additional question of tubo-ovarian integrity—there is almost always relief from pain. The patients express themselves as feeling "lighter."

Also, I have noticed that almost invariably when the sensual sense and power of orgasm have been lacking in women with the knotty, anteflexed type of uterus, dilatation has bestowed both. And this endowment is sometimes of importance in some families.

Operations Precluding Debate: It is, therefore, not the "surgical itch" nor the "temptation of skill," but rather sound conservatism, which leads gynæcologists to urge the operations described. We now pass to a larger class of work.

Specific Operations for Retrodeviations: I have elaborated this subject in a recent paper on "Retrodeviations." I have the temerity to venture that few of these operations will be done by the next generation of gynæcologists. There are several reasons. Gynæcology has flourished upon the neglect that patients entail upon themselves after confinement. Patients are being enlightened, and the gynæcological surgical harvest is already dwindling in consequence. Second; enlightenment in preventive gynæcology—the growing branch of the specialty—will induce those patients who acquire retrodeviation in spite of effort to select "the cheaper, better, safer plan of recurrent treatment" for retrodeviation in all cases in which this plan gives satisfactory results, and in which the patients have sufficient intelligence to weigh inevitable alternatives. Of course this is a prospect which will be combated by those whose chief skill and income lie in the direction of retrodeviation operations.

Cæsarean Section, Symphyseotomy, Craniotomy, etc.: These are domestic and religious questions. As the new science becomes more evolved—as women become more enlightened, there will be fewer of these except among the ignorant and self-neglectful, and by deliberate choice. Military and naval careers have certain physical requirements which are not guessed at. Matrimony and maternity are as important, and we should not guess and hope about pelvic conjugates. The religious and domestic question settled in the case of obstruction discovered at term, there is no doubt, even in the lay mind, about the necessity of getting the child out. These operations are ruled out of the debate.

Abdominal and Vaginal Section: Abdominal and vaginal section (including ovariotomy, salpingo-oöphorectomy, and hysterectomy) make up the class of work in which the fame of every prominent gynæcologist has been won. And this is the field of the sharpest debate. Some of these operations urged by gynæcologists—as for epilepsy and the psychoses—are characterized as criminal by others. Let us narrow the field.

Malignant Growths: A malignant growth, all agree, should be removed as promptly and as thoroughly as possible, together with all contiguous tissue likely to be invaded. There can be no debate, if the diagnosis is clear, about the necessity for operating for the rupture of a pus sac or blood-vessel, or the torsion of a pedicle, or the rapid absorption of poison from an infecting centre, or the strangulation of an intestine or excretory duct by pressure or otherwise. Delay is death, and although the operation may endanger life up to ninety-nine per cent., and destroy a function, and spoil some fancy statistics, this is the lesser evil. Wretched the man who allows either his statistics or a habit of conservatism to delay radical measures!

Ectopic gestation, likewise, requires prompt attention, and the subject precludes debate.

The Debate on Appendicitis: Appendicitis is quite related to the purpose of the paper. Surgeons admit that seventy-five per cent. of all cases will recover without operation, but claim that ninety-eight per cent. could be saved by operating promptly on every case as soon as discovered. This discloses a debate of great significance, for physicians are disinclined to turn all cases to the surgeon. Morris has estimated that there are two hundred thousand new cases of appendicitis discovered each year in the United States. If this is true, and the surgeons are right, forty-six thousand of them would be ruthlessly sacrificed under medical treatment. But physicians assert (and I wish I knew whether truly or not) that autopsies upon subjects that have died from other diseases than appendicitis show old inflammatory processes about the appendix in one-third of the cases, just as old tuberculous cicatrices are found in the lungs where tuberculosis has never been suspected. In other words, one-third of all coming to the autopsy table, and by inference a large proportion of the population, have gotten well spontaneously from an unsuspected trouble which would have subjected them to a life-endangering operation had they fallen into the hands of a surgeon of sufficient skill to make the diagnosis.

When surgeons extol the skill necessary to make diagnosis in doubtful cases, physicians retort that these are the cases in which diagnosis would better not be made. Obviously the subject has not crystallized, and is in process of evolution. But even the laity clamor for an operation when there is recognized tumor and poisoning from pus absorption.

Small Fibroid Tumors: I come now to the less urgent cases of small fibroid tumors, swollen and tender Fallopian tubes, ovaries, etc. These are the cases which walk about with slight disability, hope for a miracle from an operation, and spread distrust of the surgeon when they find it does not come.

Remembering the dangers from fibroids—pain, hemorrhage, growth and pressure symptoms, and malignant or septic degeneration—there is some justification in operating upon them in the improvident and self-neglectful as soon as discovered. And some operators adopt this plan. But the more intelligent—those again who can weigh inevitable alternatives—can often be carried under observation to the time of life when fibroids frequently disappear. Nor is it wise to sneer at hope of benefit from treatment. Many tumors do grow steadily smaller under treatment, and some have disappeared entirely. But consent to temporize should be given only upon the well-understood condition of constant observation, for even conservatism prompts early operation in all cases in which the growth steadily increases.

The Menopause and Fibroids: The menopause does not bring relief for all fibroids; many give their worst symptoms thereafter. Some operators report that nearly half their hysterectomies for fibroids were upon women over fifty years of age. The earlier, therefore, that an inevitable operation is done, the better are the size of the tumor, the extent of the adhesions, and the condition of the circulatory system. Yet many operations can be avoided by constant supervision.

Small Pus Tubes: Pus in the Fallopian tubes often gives less evidence of its presence than pus in any other portion of the body. It has often been discovered by accident, having given no symptoms. All operators have seen supposed pus tubes prove to contain an exudate capable of absorption. Many of us have had patients, who obstinately refused operation for pelvic masses, return to us after five or six years without treatment, with pelvis entirely clear.

Radical or Conservative Surgery: Assuming recurrent attacks of pelvic peritonitis and a pus tube, what then? Suppose we had an abscess of the liver, or finger, or face; would we not follow the gynæcological practice of nice, clean, exhaustive, and effective removal of everything possible in the neighborhood, because of future septic possibilities? By no means. Instead of spending an hour digging around the peritoneal cavity, making peritoneal toilets, we can make an incision, drain, get a scar, and save a function. An incision through the vagina into a pus cavity does sometimes leave a troublesome sinus—especially if such pus cavity be a Fallopian tube—and sometimes does not reach trouble further up. And both of the conditions may require a later abdominal section to clear up. But the brilliant results in most cases—some done without ether—compared with the mortality and post-operative condition in patients after radical operations, make it worth while to consider this mode of weeding out the unnecessary radical operations. The man who disregards the importance of function confesses ignorance of psychology and has not frankly admitted to himself the post-operative condition of his patients. Yet I have known patients to be absolutely implored and threatened for permission to do the radical operation, who have been made perfectly comfortable by vaginal puncture without ether.

Salpingo-oöphoritis; Enlarged and Tender Ovaries and Fallopian Tubes; Cystic Ovaries, etc.: In the evolution of gynæcology many cases of passive congestion and muscular debility have been treated by ovariotomy, and have been helped by the operation. Patients of this class have consulted gynæcologists month after month for a pelvic soreness which "treatment" only temporarily assuages, and finally in discouragement have consented to "have something done"—the something meaning an abdominal section.

In a paper on "The Feminine Element in General Medicine," the writer has treated of this neglected subject of passive congestion of the pelvic and abdominal organs. It comprises a congestion—almost an erectile condition—of ovaries, tubes, rectal veins, liver, kidneys, and spleen, and the soreness it brings is entirely analogous with the pain in the breasts near the menstrual epoch. Some women have breasts as sore as boils at these periods—yet breasts have not been made the subject of operative furor on this account. This pelvic condition goes to form the diagnosis of "salpingo-oöphoritis." Most of the benefit from the operations for this condition is derived from "the rest in bed, the special care given an invalid after operation, and the mysterious change in nutrition that follows the use of the knife or curette." We can modify this disordered condition of circulation without the use of the knife, and bring tonicity to these dilated and aching veins. And when a surgeon laughs incredulously at thus modifying veins, ask how surgeons succeed in modifying such stubborn tissue

as bone by extension apparatus, and in orthopædic work like the relief of spinal curvature.

The Debatable Operations: These light and debatable operations give the fancy statistics. They are so easy to do. They fascinate. They flatter a man with the idea that he is a skilful surgeon—more skilful than one who does heavier work and gets a larger mortality. These are also the cases that have given ground for reaction against operations that may cost some lives. In allowing one's mind to drop into a conservative attitude toward surgery, one must see to it that it is only toward those cases in the debatable list. This list is small and easily grasped. It is trifling with life and health to defer any of the other operations of gynæcology when demanded.

The tentative paths, tried and abandoned by the pioneers in our new science, are not to their discredit. But for them the straight road would not appear so plainly on the chart. All honor, then, to the brave men who have built up in our own time an almost perfect science of diseases of women!

66 West Fiftieth Street.

PYELO-NEPHRITIS AND ULCERATIVE ENDOCARDITIS AS A COMPLICATION OF GONORRHŒA—THE GONOCOCCUS FOUND IN PURE CULTURE UPON THE DISEASED HEART VALVE.[1]

By HENRY W. BERG, M.D.,

NEW YORK.

ATTENDING PHYSICIAN TO THE WILLARD PARKER HOSPITAL; ADJUNCT ATTENDING PHYSICIAN TO THE MOUNT SINAI HOSPITAL.

August 7, 1898, H. S——, aged twenty-one years, a clerk by occupation, was admitted to Mt. Sinai Hospital. He gave the following history: Family history negative; no tuberculosis in any member of the family. He was always a delicate child, but otherwise healthy. Hygienic surroundings were good. Twelve days previous to admission into the hospital he had noticed a urethral discharge, with pain and burning on urination. Nine days later, about August 4th, he had a sudden chill, followed by fever and swelling of the metatarso-phalangeal joint of the left thumb. There were pain and disability of this joint. He also suffered from slight headache and palpitation of the heart. There was great restlessness. At about the same time the urethral discharge ceased almost entirely. He had had no treatment for the urethral discharge except the oil of sandalwood. The bowels were constipated; the appetite was good. On admission the patient was found to have a temperature of 102.8° F.; pulse, 96, regular; the arteries were not sclerotic or tortuous; there were no dicrotism and no increase of arterial tension. Respirations, 28. He had tenderness and swelling of the left thumb. There was no delirium. The pupils were normal. He had gurgling in the right iliac fossa. The abdomen was tympanitic; the spleen was enlarged to percussion, and could be felt; it was rather soft. The lungs were negative; the heart was negative, there being no murmur and no increase in size. There was still a slight urethral discharge. The patient was put upon a milk diet.

August 8th. 8 A.M., temperature, 102.8° F.; pulse, 104; respiration, 26; 8 P.M., temperature, 105° F.

August 9th. 2:30 A.M., temperature 102.6° F.; 5 A.M., 104.8° F.

The blood was examined, but no hæmatozoa malariæ were found. The urine was acid; specific gravity, 1.020; no albumin; no sugar. A slight sediment containing a few pus cells and shreds was present.

August 10th. The patient vomited during the night. Temperature, 5 A.M., 105° F.; 11 A.M., 102° F.; 2 P.M., 105° F.; he had a chill at 3 P.M., during which the blood was examined and found negative. The spleen could be distinctly felt. The blood was examined for a Widal reaction, with negative result. Urine, acid; specific gravity, 1.014; it contained pus cells, granular casts, and epithelial cells; no albumin; no sugar.

August 11th. Temperature, 2 A.M., 105° F.; 3.45 A.M., 106° F.; 8 A.M., 100° F.; 2 P.M., 105° F.; at midnight, 101.6° F. He complained of pain and tenderness over the left kidney. I found marked tenderness on palpation of the back over the lower border of the left kidney. This, together with the pus cells and casts in the urine, the presence of gonorrhœa, and the irregular temperature of a septic character led me to the diagnosis of septic (gonorrhœal) pyelo-nephritis.

August 12th. The temperature curve still maintained its septic character. He had a severe chill lasting thirty minutes, followed by a temperature of 105° F.

August 13th. The liver was found to be swollen and tender; the lower border extended to one inch below the free costal border in the mammary line. The Widal reaction was again negative. There was no abdominal eruption. He had a slight diarrhœa.

No interesting manifestations developed within the next few days. The temperature curve remained septic, and there were occasional severe chills. The diarrhœa continued, except as restrained by medication.

August 20th. After a severe chill he had a tonic spasm followed by clonic convulsions, lasting several minutes. The convulsions were general, but he did not bite the tongue. He still vomited occasionally, both medicine and food. He still complained of slight tenderness in left renal region.

August 21st. While receiving a cold pack, the temperature being 105° F., the patient fell into convulsions. There was loss of consciousness, the eyes were staring, pupils dilated; pulse full, bounding, and rapid. The body was rigid, lower limbs drawn up and arms extended; the head at first was in position of opisthotonos, later rolling from side to side.

August 22d. While on my rounds in the ward the patient suddenly became unconscious and had a tonic spasm; respiration ceased, and he was pulseless. Artificial respiration, together with rhythmic forward traction on the tongue and appropriate medication, succeeded in restoring the patient. Temperature at this time was 106.2° F. The patient was unconscious for hours. The pupils at first contracted, then dilated. At 12:10 another convulsion took place, followed at frequent intervals by other attacks of eclampsia. Under appropriate treatment the temperature fell to 99° F. by 6 P.M. At 7 P.M. the patient recovered consciousness.

August 23d. On making the daily examination of the heart I discovered a loud blowing murmur, best heard at the apex, with rather poor second sound. This murmur was transmitted slightly to the left. Over the base was heard a rough blowing systolic (aortic) murmur, with absent second sound. This murmur was transmitted upward and downward; it was heard best over the upper portion of the sternum. Temperature still ranged from 106° F. to normal.

August 24th. Temperature, 1 A.M., 105° F.; 5 A.M., 101° F., 5 P.M., 105° F. At 6:15 P.M. the patient suddenly threw back his head, became absolutely white, gasped a few times, then became cyanotic and stopped breathing; artificial respiration was performed, but with no success, and the patient died at 6:18 P.M.

The autopsy, performed in my presence by Dr. E. Libman, the assistant pathologist of Mt. Sinai Hospital, yielded the following results:

[1] Read before the Section on Practice, New York Academy of Medicine, April 18, 1899.

The autopsy was held twenty-one hours after death. The head was not opened; rigor marked; body emaciated.

Lungs: Congested and œdematous, with few recent adhesions on the right side.

Heart: Increase of pericardial fluid. The right auricle was dilated. Both ventricles were slightly dilated. There was slight hypertrophy of the wall of the left ventricle. The heart muscle was pale and flabby. Upon two flaps of the aortic valve there were large vegetations with ulcerations. One of the flaps revealed a perforation, a little over 1 cm. in diameter, with ragged edges. Upon one of the flaps of the mitral valve, about 1 cm. from the free border, were two small yellowish nodules.

Aorta: Moderately atheromatous.

Spleen: Very large and soft; on section it was found markedly congested. The Malpighian bodies were very prominent. There was one small infarction.

Liver: Large, fatty, and congested.

Kidneys: Lobulated, capsules not very adherent, congested, markings not distinct; in parts of yellowish color. The pelvis of the left kidney showed a few hemorrhagic spots, about the size of pin heads. The mucous membrane was smooth. The pelvis of the right kidney showed no gross changes. In both pelves there was a small amount of a whitish turbid fluid, about 2 c.c. in quantity.

The ureters and bladder showed no lesion. The fluid found in the pelvis of the kidney showed under the microscope a large number of epithelial cells. The intestines were negative; pancreas negative; appendix negative. The mesenteric glands were not enlarged.

Microscopical Examination of the Kidneys.—The left kidney showed changes of acute and chronic parenchymatous nephritis. The epithelium of the tubules showed marked degenerative changes; the cells were granular, the nuclei were frequently not to be seen; numerous cells were desquamated, and the tubules contained casts and granular matter. Between the tubules there were small hemorrhages. The glomeruli showed acute inflammatory changes. In the stroma, especially of the cortex, there were collections of small round cells in miliary form, diffuse in places; no leucocytes were present. The Malpighian bodies were converted into fibrous balls. There was increased connective tissue between the tubules in places. The pelvis of this kidney showed round-cell infiltration around the vessels. The epithelium was desquamated, in some places partially, in others totally. The right kidney showed changes much less in degree, but similar to those found in the left.

Diagnosis: Acute pyelo-nephritis, acute ulcerative endocarditis.

Bacteriological Report by Dr. E. Libman.—1. A blood culture was made August 12th. Ten cubic centimetres of blood were aspirated from the left median cephalic vein under strict aseptic precautions. Inoculations were made on agar, serum-agar, and bouillon. No growth resulted. The cultures were observed nine days.

2. A similar blood culture was made August 23d, one day before death. The results of these inoculations were also negative.

3. The attempt was made a few minutes after death to aspirate some blood from the heart, but only a few drops could be obtained.

4. In the vegetations on the aortic valve were found diplococci, which were decolorized by Gram even after very slight application of the alcohol. Morphologically they resembled gonococci.

5. The autopsy having been made late (twenty-one hours after death), no cultures were made from the heart blood. Any growth then obtainable might be due to a post-mortem invasion from other parts of the body.

6. In the fluid in the pelvis of the left kidney were found a few diplococci not staining by Gram, which were considered to be gonococci.

This case which I have thus reported has many points of interest. In brief, we have a history of a primary gonorrhœa complicated by slight articular rheumatism, and further complicated by a gonorrhœal pyelo-nephritis and an ulcerative endocarditis followed by death. As to whether the recent pleurisy in the right chest, which was not recognized during life, was the result of infection or not is doubtful, but the probability is that this also was a manifestation of the general infection.

The most important lesion was evidently the ulcerative endocarditis. A large number of cases of ulcerative endocarditis complicating gonorrhœa have been reported. In the larger number of cases the heart lesion was preceded by gonorrhœal arthritis; thus Ricord and Hunter, according to Sée,[1] believed that gonorrhœal rheumatism was sometimes complicated by rheumatic endocarditis. Desnos, however, in 1877 performed the first autopsy upon a case of endocarditis without rheumatism, complicating gonorrhœa; and other cases have since been reported in which arthritis was not present. Such a case was reported by Morel.[2] That inflammatory complications occur in gonorrhœa has always been recognized. Many of them are due to direct extension of the process from the urethra or vagina into the deeper tissues connected with these tracts. Others are the result of direct inoculation of distant structures with gonorrhœal pus, as, for instance, gonorrhœal ophthalmia. Neither of these methods of infection would account for the production of a gonorrhœal endocarditis. Effects upon the nervous system and the manifestations of general sepsis could be explained by supposing that a toxin produced by the gonococcus had been absorbed into the lymphatic and circulatory system, but the finding of the gonococcus in pure culture in the vegetations on the valves of a case of ulcerative endocarditis complicating gonorrhœa would seem to prove that the gonococcus itself has been carried to the site of the lesion, and has there produced the ulcerative manifestation.

For some time it was believed, when such an infection occurred, that it was the result of a mixed infection. As is well known, the urethra is the habitat, even in the normal state, of numerous varieties of germs, so that, when the mucous membrane of the urethra has been thrown into a pathological condition through the action of the gonococcus, the pyogenic germs would find a ready means of entering the system and producing distant lesions of a septic character. Thus Weichselbaum[3] reports a complete autopsy, with bacteriological investigation of a case, which certainly proved that ulcerative endocarditis can complicate gonorrhœa as a result of mixed infection, he having found gonococci and streptococci upon the valves. A similar case was published by Ely.[4]

His[5] and Wilms,[6] although they both published cases of ulcerative endocarditis complicating gonorrhœa, in which the cocci found on the diseased valves had morphological characteristics of the gonococcus, and behaved in the characteristic manner toward Gram staining, yet considered that these cases were the result of mixed infection.

But in the last few years, particularly since 1894, many excellent observers have reported cases in which there was found at the site of lesions complicating gonorrhœa only the gonococcus. Thus Bordone-

[1] "Le Gonocoque," 1896.
[2] Thèse d Paris, No. 209, 1878.
[3] Centralblatt für Bacteriologie, 1887, 2, and "Zur Aetiologie der acuten Endocarditis," Ziegler's Beiträge, 1888, iv., 3.
[4] MEDICAL RECORD, March 16, 1889.
[5] Berliner klinische Wochenschrift, 1892, No. 40.
[6] Münchner med. Wochenschrift. 1893, No. 40.

Uffreduzzi[1] obtained the gonococcus in pure culture by inoculations made with the fluid from a joint affected by gonorrhœal arthritis. A gonorrhœa was produced in a human subject by inoculation with the second generation of pure cultures thus derived from the arthritic joint. Councilman[2] reports a case in which he obtained pure cultures, in a case of gonorrhœal septicæmia, from the joints, the pleura, the pericardium, and the valves of the heart. Councilman also quotes a case of Gluzinsky very similar to the case which my communication recounts, and Winterberg[3] reports a similar case. One of the earliest cases of this kind was that of Leyden,[4] in which, as in my case, the gonococcus was found after death. Cultures from the blood during life, and from the left ventricle after death, remained sterile.

One of the most valuable cases was reported by Thayer and Blumer.[5] In this case, in addition to pure cultures of gonococcus found in the valves, the blood cultures taken during life showed colonies of gonococcus, which would seem to prove that the gonococci passed by means of the blood current to distant portions of the body, and there gave rise to infections.

I think that at present we may believe that septic infections, such as occurred in my case, can be the result of the unaided action of the gonococcus distributed through the body by the blood channels.

Clinical Department.

TUBERCULOUS PERITONITIS AND CANCER OF THE STOMACH OCCURRING SIMULTANEOUSLY IN THE SAME PATIENT.

By J. ESTILL MILLER, M.D.,

PITTSFIELD, ILL.

My object in reporting the following case is, first, to place on record one to which I am unable to find a parallel in the annals of medicine; and second, to prove that cancer may be considered an important factor in the prognosis of the most favorable cases of tuberculous peritonitis.

On June 14, 1898, Mr. T. B——, aged forty-two, consulted me for the relief of a digestive disorder, with which he had been afflicted for about two years, in spite of the fact that he had consulted a number of physicians, with the hope that he might find some one who could effect a cure. I made a casual examination, prescribed a simple remedy for indigestion, and requested him to call again in a few days if not relieved. At the expiration of a week he returned, stating he was no better, and inquired if I thought a trip to the mountains of Tennessee would prove injurious to him. I replied that in all probability it would be beneficial, and gave him medicine of a tonic nature to be taken while away. He returned about six weeks later, more debilitated, more emaciated, and suffering more pain in the bowels and stomach than formerly.

I then made a thorough examination, believing that something more than a mere functional disorder ailed him.

His family history was good, except one sister who is afflicted with phthisis pulmonalis.

He had never been seriously ill, and had worked hard since childhood as a farmer. Fifteen years previous to the present illness a cow ran over him, stepping on the "pit" of his stomach, which injured him so severely that he was forced to keep his bed for several days.

The present condition dates from an attack of cholera morbus, which occurred two years ago after a hearty dinner. Since then he has suffered more or less from indigestion, accompanied by the formation of gas in the stomach and intestines, associated with intermittent pain which at times extended to the back in the lumbar region.

Status præsens: The patient is about five feet nine inches tall, dark complexioned, greatly emaciated; he tells me he has lost twenty-five pounds during the last six months; his form is stooping from the waist, as it pains him across the loins to stand erect; the lines of facial expression are drawn, indicating prolonged suffering; the skin is dry, cool, and of waxy discoloration.

Temperature, 97.5° F.; pulse, 63, full and regular; the heart normal in size, and valves healthy; respirations, 18 per minute and of regular rhythm; auscultation and percussion of the chest negative.

The quantity of urine passed in twenty-four hours was about normal; specific gravity, 1.022; chemical analysis revealed nothing. The tongue was coated, flabby, and pale; appetite capricious; there was no vomiting, but frequent eructation of gas, which afforded some relief to the oppressed feeling in the gastric region. There was a persistent and continuous intestinal atony, accompanied by an obstinate form of constipation.

Upon abdominal palpation and percussion, in the recumbent posture, the liver and spleen were found normal; the stomach and intestines were slightly distended with gas. I thought I could feel several small soft tumors, which were freely movable, situated around and below the umbilical region; no indentations made with the fingers would remain, proving that the tumors were not composed of fecal matter. Slight tenderness was elicited on deep pressure; no dulness could be found in this position, but when the patient was standing and leaning forward with hands resting on a chair, to relax the abdominal wall, slight flatness and fluctuation could be distinguished in the hypogastric region.

I told Mr. B—— my diagnosis was tuberculous peritonitis, and as there was only one treatment to be considered, and that rather radical, I advised him to go with me to St. Louis for a consultation, and thus convince himself and family that my diagnosis and the treatment advised were correct. Therefore on the 13th of August we called on Dr. H. Tuholske, of that city, and after his usual careful and painstaking examination he was of the opinion that it was either tuberculosis of the peritoneum or cancer in the abdomen, although he admitted that it was an unusually obscure case and advised an exploratory laparotomy, stating that if it was the former condition the operation would likely effect a permanent cure, and if the latter it would not hasten his death.

It was my wish to wait until cool weather to perform the operation, but the patient failed so rapidly after our return and the ascites increased to such a marked degree, that respiration was rendered difficult and he begged for relief.

Therefore on the 30th day of August, after the usual antiseptic preliminary preparations, including disinfection of the operating-room with formaldehyde gas, I operated at his home. The abdomen was opened midway between the umbilicus and pubes, by making an incision two and one-half inches long. When the peritoneum was opened, about one gallon of clear, straw-colored fluid was removed, which coagulated on exposure to the air. The peritoneum was thickened and studded with tubercles, intestinal adhesions were

[1] Deutsche med. Wochenschrift, 1894, xx., p. 484.

[2] Trans. of the Association of American Physicians, 1893, viii., p. 165.

[3] Festsch. zum 25jähr. Jubil. d. Vereins Deutsch. Aerzte zu San Francisco, 1894, p. 40.

[4] Berliner klinische Wochenschrift, 1894, January 1, xxxi., p. 22.

[5] Arch. de Méd. expérimental., November 1, 1895, vii., No. 6, p. 701.

found in several places; also thickened omentum curled upon itself. The abdominal cavity was sponged dry with iodoform gauze and closed without drainage, as advised by Dr. Howard A. Kelly in his late work. The patient rallied nicely from the operation. August 31st, he was resting easy; temperature, 99° F.—the first time it has reached normal or above since June; pulse, 74, full and regular; respiration easy. Said he felt greatly relieved and rested, as he had secured the first good night's rest he had had for weeks. The pain in the abdomen and back had entirely disappeared. The following day (September 1st), after a mild laxative, the temperature and pulse became normal. On the sixth day the dressing of the wound was changed and it had healed by primary union; a few of the stitches were removed, and the remainder on the tenth day.

The patient continued to improve; he was sitting up on the twelfth day, and on the fifteenth walked out to dinner; but during the last four or five days he had complained of the pain in his stomach. I also noticed that the fluid was accumulating again.

September 17th I observed a marked change in my patient; he complained of the same "old pain" in his back, increased pain in the stomach, with an occasional attack of vomiting. The vomited material consisted of the normal contents of the stomach, except that there was no hydrochloric acid.

On the 24th of September I drew off with a trocar three quarts of fluid similar to the first. I allowed the air to enter freely into the peritoneal cavity. The ascites never recurred, and he claimed that his bowels felt perfectly natural; there were no pain, no tenderness, no tumors, and no tympanites.

From this time on he grew progressively weaker, with pain almost continuous in the stomach; vomiting became more frequent and of a coffee-ground nature; a tumor, indurated and slightly irregular, appeared in the epigastric region about September 27th. After this, the temperature became subnormal, the pulse weak and rapid, with entire absence of appetite. He continued to fail rapidly, and toward the end had several attacks of hæmatemesis, and on the 29th of October death relieved him of his suffering.

Unfortunately an autopsy could not be obtained, but I do not think there can be a doubt as to the condition which existed. I believe the operation would have cured the tuberculous disease, as there was no indication of it at his death. A frequent remark of the patient was that if his "old stomach would get right he would be well, as he felt sure his bowels were cured," and doubtless he was correct.

In offering comment upon this case, I desire to call attention to the atypical course of the tuberculous trouble. The temperature was almost constantly subnormal; at times it was as low as 96° F. No tuberculous deposits could be found in the lung; there was no alternating diarrhœa, but constant constipation; no periumbilical erythema, a symptom considered so important by Dr. Henry and Dr. Macdonald.

It is claimed by some that cancer elects weakened tissues for its invasion; if this is true, is it not possible that the injury this man received fifteen years ago produced the locus minoris resistentiæ?

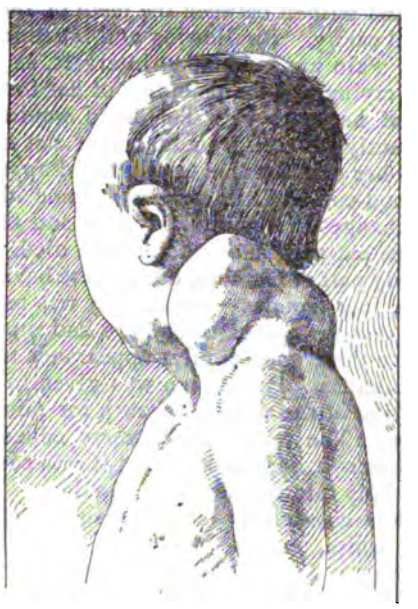
Salicylic Acid in Pneumonia.—To children I give one-tenth of a gram hourly; or, if the child is very small, once in two hours. To adults I give five-tenths of a gram every two or three hours. With the aged the same dose every three or four hours, watching the condition of the heart. Contraindications are affections of the heart and extreme weakness.—Dr. De Becker.

LYMPHOSARCOMA OF THE NECK IN AN INFANT.

By J. H. RYAN, M.D.,
Los Angeles, Cal.

S. J. A——, female, aged twenty months, well nourished, was brought to me August 5th last, with a growth at the base of the neck, left side. Her parents accompanied her. They were young, in good health, fair circumstances, and lived in the country in a hilly district. It was in the early part of June that this tumor first made its appearance; it was located in the posterior angle near the shoulder. It was of a soft nature, and a surgeon they called on explained that it was an abscess, and directed them to poultice the growth. They did so, without benefit.

When I first saw the patient the tumor was the size of a small orange, and she also presented considerable exophthalmos, and extending back from either outer



canthus were horizontal swellings over the frontal and as far as the temporal bones. These enlargements were not hard but rather elastic or œdematous. Up to this time, her parents stated, the child seemed healthy and well. For the last two days, however, she seemed sleepy and was quieter. The pulse was 144; respiration, 52; temperature, 103.5° F. An ophthalmoscopic examination of each eye was negative, save a general anæmic appearance of the retinæ. She seemed to suffer no pain, and slept and ate well. The tumor at the base of the neck seemed lobular, such as would occur from a group of glands becoming simultaneously affected.

August 8th. The eyes protruded more than they did three days previously, with ecchymoses about the eyelids and under the conjunctiva, and the child was more irritable and required more nursing. Pulse, 116; respiration, 32; temperature, 98.5° F. A sanguinolent discharge was escaping from right eye. The urine gave: specific gravity, 1.024; reaction, acid. There were no albumin and no phosphates precipitated by heat. Fowler's solution and potassium iodide were administered.

August 9th. Pulse, 142; respiration, 40; temperature, 103.7° F.

For a few weeks the patient was admitted into the St. John City Hospital, New Brunswick, Canada, but no treatment was of any avail, and, her condition growing worse, she was returned to her parents. The progress of the growth was somewhat spasmodic or periodical; there were intervals when there seemed to

be little or no increase in the size, then great increase would occur. The right side of her face and neck became enormously enlarged, and the eyes were fairly pushed out of their orbits, and were very strongly convergent. Chemosis was so extreme that considerable portions of conjunctiva extended through the palpebral fissure. The soft parts covering the lower and anterior portions of the frontal bone, the eyebrows, and all adjacent tissue were enlarged and œdematous, and would pit under pressure of the finger. The superficial veins covering the forehead and other growths were broad, flattened, with large branches, and very blue in color. The right submaxillary gland was so enlarged, together with all the surrounding tissue, as to crowd the tongue into the left buccal cavity. The buccal mucous membrane covering the growth, either from abrasions from the teeth or other causes, became more or less gangrenous, emitting for some days before death a foul odor.

The patient's tongue was lifted and rolled over on its edge and pushed between the teeth of the left side of the oral cavity. Swallowing and breathing became difficult. Pain was evident at intervals, as the spells of severe crying and the pounding of her forehead and rubbing of her ears with her hand would indicate. She evidently suffered from otalgia if not from deafness, and her eyes became totally blind apparently.

The wood-cut herewith will give some idea of the striking changes that had taken place and the appearance of the patient the day before she died, which was in the early part of October, the disease having run its course in four months. An autopsy was refused. It was seen that the cornea of one eye had ruptured, and in each eye there was a similar appearance to that of a panophthalmitis. Permission was given to remove a large portion of the original growth for microscopical inspection. The tumor was nowhere adherent to the skin; it was soft, and the knife cut it with ease. It extended deeply into the neck and shoulder. The lower portion was covered by the trapezius muscle. Considerable white, pus-like discharge exuded from numerous points. The malignant nature of the disease is beyond dispute. It was supposed to be a lymph-adenoma, or, more correctly speaking, a lympho-sarcoma.

Professor Brooks, of the Post-Graduate pathological laboratory, has kindly examined the specimen for me.

THE AFTER-TREATMENT OF CATARACT.

By J. G. WISHARD, M.D.,
TEHERAN, PERSIA.

The manner of dressing cataract cases will very naturally differ with different operators, and under different circumstances the same operator will not employ the same dressing.

The long, hot, dusty summers here in Persia render dangerous the use of any ointment or sterilized vaseline about an eye recently operated upon. With these conditions to meet, I have found the following method of dressing cataracts most satisfactory. Whether or not it is new I do not know. I had never heard of it before trying it.

Having sterilized every instrument possible by boiling, and the remainder, such as knives, etc., by pure alcohol, the operation is done under the strictest antiseptic precautions. Every particle of lens matter, blood, etc., having been carefully removed by pledgets of cotton soaked in boiled water and picked up with the iris forceps, the eyeball is then covered with finely powdered iodoform, dusted into the eye from iodoform gauze. The line of incision and all bleeding points are "touched up" with clean pledgets of cotton covered with iodoform. This usually stops all bleeding and renders the eye dry and clean. The lids are then carefully closed and a pad of iodoform gauze is applied, held in place by a firm band. The eye is then left for a week or ten days, when the band is removed and the incision is healed. The after-treatment of cataract by this method, therefore, is one of prevention rather than cure. Of course, should there be pain or any other reason for removing the band and examining the lids, it is done, but it is rarely necessary.

I have tried this method in nearly one hundred cases, operated upon here in the mission hospital where we have no special ward for eye cases, and since adopting it I have not had one failure on account of suppuration. The patient will often object to being left so long without something "being done" for him, but by a few words of encouragement he can usually be satisfied.

In hospital cases I have found that it pays to dust iodoform liberally into the hair about the eye, since it will help keep away lice and the myriads of flies and other insects which render the work of the surgeon so difficult in Persia.

VICARIOUS MENSTRUATION.

By R. H. RICE, M.D.,
KEWAUNEE, WIS.

Mrs. P——, American, of Bohemian descent, was delivered at full term about August 15th. She contracted typhoid fever on November 20th, that being the first day I was called. The course was a severe one, there being considerable consolidation of one lung, very high fever, and a moderate hemorrhage from the bowels in the third week. The woman had not menstruated since childbirth, but in the middle of the sixth week she had some bearing-down pains, as I afterward learned, and in a day or so began to bleed from the mouth. The ordinary hæmostatics had no effect in checking this, and ergot aggravated it. It seemed to pour out from between the teeth as well as from the roof of the mouth. On the second day, thinking it might be a vicarious menstruation, I applied hot foot baths and gave a hot vaginal douche, with a result of stopping it in about an hour, there being then the slightest vaginal show of blood that evening.

Progress of Medical Science.

The Diastolic Murmur of Mitral Stenosis.—As the result of a clinical examination of a considerable number of cases, Hunt (*Lancet*, March 25, 1899, p. 829) has reached the conclusion that the murmur in an early compensated case of mitral stenosis is always presystolic. Early diastolic murmurs are practically never heard while compensation remains good. On the other hand, when cardiac failure supervenes and the patient suffers from dropsy, cyanosis, and other symptoms of mitral stenosis, the murmur is frequently heard in the first half of the diastole, although even then it is not so common as the presystolic murmur. A presystolic murmur may or may not be accompanied by a systolic bruit, but an early diastolic murmur is almost always preceded by a systolic murmur. A single early diastolic murmur at the apex is rare with mitral stenosis, and strongly suggests aortic regurgitation, even if no murmur is heard at the base. A presystolic murmur frequently changes into a diastolic murmur, and *vice versa*, in a short time, and the period of diastole occupied by the murmur may even vary in the erect and recumbent postures. The difference in

the cause of these murmurs is, therefore, not likely to be found in any structural condition of the affected valves, but rather in the way in which the heart is working at different times. The opinion is expressed that the early diastolic murmur of mitral stenosis is dependent upon coexisting insufficiency, the ventricular systole driving a certain amount of blood back through the constricted orifice into the already overdistended left auricle and pulmonary veins, and at the beginning of the diastole these cavities by their elastic recoil drive some of the blood back through the narrowed mitral orifice, thus producing the murmur.

Diabetes Mellitus and Pregnancy.—Dr. F. W. Taylor (*Boston Medical and Surgical Journal*, March) draws the following conclusions: (1) Diabetes may come on during pregnancy. (2) Diabetes may occur only during pregnancy, being absent at other times. (3) Diabetes may cease with the termination of pregnancy, recurring some time afterward. (4) Diabetes may come on soon after parturition. (5) Diabetes may not return in a pregnancy occurring after its cure. (6) Pregnancy may occur during diabetes. (7) Pregnancy and parturition may be apparently unaffected in their healthy progress by the diabetes. (8) Pregnancy is very liable to be interrupted in its course, and probably always by the death of the fœtus.

Diagnosis of Movable Kidney.—Dr. G. Fütterer (*American Gynæcological and Obstetrical Journal*, February) says: "We have to find a more or less movable tumor somewhere in the abdomen, which has the size, shape, and consistence of a kidney. We should try to feel the hilus, and, if possible, the pulsation of the renal artery, which, however, can but rarely be felt. This examination is best made by relaxing the abdominal walls by flexing the thighs and raising the upper portion of the body, standing on the right side of the patient if we examine the right kidney. We put the left hand in the right lumbar region, pressing upward, while the right hand carefully palpates the abdomen and only gradually goes down deeper. If in this way we find a tumor which seems to be the kidney, we ought to put our patient into the knee-elbow position and try to percuss both kidneys in order to ascertain the absence of one of them."

Tolerance of Creosote.—Burlureaux has demonstrated the extreme variability of individuals in their tolerance of creosote. Since the greatest benefit is to be derived from the drug by giving the maximum dose which the patient can take, this question of individual susceptibility or intolerance becomes a very important one. In a work just published by Robert Simon, and referred to in the *Journal de Médecine* of March 25th, page 233, the phenomena of intolerance, which it is well for the prescriber to know, have been described. They include, among others, the taste of creosote in the pharynx, sweating, rigors, vertigo, hypothermia followed or not by hyperthermia, black urine, and a choleriform state. In some subjects there is permanent lowering of the temperature during the whole course. The taste may persist for a long time and return after eating, so that the subject thinks he has swallowed more of the drug by mistake, perhaps with the food. The following conclusions are given: (1) All tuberculous patients who cannot tolerate creosote in small dose are almost irremediably lost, even if the disease is of recent date, etc. If beginning cases with few signs are subjected to a creosote treatment, it is surprising how little resistance they often show. Here the intolerance for creosote is an important element in prognosis, since others are absent. (2) All patients who stand creosote well, although the appearances may be unfavorable and the lesions advanced, have good chances of benefit, especially if the tolerance is on the increase. (3) If, on the contrary, after having borne a large dose, a patient shows progressive (and not passing) intolerance, the prognosis is made worse, even if other signs of losing ground are not pronounced. Transient intolerance may occur from accidental causes.

Immunity and Reinfection in Chronic Gonorrhœa.—In a study of these questions by Jadassohn (*Archiv für Dermat. und Syph.*, vol. xliii., p. 319 *et seq.*), the following conclusions are reached: (1) A mucous membrane attacked with chronic gonorrhœa may react by exaggeration of the inflammation when there is multiplication of the gonococci which it harbors, as well as when there is an introduction of new gonococci. (2) A mucous membrane attacked with chronic gonorrhœa may no longer react, in case of multiplication of its own gonococci, but may respond by a recrudescence of the inflammation upon the introduction of new gonococci. (3) A mucous membrane attacked by chronic gonorrhœa may no longer react to the multiplication of its own gonococci, nor to the introduction of new gonococci; it then enjoys, in one sense, a sort of immunity against acute gonorrhœa.

A New Alkaloid from Coca.—Guenther, of Berlin, and Schaefer, of New York, have reported on a new base which has been recently isolated from the mother liquid of coca. The discovery was made in the attempt to find a reliable test for the purity of the alkaloid cocaine. MacLagen's test heretofore has been considered the most reliable, but Guenther has shown that this does not positively detect the presence of other substances, notably isatropyl-cocaine, which is supposed to be a powerful cardiac poison and the cause of some of the cardiac depression seen in the use of cocaine. Some of the properties of this new base are as follows: It melts between 110° and 111° C., whereas cocaine has a melting-point between 97° and 98° C. Salkowski, who has investigated its pharmacological action, reports that its action is very similar to cocaine. The solubility of the new base is about 1 to 2,500, while that of cocaine is 1 to 700 in water. It is optically active, being lævo-rotary like cocaine; is less soluble in all media; hence some of these—notably, petroleum ether—may be used for the isolation of this body. Chemically the body is a methyl-cocaine, and is hence a homologue of cocaine itself. Its chemical formula would thus be reckoned as $C_{18}H_{23}NO_4$. Schaefer is of the opinion that this new base, which he proposes to call cocainidine, is weaker than ordinary cocaine, especially in its anæsthetic properties.—*Berichte der deut. pharmaceutischen Gesellschaft*, 9, 1899, p. 38, February 2d; *American Druggist*, April 10, 1899.

Constituents of Digitalis Leaves.—In the *Journal of Pharmacology* for March, 1899, an article of Cloetta on the constituents of digitalis leaves, translated by O. Hensel, gives some interesting details of the amounts of glucosides found in this part of the plant. Heretofore most of the exact work on digitalis has been done on the seed, but Cloetta studied the leaves, since he believed that the full therapeutic effects were derived from the infusion of the leaves. After a complete chemical study, he concludes that the constituents of the leaves are about the same as those of the seeds. They contain digitonin, digitoxin, and digitalin, and the peculiar coloring matter found in the seed. The digitalin of the seed was not found in the leaves. There is a difference, however, in the quantities of these glucosides in the leaf, even if there is no marked difference in the constituents themselves. In the seeds, digitalin represents the active ingredient, while digitoxin is found in small amounts only, whereas in the leaf the reverse occurs. Therapeuti-

cally this fact is of moment, since digitoxin is five times as strong as digitalin. The author further brings out the fact that it is almost impossible to separate digitonin from digitoxin, and he has prepared a soluble preparation of digitoxin in digitonin, which can be used hypodermatically and can probably clear up some of the difficulties connected with the pharmacological study of this drug.

Chelidonin in Carcinoma of the Stomach.—Dr. M. N. Swanow (*Medicinskoje Obozojinie*, September, 1898) recommends chelidonin, the active principle of chelidonium majus, for malignant growths. He employed chelidonin sulphate 0.1 cgm. in water twice daily, with good results in a case of carcinoma of the stomach. The patient, fifty-two years old, was very much emaciated, vomited frequently, had intense abdominal pain, could not digest food in any form, and was kept alive with nutrient enemata. After twelve days' treatment with chelidonin, improvement was very marked, and the pain disappeared; the patient retained semi-solid food, increased in body weight, and left the hospital improved.

The Treatment of Atrophy and Anæmia in Children with Subcutaneous Injections of the Yolk of Egg.—Dr. Muggia (*La Semaine Médicale*, No. 58, 1898) has employed subcutaneous injections of egg-yolk in cases of anæmia and atrophy in children with good result. A hen's egg is first washed until thoroughly clean, then broken and the yolk dropped into a sterile vessel. One-third its weight of decinormal saline solution is then added, mixed and filtered. At first 1 c.c. of this mixture is injected, and gradually the amount is increased up to 10 c.c. The duration of treatment varies with the character of the case; local changes following injections were not observed.

Clinical Observations on Delirium Tremens and Similar Diseases, and the Treatment of the Same by Cerebro-Excitants.—As a result of his numerous observations, Dr. R. Trewine (*Wratch*, Nos. 47, 48, 51) has become convinced that in delirium tremens, dementia senilis, and in post-typhoidal paranoia and hallucinatoria acuta, cerebro-excitants are indicated rather than sedative drugs. He therefore tested the use of atropine in doses of 0.0006 to 0.0009 hypodermatically, in these cases. In all cases the result was good: a quiet sleep always occurred after the injection. The same was true also, but to a less degree, of the use of cold douches, diuretin, and alcohol.

The Present Position of the Pessary in Gynæcological Practice.—At a meeting of the Edinburgh Obstetrical Society, held February 8, 1899, Dr. J. W. Ballantyne read an interesting paper on this subject. In order to gauge the trend of professional opinion on this question, he examined the opinions expressed in recent medical literature, and also the experience of instrument makers supplying the profession (*The Lancet*, February 18, 1898). From the latter source he found that there had been during the last twenty years a steady increase in the number of pessaries sold to the profession; with a steady decrease in varieties, so that now the ring and the Hodge pessaries, in one form or other, and occasionally the vaginal stem with an abdominal belt, constituted practically the only ones in common use. Medical men showed a marked tendency, after trying various forms of the Hodge pessary, to return to the Albert Smith modification in vulcanite, and after testing different kinds of rings to revert to the use of the simple rubber instrument containing a watch-spring. Intra-uterine stems were hardly ever asked for. Dr. Ballantyne then analyzed the opinions expressed in twenty text-books on gynæcology published in the last ten years. Of these eight authors were strongly in favor of this method of treating uterine displacements, five were strongly against it, and seven were critical, and even sceptical, without actually going so far as to condemn the method and banish the instruments. Different objections had been raised to the use of pessaries, and there was the inconvenience, as they required attention by frequent douching and occasional visits to the physician, and might interfere with marital relations. Some considered even properly adjusted pessaries to be inefficient and doubted if they were ever the cause of relief from symptoms; most had no doubt at all that they never really cured in the sense of complete restoration of the normal position of the parts. Some averred that they were not only ineffective but also injurious and even dangerous; some considered all pessaries as dangerous; others condemned only the intra-uterine stem, the Zwanck, and the large ball pessary. They were also credited with being the cause of pruritus, vaginitis, ulceration, fistulæ, prevention of union of a torn cervix, subinvolution, cancer, and septic inflammation of the uterus and tubes. The supporters of their use claimed that any inconvenience or attention necessitated by the pessary was not to be compared with the trouble and expense attending an operation. Besides, they were undoubtedly effective in relieving symptoms and sometimes even produced a permanent cure in a longer or shorter time. Most admitted that the ordinary vaginal pessaries with ordinary care were perfectly safe; and some stated that with special care intra-uterine stems might also be considered innocuous. Opinions varied with regard to the suitability of pessaries to the different conditions. In incomplete prolapse of the uterus, when the perineum could be depended on, many recommended the india-rubber ring or Hodge-Smith pessary, with or without transverse bars, according as there was or was not some degree of cystocele. The results were that symptoms were relieved; it kept the replaced uterus in position, and it gave time for the normal uterine supports to regain their tone, and if a pregnancy should occur, or the climacteric be near, this benefit might become permanent and a real cure be effected. Most writers, however, believed that the benefit was only palliative and the relief temporary. The alternative treatment recommended in these cases without the use of pessaries was rest, douching, ichthyol-glycerin tampons, anterior colporrhaphy, perineorrhaphy, ventro-fixation of the uterus, or Alexander's operation. In complete prolapse when the support of the pelvic floor was lost, the only possible pessary was the stem, with an abdominal belt, outside straps, and a perineal pad. The Zwanck and all instruments with hinges and screws were now generally regarded as both unsatisfactory and dangerous. For anteversions most authorities were now agreed that to try to treat anteversion of the uterus by pessaries was to use means which were inadequate to remedy a condition which was not itself productive of trouble. Anteflexion was accompanied by well-marked symptoms, and the use of pessaries for its relief was narrowed down to the justifiability of employing an intra-uterine stem. All recognized the risks of sepsis, inflammation, and perforation of the uterus. The most suitable seemed that recently introduced by Lefour, which was entirely uterine without any vaginal portion. The galvanic stem was also used. In retroversions of the uterus, most writers agreed that their correction by a pessary was followed by an amelioration or a total disappearance of the symptoms; also that they scarcely ever effected a permanent cure, the symptoms returning on withdrawing the instrument. The ring and Hodge-Smith pessaries were generally used for these conditions, the latter being carefully fitted to the size, shape, and curvature of the vagina.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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INSECTS AND DISEASE.

A DISTINCTIVE feature of this end-of-the-century period is the publication of subjects scientific and medical in lay journals and magazines. Another is the manner in which women are coming to the front as exponents of these matters. A few months ago a lady contributed some well-written if wrong-headed articles on the methods of administering chloroform in England, severely criticising and gravely lecturing the most experienced anæsthetists in that country, and considerately pointing out to them the correct mode of procedure. Quite recently Mrs. Fawcett set forth in black and white her views on vaccination, and now Lady Priestley writes, in the current number of the *Nineteenth Century*, on the winged carriers of disease. Lady Priestley especially touches on the relation of malaria to mosquitoes, and although naturally she has nothing new to say in regard to the investigations of Manson and Ross, regarded from a scientific standpoint, there are several references in her paper of great general interest. For instance, referring to Manson's researches in the far East, she says: "Dr. Patrick Manson established the first mosquito house deliberately planned for the investigation of disease. He had no difficulty in persuading, for a little consideration, certain of his patients suffering from filarial infection to become midnight tenants of his mosquito trap. When night came round the coolie of research was quietly put to bed, with a lighted lamp beside him for the first half-hour, to lure the mosquitoes in. The curtain would then be closed till morning. At break of day the coolie would emerge carefully, and after satisfying himself that he had been sufficiently well bitten for the purpose of science, would proceed cautiously with the aid of tobacco smoke to capture the mosquitoes and carry them off alive to the laboratory."

The theory of certain diseases being conveyed by insects now rests on too firm a foundation to admit of dispute, and notwithstanding that to Manson and Ross belongs perhaps the chief honor of proving that an intimate relation exists between the dissemination of malaria and the mosquito, yet it should not be forgotten that Kilburn, by his investigations demonstrating that the tick is an essential factor in the spread of Texas cattle disease, has very considerably helped forward the inoculation theory of disease. Mr. Jonathan Hutchinson, in his *Archives of Surgery* speaking of mosquitoes in relation to leprosy, says: "The hypothesis that the bacillus of leprosy is conveyed by the agency of mosquitoes has at first sight much plausibility. Dr. Sommer, of Buenos Ayres, in the *Semaine Medica*, notes that in hot countries leprosy prevails where there is much water, and consequently many mosquitoes. He thinks that this explains the acknowledged prevalence of the disease in fish-eating populations, since fish and mosquitoes both occur in association with water. To him Dr. Ashmead rejoins by reprinting an article of his own, dated January, 1896, which contains the same suggestion. Dr. Ashmead, however, does not limit his theory to the idea that the virus is conveyed by the insect's haustellum. He thinks that eating fish such as carp, which have fed on the eggs of mosquitoes, may be a cause. He adds, in words the equivalent of which I have myself many times used during the last forty years, and which again I most fully endorse: 'In leper countries all intelligent persons should unite to prevent by persuasion and all legal means the consumption of raw fish. The part taken by mosquitoes in the conveyance of the malarial parasite is now fully acknowledged, and there are many facts as regards leprosy, its prevalence and its decline, which are fairly parallel with those as to intermittents.'"

Mr. Hutchinson then reviews the case against this theory of the etiology of leprosy, as follows:

"(1) Leprosy prevails on the seaboard, where neither mosquitoes nor mosquito-eating fish are found. In Norway these insects are chiefly troublesome at certain inland spots where there is found water, but these are not the haunts of leprosy.

"(2) Travellers visiting districts where leprosy is endemic seldom or never take the disease, unless they adopt the habits of the natives as regards food. No one dreams of danger from visiting Norway, and the infection of Europeans even in India is very rare. The reverse is the fact as to intermittents, which casual visitors to the district often catch.

"(3) We have no reason to believe that mosquitoes were ever common in England, yet during the Catholic fish-eating days leprosy was abundant. It disappeared from England long before the drainage of the gnat-breeding swamps was accomplished.

"(4) The bacillus of lepra much resembles that of tuberculosis, if it be not identical with it, but we have no reason to believe that tuberculosis is spread by insects. On the other hand, the evidence as to the importance of food as a vehicle of the bacillus has increased much of late.

"(5) Probably there are many places where leprosy prevails and where mosquitoes are unknown. Defective knowledge of topographical detail prevents my naming any special places.

"(6) If the poison was conveyed by insects, we should probably have some localities where every person, resident and visitors all alike, would suffer, just as there are places where no one escapes malaria. This, however, is not the fact with leprosy, the prevalence of which much more nearly resembles that of tuberculosis."

The fact that ophthalmia could be spread by flies has long been known, and it seems quite likely that in certain instances and under favorable conditions typhoid can be disseminated by the same agency; but on the evidence at present forthcoming the theory that the mosquito plays a prominent part in the propagation of leprosy will be received with much scepticism.

THE RÔLE OF TYPHOID FEVER IN THE ETIOLOGY OF EPILEPSY.

It is a well-recognized fact that infectious diseases exert a favorable influence upon epilepsy, inhibiting the seizures as a rule throughout the period of acute illness, and sometimes for a long while afterward. On the other hand, it has also been shown that epileptiform convulsions can be induced in animals by the injection of bacteria and toxins, and there are on record observations in human beings in which epilepsy has followed typhoid fever. In some of the latter there has been a neuropathic predisposition, and the acute febrile disease can be looked upon only as an exciting factor. In others there had been convulsions in infancy, and the typhoid fever may have merely roused into activity a latent condition. Finally, in a third group the fever must be considered as the essential causative agency. Dide (*Revue de Médecine*, February 10, 1899, p. 151) reports illustrative cases of each of these varieties, and points out that the epileptic seizures may set in either during or after the attack of typhoid fever. In the former event they are to be looked upon as a toxic manifestation; in the latter, as a paratyphoid manifestation, resulting remotely from cellular changes induced in the nervous system by the action of the poisons generated in the course of the primary disease. If these observations are correct they will probably be found to have a wider applicability, and what is true of typhoid fever may reasonably be expected to prove true also of other infectious diseases.

HEREDITARY SYPHILITIC DISEASE OF THE THYMUS GLAND.

The function of the thymus gland has long been a matter of obscurity, and only recently Beard (*Lancet*, January 21, 1899, p. 144) has suggested that the gland is the parent-source of all the leucocytes and the lymphatic tissues of the body. The chapter of the pathology of the thymus gland is a short one, to which an interesting addition has been made recently in a communication by Eugen Schlesinger (*Archiv für Kinderheilkunde*, 26 Bd., III. u. IV. Heft, p. 205) dealing with disease of the gland dependent upon hereditary syphilis. Experience shows that such disease is rare and that it appears in various forms, such as suppuration, diffuse interstitial inflammation, gummata, hemorrhagic extravasation. Diffuse interstitial inflammation, with round-cell infiltration and secondary connective-tissue induration, is probably the most common syphilitic disease of the thymus gland. Gummata are rare. Hemorrhage into the thymus as manifestation of syphilis may be small or large, of which perhaps only the latter is significant. Purulent cavities, abscesses, or, as they were formerly designated, cysts, result from necrosis of so-called concentric corpuscles that have been invaded by parenchymatous cells. The necrotic area becomes surrounded by an epithelial boundary, originally formed by the outer layer of concentric corpuscles and increased by the addition of neighboring epithelioid cells and other concentric corpuscles. These formations are, however, not truly abscesses, as their contents are not pus and they are not surrounded by a pyogenic membrane; nor are they properly cysts. They represent rather an interference with the normal involution of the thymus gland, and this process may be considered as distinctive of syphilis. The condition is a rare one, and may give rise to little or no external evidence of its presence.

News of the Week.

Post-Graduate Hospital Reception. — The ladies' auxiliary committee of the babies' ward of the Post-Graduate Hospital gave their annual reception one day last week. There were no speeches, but a musical programme was given.

The Association of American Physicians.—The fourteenth annual meeting of this association will be held at the Arlington Hotel, Washington, D. C., on May 2d, 3d, and 4th. The programme contains the titles of twenty-seven papers to be read at this meeting.

Destruction of the Penitentiary Hospital.—The administration building and hospital of the penitentiary on Blackwell's Island was burned last week. Eighteen patients were in the hospital, but all were brought out in safety. The building was the oldest part of the prison, and when it was erected in 1832 it was the whole prison. Now it is the middle building of the north and south wings. It is about eighty feet square, four stories and an attic high, built of the stone from the island quarries. It was occupied by a keepers' kitchen and eating-room and offices on the ground floor, the deputy warden's and matrons' and keepers' living-rooms on the second floor, the chapel and sewing-room on the third floor, and the men's and women's hospitals on the fourth.

College of Physicians of Philadelphia—Section on General Medicine.—At a stated meeting held April 10th, Dr. William G. Spiller exhibited a case of paralysis agitans resulting from overwork, and involving only the members of the right side. The tremor had begun in the right upper extremity, the hand being engaged in a special movement, requiring considerable force. Dr. Spiller exhibited also a man suffering from right hemiplegia and epileptiform convulsions, and who presented nodular enlargements on the left side of the cranium, which, it was believed, were responsible for the nervous conditions. Dr.

Spiller read a paper on "Concussion of the Spinal Cord, with Histological Findings in a Cat." He pointed out that while in many cases of spinal concussion the condition is purely a functional one, in a smaller number organic changes are present, consisting in degeneration of nerve fibres in the white matter. Such a condition was found in the cord of a cat that had accidentally suffered injury by being crushed by a closing door, and had been paraplegic and anæsthetic in its hind extremities and tail. Dr. J. Alison Scott reported a case of gangrenous pancreatitis with extreme fat necrosis. Nausea, vomiting, diarrhœa, pain, elevation of temperature, and albuminuria were present, but a positive clinical diagnosis was not reached. Dr. A. E. Taylor read a paper on "The Influence of Diet upon the Elimination of Nitrogen, Urea, Uric Acid, and the Xanthin Bases." Careful observations showed that with a meat-diet the amount of urea eliminated with the urine was greatly increased, while upon a vegetable and a milk diet it was diminished. Uric-acid elimination was greatly increased upon a diet of sweetbreads, and the xanthin bases were greatly increased when coffee and alcohol were taken. Dr. Alfred Stengel reported a case of angioneurotic œdema with hemorrhage from the kidneys. The patient had suffered from repeated attacks of wheals, some partly hemorrhagic, and with the aid of the cystoscope the blood was seen trickling from the ureter.

Leper Settlement in Porto Rico.—A leper settlement has been established in Porto Rico, under the direction of the military authorities, on a small island named Luis Pena.

Governor N. Senn, M.D.—The news comes from Chicago that the friends of Dr. Nicholas Senn have announced his name as a candidate for governor of Illinois next year. Dr. Senn is surgeon-general of the Illinois National Guard, and during the war was a lieutenant-colonel of volunteers and chief operating-surgeon in the field at Santiago and in Porto Rico.

Yellow Fever, of which there is always more or less every winter in Havana, is beginning to become more prevalent with the onset of warmer weather. Two or three new cases are reported daily, but as yet there have been no cases among the United States troops in the city or elsewhere on the island. A cable despatch, dated April 24th, from Vera Cruz, Mexico, to the surgeon-general of the marine hospital service, says that eight cases of yellow fever have developed there.

The Sixtieth Anniversary of the Colored Home and Hospital, in this city, is to be celebrated this afternoon (Saturday, April 29th) at half-past three o'clock. The occasion will be of special interest, in that the main feature is to be the dedication of the new buildings erected last year at One Hundred and Forty-first Street and the Southern Boulevard. These buildings include a distinct general hospital department, a modernly equipped operating-room, a maternity pavilion, and a phthisis pavilion, in addition to a convalescent department and a home. During the afternoon all these will be thrown open to the friends of the institution and to the medical profession. Mr. Hamilton Mabie, Mr. Booker Washington, and the Hon. John W. Keller, president of the commissioners of charities, are to be the speakers of the occasion.

A Congressman's Salary Given to Hospitals.—Congressman-elect Joseph C. Sibley, of Franklin, Pa., has announced to his constituents of the Twenty-seventh District that he will divide his salary for his term of two years in Congress as follows: $2,000 each to the hospitals at Bradford, Kane, Oil City, and Warren, and $2,000 toward establishing an emergency hospital at Franklin.

The Liability of Patients for the Fees of Consulting Physicians.—A legal case, of much interest to the medical profession, was recently decided in Tacoma by Judge Smalley, in the case of McKone *vs.* Cole, an action at law to collect a consultation fee of $20, by plaintiff from defendant. The defense was that the plaintiff never employed Dr. McKone, but that the latter was called in without consulting him, by his family physician, Dr. Stratton, who was attending him for an attack of appendicitis at the time, and for this reason the attending physician was responsible for the bill. The court held that in serious cases the patient is not competent to judge of his own condition, and that the attending physician need not always inform the patient of his intention to call counsel, as the excitement pending such a consultation might be prejudicial to the patient's chances of recovery. A verdict was accordingly entered for plaintiff. The decision was certainly one in which law and common sense seem happily combined.—*Occidental Medical Times.*

The Plague.—An official estimate, which is, however, generally thought to be much too low, of the total mortality caused by the bubonic plague in Bombay since its outbreak, places the deaths at two hundred and twenty-five thousand. From Formosa the governor-general reports to the Japanese government that there are from sixty to one hundred new cases and from twenty-five to forty deaths reported daily. The management of the epidemic is a matter of great difficulty, and the friends of patients are exceedingly ingenious in devising ways to evade quarantine. A report recently obtained currency in Paris, that three cases of the bubonic plague had occurred among the employees in one of the large stores of the city, to which the disease was alleged to have been brought in carpets of Eastern manufacture. The chief of police, however, has announced that the report is wholly without foundation.

Smallpox has taken on increased activity in Dallas, Tex., and the surrounding country, and much anxiety is expressed over the obstinacy of the epidemic. Eight other towns in the same State reported cases of the disease during the past week. A small epidemic exists in the negro settlement of the South Side in Chicago, and several cases are reported from Pulaski

County in Illinois. In Cleveland, Ohio, according to a recent despatch, the disease has increased to such an extent that the health department officials are scarcely able to cope with it under the present conditions. Three of the public schools have been closed. The cases are widely scattered, every part of the city being represented. The pest-house long ago proved utterly inadequate to hold patients assigned to it, and a large annex is being constructed. During the past two months from two to nine new cases have been reported every day, and on one day last week eighteen new cases were reported.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 22, 1899. April 14th.—Surgeon M. H. Crawford ordered to duty at the naval rendezvous, Chicago, Ill. Assistant Surgeon J. S. Taylor detached from the recruiting rendezvous, Chicago, Ill., and ordered to the *Independence* temporarily. April 17th.—Assistant Surgeon C. H. DeLancy detached from the *Amphitrite* and ordered to temporary duty at the marine recruiting rendezvous, Savannah, Ga.

The Health of Santiago.—The Marine Hospital reports from Santiago show a continued state of good health in the city and environs, which justifies amply the statement of General Wood that the place is as healthful as any of the seacoast towns in the United States south of Maryland. During the first week in April the number of deaths in the civil population was thirty-one, the principal causes being malarial and typhoid fevers and tuberculosis.

Sanarelli's Bacillus.—We learn from the *Archivos de la Policlínica* that the American commission charged with the study of yellow fever in Cuba has confirmed the existence of Sanarelli's microbe in the person of one of the patients at the Hospital Mercedes. If the report is correct, this will be the first time that Sanarelli's discovery has been confirmed in the island of Cuba.

The Omaha Medical Society.—At the annual meeting of this society, held April 11th, the following officers were elected for the ensuing year: *President*, Dr. John P. Lord; *First Vice-President*, Dr. Harold Gifford; *Second Vice-President*, Dr. H. P. Hamilton; *Secretary*, Dr. J. M. Aikin; *Treasurer*, Dr. W. R. Lavender; *Censors*, Drs. D. C. Bryant, B. B. Davis, and C. C. Allison.

The Cumberland County (N. J.) Medical Society.—At the annual meeting of the District Medical Society of Cumberland County, held at Bridgeton, April 11, 1899, the following officers were elected for the ensuing year: *President*, Dr. Ellsmore Stites; *Vice-President*, Dr. Frank M. Bateman; *Treasurer*, Dr. Joseph Tomlinson; *Secretary*, Dr. Hamilton Mailly; *Censors*, Drs. D. H. Oliver, William L. Newell, H. W. Elmer, J. C. Applegate, and Ephraim Bateman. Dr. G. B. Cunningham, of Vineland, was elected to active membership in the society, and Dr. C. P. Noble, of Philadelphia, an associate member. A paper on "Individualism in Medicine" was read by Dr. Joseph Tomlinson, of Bridgeton.

Incredible Tales of Filth.—The reports brought to us from the places now in our care, but recently under the misrule of Spain, concerning the frightful nastiness and utter absence of hygiene of places controlled by the Spanish authorities, must tax the credulity of those who have never witnessed the sights described. The *Boston Medical and Surgical Journal* says that a detailed report of the unsanitary conditions existing in Cavite, on its occupancy by our troops, states that only two or three modern water-closets were found in the entire place, and these had the vent pipes carefully closed and discharged into sealed vaults, the medical inspector personally having seen explosions of gas drive the trap-water over the room. One closet was built over the sea wall, with holes in the floor and blocks of wood to keep the feet of the men out of the surrounding filth. In the majority of the Spanish barracks, and in all the houses of the town, the fæces of generations had been carefully preserved in cemented vaults. Closets for the Spanish officers were modern porcelain affairs with a water flush, the water-tank requiring to be filled by hand, and with no gas vent to the trap. Fæces, urine, and water collected in the vault until the level of siphonage was reached, when about two-thirds of the contents siphoned off into a sewer, which emptied through the sea wall at the level of low tide into a recessant angle, where both wind and tide tended to retain all accumulations of filth. This sewer, only periodically flushed as it was, was connected directly by means of a grating in the floor with the inner court of the building, so that all sewer gas which was unable to enter the building by way of the closets entered by way of the courtyard.

Women Medical Practitioners in Great Britain.—The Ophthalmological Society of the United Kingdom has followed the example set by the British Medical Association in 1892, having at a recent meeting resolved to admit women to its membership. Moved by this solemn event, and in a spirit of true condescension and brotherly well-wishing, the *British Medical Journal* remarks: "This liberal policy cannot but have the best results. Women have now the same legal status in the profession of medicine as men, and it is just and wise that the right hand of fellowship should be held out to them. It is desirable in the interests of the profession at large that they should be brought under those good influences — intellectual, moral, and social—which a well-organized society exercises over its members, and it is not less to be desired in the interests of the individual ladies that they may have every opportunity of making themselves acquainted with the observations and the opinions of the most active workers in the various departments, and of experiencing that useful stimulus to good work and high purpose fostered by learned societies, which have never failed to set up a high standard of professional attainment and professional honor." All of which will cause a smile to illumine the comely fea-

tures of our own medical women, who have for so long profited by those good influences—intellectual, moral, and social—that they have probably forgotten, if they ever experienced, the time when cruel man refused to let them gather under that high standard of professional attainment and professional honor which learned societies have never failed to set up.

Pathological Society of Philadelphia.—At a stated meeting held April 13th, Dr. Joseph McFarland made a demonstration of the action of venene and antivenene, injecting each of two rabbits with 0.25 c.c. of a one-per-cent. solution of a dry extract of the mixed venom of various serpents, and one of the animals besides with 2 c.c. of the blood serum of a horse that had been immunized to snake poisoning. In the course of an hour the first animal was dead, while the second survived. The antivenene was brought from the laboratory of Calmette at Lille. Dr. J. D. Steele exhibited a specimen of sarcoma of the kidney, which was especially noteworthy for its size, being as large as a fœtal head, and for its hardness, which almost equalled that of cartilage. Histologically the growth presented the structure of a fibro-myo-sarcoma. Dr. J. M. Spellissy exhibited a specimen of traumatic rupture of the pelvis of the kidney, obtained from the body of a railroad engineer who had been caught in a turntable and suffered an injury of the loin. The symptoms were at first not alarming, and subsequently appeared to be those of injury of the bladder. At the operation the lesion was not discovered, but the symptoms were subsequently relieved, although later reappearing, and death resulted on the twenty-eighth day. Nephrectomy had been considered, but was thought contraindicated by the condition of the patient. Dr. G. E. de Schweinitz read a paper entitled "Concerning the Changes in the Retinal Arteries Indicative of General Arterial Disease from the Ophthalmoscopic Standpoint." The changes observed consisted in tortuosity, thickening, opacity, striation, varicosity, beading, irregularity in size and shape, pressure on the veins, œdema, hemorrhage, and retinal degeneration. They would appear to be diagnostic of similar changes in the cerebral vessels; of evil prognostic omen; and to indicate therapeutically the administration of drugs like sodium iodide and nitroglycerin, in conjunction with regulation of the mode of life. Dr. W. M. L. Coplin read a report of two cases of aceto-soluble albuminuria, in which the presence of the proteid substance was not detectable by the acetic acid and the boiling tests. Dr. W. E. Hughes exhibited specimens from a case in which death had resulted suddenly by accident, and in which there was extensive post-mortem digestion of the stomach, œsophagus, the diaphragm, and part of the pleural covering of the lungs.

Schemes for Supplying London with Water.—Londoners may well be perplexed by the multiplicity of schemes at present being put before them for improving the metropolitan water supply. There are bills by the water companies for the extension of their undertakings, and bills by the County Council for the purchase of the companies and the introduction of the supply from Wales; and, altogether, it is pretty clear that the attention of Parliament will be very much occupied during the coming session with the consideration of the conflicting interests. Then a company has been floated, with parliamentary powers and a large capital, for the supply of sea-water from the English Channel. We do not venture to pronounce on the merits of such an enterprise as a commercial undertaking, but it is tolerably evident that a supply of something like ten million gallons a day, which the company claims will be available by the means in contemplation, will assist in the solution of the water problem in London, for it will, of course, so far relieve the demands on the existing supply. The sea-water is proposed to be sold by the company to the vestries and district boards throughout the city for various municipal purposes, such as street watering, sewer flushing, fire extinction, etc., for which it is believed to be eminently suited. The mains will also be connected with the houses of private residents and with hotels, hospitals, swimming baths, and other public institutions, and stand-pipes will be erected in the streets, where the water may be disposed of at retail. For many domestic as well as public purposes there is no doubt that salt water is preferable to fresh, if it can be had easily and cheaply, and the outcome of the company's venture will probably be watched with interest by the whole city.—*Sanitary Record.*

Dr. Coe Denies Having Said It.—Dr. H. C. Coe, of this city, writes: "My attention has recently been called to a statement in the Sunday *World* (April 11th), in which I am represented as highly recommending the so-called 'O'Neil's Electrical Treatment.' I desire to state through your columns that the use of my name was entirely unauthorized, and that I neither know, nor desire to know, anything about the treatment in question."

Legislation Concerning Medical Practice in Illinois.—We have received through the courtesy of Dr. J. A. Egan, secretary and executive officer of the Illinois State board of health, the text of an act recently passed by the legislature to regulate the practice of medicine in the State of Illinois. This measure, which, if signed by the governor, goes into effect July 1, 1899, provides for the examination and licensing of persons who desire to practise medicine and surgery in all their branches, for those who desire to practise midwifery, and for those who desire to practise any other system or science of treating human ailments, who do not use medicines internally or externally, and who do not practise operative surgery. Applications from candidates who desire to practise medicine and surgery in all their branches shall be accompanied by proof that the applicant is a graduate of a medical college in good standing, as may be determined by the board; provided, that graduates of legally chartered medical colleges in Illinois in good standing, as may be determined by the board, may be granted certificates without an examination.

Examinations may be made in whole or in part in writing by the board, and shall be of a character sufficiently strict to test the qualifications of the candidate

as a practitioner. The examination of those who desire to practise medicine and surgery in all their branches shall embrace those general subjects and topics, a knowledge of which is commonly and generally required of candidates for the degree of doctor of medicine by reputable medical colleges in the United States. The examination of those who desire to practise midwifery shall be of such a character as to determine the qualification of the applicant to practise midwifery. The examination of those who desire to practise any other system or science of treating human ailments shall be of a character sufficiently strict to test their qualifications as practitioners. Provided, that those who are authorized to practise other systems cannot use medicine internally or externally, or perform surgical operations, and that only those who are authorized to practise medicine and surgery in all their branches shall call or advertise themselves as physicians or doctors. Provided further, that those who are authorized to practise midwifery shall not attend other than cases of labor.

The fees for examination and for a certificate shall be as follows: $10 for examination in medicine and surgery, and $5 for a certificate if issued; $5 for an examination in midwifery, and $3 for a certificate if issued; for all other practitioners, $10 for an examination and $5 for a certificate if issued.

The State board of health may refuse to issue the certificates provided for in this act to individuals who have been convicted of the practice of criminal abortion, or who have by false or fraudulent representation obtained, or sought to obtain, practice in their profession, or by false or fraudulent representation of their profession have obtained, or sought to obtain, money or any other thing of value, or who advertise under names other than their own, or for any other unprofessional or dishonorable conduct; and the board may revoke such certificates for like causes.

Any person shall be regarded as practising medicine, within the meaning of this act, who shall treat, or profess to treat, operate on, or prescribe for any physical ailment or any physical injury to or deformity of another. This section does not apply to any person who ministers to or treats the sick or suffering by mental or spiritual means. The examination of those "who desire to practise any other system or science of treating human ailments," who are not permitted to call or advertise themselves as physicians or doctors, or to use medicine or perform surgical operations, will probably be in the following branches: anatomy, physiology, chemistry, histology, pathology, bacteriology, and hygiene.

A bill for an act to regulate the practice of osteopathy in the State passed the Senate but died in the House. This measure provided that the State board of health should issue certificates of qualification to persons presenting diplomas from legally chartered osteopathic schools, said certificates to be conclusive as to the right of the lawful holders to practise osteopathy in the State. The bill provided further that the system, method, and science of treating diseases of the body, commonly known as osteopathy, is hereby declared not to be the practice of medicine or surgery. An osteopathic bill passed both branches of the legislature in 1897, but was vetoed by Governor Tanner.

Our Losses in the Philippines.—The losses of our troops in the Philippines from August 6th to April 23d inclusive, are as follows: Killed, 195; died of wounds, 51; died of disease, 278; total deaths, 524. Wounded, 1,130; missing, 15; grand total, 1,669.

The Late Dr. E. P. Hurd.—At a meeting of the board of trustees of the College of Physicians and Surgeons of Boston, held March 29, 1899, the death of Dr. E. P. Hurd, of Newburyport, being announced, the following was adopted as an expression of feeling by those present:

"That in the death of E. P. Hurd, M.D., of Newburyport, the medical profession of Massachusetts has lost one of its most scholarly and devoted members.

"That the college we represent suffers a double loss, its professor of pathology and its registrar, and we feel it has been deprived of one who has ever shown an unselfish interest in its welfare, doing all that he could to elevate its standard and broaden its influence.

"That as professor of pathology from 1893 to the time of his death, in this school, he has been an inspiration to the students and an example to his fellow-teachers.

"That as registrar of the college his intercourse with all has been courteous and kindly.

"That the faculty is deprived at once of a wise counsellor and a sincere friend, whose place can never be easily filled.

"GEORGE M. HOBBS, *President;* JULIUS L. CLARKE, *Clerk.*"

Obituary Notes.—DR. WILLIAM MITCHELL KEMP died at his home in this city on April 20th. He was born in New York in 1846, and was graduated from Bellevue Hospital Medical College in 1870. He was a member of the County Medical Society, the Academy of Medicine, and the Physicians' Mutual Aid Association. He was also a trustee of the Northwestern Dispensary.—DR. F. HENRY KRETZ died at his home in this city, on April 23d, from the result of an injury received two weeks ago while alighting from a street car. Just as he stepped off the car started suddenly, and he fell, striking his left leg below the knee against the step. The fall caused a slight abrasion, but no inconvenience resulted until about a week ago, when the leg began to swell, and gangrene set in. He was born in Munich in 1844, and was graduated in medicine from the university in his native city in 1869. He came to this country in 1875. He is survived by a widow and two sons.—DR. CHARLES MASON, of Peekskill, N. Y., died on April 19th, from the result of injuries sustained while getting out of his carriage. He was a graduate of the Bellevue Hospital Medical College in 1875.—DR. JOHN R. CONWAY died of pneumonia on April 22d, at his residence in this city. He was born in New York thirty-six years ago, and was graduated from the College of Physicians and Surgeons in 1883. He entered Bellevue Hospital in 1884, as house surgeon, and later became visiting surgeon to the Charities Hospital, in Ward's Island.

Society Reports.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, April 4, 1899.

FREDERICK PETERSON, M.D., PRESIDENT.

Alcoholic Neuritis in a Child.—DR. GEORGE W. JACOBY presented a little boy, four years and a half old, exhibiting symptoms which in the adult would at once lead to a diagnosis of alcoholic paralysis. In spite of the tender age of the patient, this case was indeed one of alcoholic paralysis. When first seen on February 20th, it was stated that the boy had been well up to four weeks previously, at which time he had had severe colic without vomiting or constipation. Then the left knee-joint had become swollen. Eight days previously he had been noticed to be unsteady in walking. It was found that the boy had received about a half to one tumblerful of beer daily ever since the age of six months. Examination had revealed extensor paralysis of the hands and legs, with a reaction of degeneration in all the muscles. The extensors of the thighs were unaffected, and there was no sensory disturbance. The speaker quoted some recent statistics regarding the habitual use of alcohol in a large German city. The municipal authorities had undertaken an investigation among the school children, and had found that, of one hundred children, sixteen drank no milk. Twenty-five per cent. of the children had never tasted brandy, but had habitually drunk beer or wine. Eight per cent. had received their daily portion of brandy "to make them strong." He thought there was an almost equally large percentage of children among the German and Irish population here who were habitually given alcoholic drinks. This case emphasized the accumulative effect of small doses of a poison long continued.

DR. WILLIAM M. LESZYNSKY said that eight or nine years ago he had reported a typical case of multiple neuritis occurring in a child about six years of age, who had been given beer and whiskey by its ignorant Irish parents, in order to make it strong. The speaker agreed thoroughly with Dr. Jacoby regarding the prevalence of this vicious habit in this country.

DR. JOSEPH COLLINS said that he had had two such cases under observation in the last two years. One of these, a child of seven years, was now passing through the second attack. This child had been in the habit of drinking beer. He had not completely recovered his muscular power when the second attack came on. He had been impressed with the phenomenon presented by all the cases that he had seen, and which was present in the case just exhibited, *i.e.*, the remarkable pallor of the cutaneous surface as compared with the redness of the mucous membranes. In this connection it was interesting to note that Hughlings Jackson had recently recorded himself again in favor of treating chorea entirely by the use of port wine.

DR. FREDERICK PETERSON remarked that it was very unusual for an alcoholic neuritis to be free from sensory symptoms.

DR. JACOBY said that there was intense pain over the nerve trunks in his case, but there was no general hyperæsthesia of the skin.

No Epileptic Attack for Four Years.—DR. J. ARTHUR BOOTH presented a woman, fifty-one years of age, as a case of cured epilepsy. The interesting point was that she had gone four years without an attack. She had been under his care since 1882. She had been in good health up to the twelfth year, when she had had her first seizure, characterized by loss of consciousness, frothing at the mouth, biting the tongue, and deep stupor. From this time up to 1880 there had been about six attacks each year. For the next two years the seizures were more frequent and severe, so that they occurred several times a week. The attacks were apparently not influenced by menstruation. She had been given bromide of sodium and chloral. At one time she had received as much as four drachms of the bromide in the twenty-four hours. During the past year she had taken only ten grains daily.

DR. PETERSON remarked that in view of the investigations of Dr. Sinkler it did not seem proper to call any case of epilepsy cured, although ordinarily a case which had gone as long as four years without an attack might be considered as cured. A collective investigation on this subject should prove very instructive. Probably a much larger percentage was cured by drugs than by surgical operation.

DR. EDWARD D. FISHER said that children often had attacks for several years, and then there was an interval of four years or more before their return. He had known cases to pursue such a course with little or no treatment, and hence it was not even presumptive evidence of a cure. He had not found anything to take the place of the bromides, and considered this the proper treatment. In his experience the continuous use of the bromides had not had any deleterious influence on the mind.

DR. GEORGE W. JACOBY said that one must place some limit to determine what should be called a cure. An epileptic patient might have a return of his trouble just as he might of other disorders. He would rather look upon an interval of many years, followed by a return of the seizures, as a fresh attack of epilepsy, brought about quite possibly by the same cause as had originally produced it.

DR. L. PIERCE CLARK said that he had known several cases of epilepsy to undergo apparently a spontaneous cure—that is, they would have no seizure for perhaps thirty years, and this, too, without any apparent relation to medicinal or dietetic treatment.

DR. BOOTH said that the result of drug treatment in epilepsy depended very largely upon the faithfulness with which the treatment was kept up, and it was because patients were usually negligent that more so-called cures were not reported.

Two Cases of Localized Scleroderma.—DR. GEORGE W. JACOBY presented two women showing localized scleroderma. Both upper extremities and the face were affected in both persons. One patient, a girl of seventeen years, had been quite sickly in infancy. At the age of two years she had been scalded from the shoulders to the waist. At the age of five years stiffness of the hands had been first noticed. The other patient was thirty-five years of age, and had been a healthy child. She had been married at the age of twenty-two years, had had six healthy children, and had herself enjoyed good health. Seven years ago she had noticed a sore on the tip of the index finger of the left hand, and this had healed very slowly. Then the other fingers became the seat of open sores, and as they healed the fingers were noticed to be stiff. On examination, both patients presented hardness, stiffness, and bronzing of the skin, together with wasting. There was an atrophic absence of the first phalanx of each finger. These cases were presented because of their comparative rarity. He had seen only three other cases. In two of the latter there had also been a history of scalding or of severe injury of some kind to the skin. He was inclined to think that these cases might not be tropho-neuroses, as was generally believed, but instead examples of parasitic infection. Both of the patients presented had been under treatment with the desiccated thyroid, one of them sufficiently long to show that the treatment was in her case an utter failure. The question always arose as

to the possibility of this affection being dependent upon some interference with the function of the apophysis.

Dr. B. Sachs said that about two months ago he had seen a man who had fallen off a ladder, and in doing so one hand had been penetrated by a sharp steel wire. Soon after this accident there had been flushings connected with a part of the distribution of the musculo-spiral nerve. Subsequently a very marked and typical scleroderma had developed. The man had been under treatment with the thyroid, and was taking at the present time fifteen grains, three times daily. Under this medication the scleroderma had been distinctly diminished.

Dr. L. Stieglitz said that he believed he had been the first one in New York City to use the thyroid treatment in cases of scleroderma, and he had found that it was very beneficial during the hypertrophic stage. It was not surprising that in the stage of atrophy the method should prove unavailing. He had seen good results from this treatment in three cases.

Dr. Jacoby thought that localized scleroderma was different from the other forms of scleroderma; it was a distinct entity.

Progressive Muscular Atrophy (?).—Dr. L. Stieglitz presented a man, sixty-two years of age, who six years ago had first noticed a weakness in the left leg. This had grown steadily, and had been associated with wasting. Two years ago he had been injured in a runaway accident, and claimed to have been unconscious for a week. The pupils reacted to light and accommodation. There was perfect control of the sphincters. Examination showed marked weakness and wasting of the left thigh and calf, and beginning wasting on the other side. The knee jerk was absent on the right side, and on the left there was only a response in the sartorius muscle. The man also had a dislocation upward of the left hip. The case suggested three diagnoses. The first of these was tabes with a Charcot joint in the left hip, but it was evident that there was no disturbance in the sensory part of the arc, and there was no other symptom of tabes. The second possible diagnosis was dislocation of the hip with secondary wasting of the muscles, but, according to the history, the atrophy of the muscles had begun long before the injury to the hip. The third diagnosis, and the one to which he inclined, was progressive muscular atrophy with incidental dislocation of the hip.

Dr. L. Muskens said that in this case he had found a lack of faradic response, more marked on the left side. As a result of his examination of the patient he took the same position as Dr. Stieglitz.

Dr. Joseph Collins said that the case had been under treatment at his clinic for a long time, and there had been no suspicion of the existence of progressive muscular atrophy. In the hospital in which he had been previously there had been no history given of muscular atrophy prior to the injury to the hip. He looked upon the case as one of dislocation occurring in a man of very feeble recuperative power. The atrophy seemed to be entirely one of inactivity.

Dr. Leszynsky said that this patient presented remarkable resistance power in his extensors, and the condition of the knee jerk seemed to him to point to tabes.

Dr. Fraenkel said that the fact that the knee jerks were lost on both sides would indicate a more serious condition than an inactivity atrophy. The resistance of the extensors could be explained by contracture of the muscle a a result of the injury to the hip.

Dr. Stieglitz opposed Dr. Collins' diagnosis as not being in accordance with the conditions found in the two lower extremities. Gowers had stated that the knee jerk was often lost before there was marked atrophy in cases of progressive muscular atrophy. The response from the sartorius seemed to indicate positively that part of the sensory arc must be free.

Demonstration of Specimens from a Case of Erythromelalgia.—Dr. B. Sachs and Dr. A. Wiener gave this demonstration. Dr. Sachs said that this disease had been carefully studied in the past six or seven years. The only autopsy on record was on a case under the care of Auerbach, and it was associated with tabes. There were changes found in the upper lumbar and sacral roots, but it was not shown that the erythromelalgia was dependent upon central disease. Mitchell and Spiller had recently observed a case in which it had seemed to them that the nerves were more involved than the blood-vessels. The specimen demonstrated had been taken from a man, thirty-six years of age, who had been first seen in 1898. At that time, when the part was pendent a few minutes there was a violet color of the foot and ankle, associated with severe pain and tenderness. A few months later a gangrenous ulcer formed on the dorsum of the foot. There was marked atrophy of the anterior tibial group. Owing to the rapid spread of the gangrene, it had been considered necessary to amputate through the thigh. According to Weir Mitchell, there was no gangrene in cases of erythromelalgia and the disease was asymmetrical, but in this case the appearance had been typical before the occurrence of gangrene, and, moreover, slight gangrene had been reported by others. Marked arterial changes were found in this case, particularly in the larger branches of the popliteal artery. This in itself seemed to be a sufficient justification for Dr. Gerster's opinion that the amputation should be done above the knee. The symptoms seemed to be explained by obliterating endarteritis. The changes in the nerves were so slight that he looked upon them as secondary. It was interesting to note in this connection that there were at the Montefiore Home several cases of cardiac disease and marked arterial sclerosis presenting the principal symptoms of erythromelalgia. There was an interesting analogy between erythromelalgia and Erb's description of intermittent candication.

Dr. A. Wiener said that specimens of nerve, skin, muscle, and connective tissue had been given to him for examination, and in not a single one were the arteries normal. Only in the distal portions of the peripheral nerves could any distinct changes be found, and they were rather degenerative than inflammatory. In all of the specimens a very prominent feature had been the enormous quantity of connective tissue. He had not been able to find a single case on record in which arterial changes had not been found, whereas cases had been reported in which there had been no changes in the nerves.

Dr. Ira Van Gieson said that in this case the vessels were affected to a somewhat greater extent than in the Mitchell-Spiller cases. The specimens showed plainly the predominance of the arterial changes.

Dr. C. L. Dana said that this case differed essentially from the typical ones described by Weir Mitchell in the occurrence of gangrene, and hence it was possible that the histological appearances were not exactly those found in the classical cases of erythromelalgia. Two cases of erythromelalgia were cited in which the urine had contained sugar, and the patients had improved greatly under appropriate dietetic treatment. This seemed to suggest that there might be an underlying diabetic or gouty state leading to neuritis or disease of the blood-vessels.

Dr. William H. Thomson spoke of cases of pseudo-erythromelalgia occurring in Graves' disease, and in allied cases characterized by persistent tachycardia. He had seen at least ten of these cases, and felt sure that when severe they might be very readily confounded with true erythromelalgia.

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DR. SACHS, in closing, insisted that the case had been a typical erythromelalgia for several months, and that the gangrene had developed at a very late stage. The fact that it occurred in a man aged thirty-five years, apparently healthy in every other way, was very interesting. The man had recovered very satisfactorily from the amputation, and the pain had entirely disappeared.

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DR. S. F. HALLOCK remarked that the symptoms had early led him to the diagnosis of brain tumor, but he had been unable to locate it without the aid of Dr. Collins.

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DR. PETERSON said he had seen two or three cases of hemiplegia coming on during epileptic attacks, and they had been permanent.

DR. CLARK said that he had seen about forty cases of exhaustion paralysis, in which the duration of the paralysis had varied from forty seconds to two or three weeks.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 20, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

THE evening was devoted to a continuation of the discussion on malaria.

Morphology of the Malarial Organism.—DR. JAMES EWING, with the aid of lantern slides, described minutely the changes observed in the life history of the three principal types of the malarial parasite, viz.: (1) The tertian; (2) the quartan, and (3) the æstivo-autumnal.

DR. W. S. THAYER, of Baltimore, said that there did not seem to be any good evidence of the existence of a capsule in the crescentic forms of the parasite. It was known that the flagellate forms of the parasite developed from round bodies, which were derivatives from

to the possibility of this affection being dependent upon some interference with the function of the apophysis.

DR. B. SACHS said that about two months ago he had seen a man who had fallen off a ladder, and in doing so one hand had been penetrated by a sharp steel wire. Soon after this accident there had been flushings connected with a part of the distribution of the musculo-spiral nerve. Subsequently a very marked and typical scleroderma had developed. The man had been under treatment with the thyroid, and was taking at the present time fifteen grains, three times daily. Under this medication the scleroderma had been distinctly diminished.

DR. L. STIEGLITZ said that he believed he had been the first one in New York City to use the thyroid treatment in cases of scleroderma, and he had found that it was very beneficial during the hypertrophic stage. It was not surprising that in the stage of atrophy the method should prove unavailing. He had seen good results from this treatment in three cases.

DR. JACOBY thought that localized scleroderma was different from the other forms of scleroderma; it was a distinct entity.

Progressive Muscular Atrophy (?).—DR. L. STIEGLITZ presented a man, sixty-two years of age, who six years ago had first noticed a weakness in the left leg. This had grown steadily, and had been associated with wasting. Two years ago he had been injured in a runaway accident, and claimed to have been unconscious for a week. The pupils reacted to light and accommodation. There was perfect control of the sphincters. Examination showed marked weakness and wasting of the left thigh and calf, and beginning wasting on the other side. The knee jerk was absent on the right side, and on the left there was only a response in the sartorius muscle. The man also had a dislocation upward of the left hip. The case suggested three diagnoses. The first of these was tabes with a Charcot joint in the left hip, but it was evident that there was no disturbance in the sensory part of the arc, and there was no other symptom of tabes. The second possible diagnosis was dislocation of the hip with secondary wasting of the muscles, but, according to the history, the atrophy of the muscles had begun long before the injury to the hip. The third diagnosis, and the one to which he inclined, was progressive muscular atrophy with incidental dislocation of the hip.

DR. L. MUSKENS said that in this case he had found a lack of faradic response, more marked on the left side. As a result of his examination of the patient he took the same position as Dr. Stieglitz.

DR. JOSEPH COLLINS said that the case had been under treatment at his clinic for a long time, and there had been no suspicion of the existence of progressive muscular atrophy. In the hospital in which he had been previously there had been no history given of muscular atrophy prior to the injury to the hip. He looked upon the case as one of dislocation occurring in a man of very feeble recuperative power. The atrophy seemed to be entirely one of inactivity.

DR. LESZYNSKY said that this patient presented remarkable resistance power in his extensors, and the condition of the knee jerk seemed to him to point to tabes.

DR. FRAENKEL said that the fact that the knee jerks were lost on both sides would indicate a more serious condition than an inactivity atrophy. The resistance of the extensors could be explained by contracture of the muscle a a result of the injury to the hip.

DR. STIEGLITZ opposed Dr. Collins' diagnosis as not being in accordance with the conditions found in the two lower extremities. Gowers had stated that the knee jerk was often lost before there was marked atrophy in cases of progressive muscular atrophy. The response from the sartorius seemed to indicate positively that part of the sensory arc must be free.

Demonstration of Specimens from a Case of Erythromelalgia.—DR. B. SACHS and DR. A. WIENER gave this demonstration. Dr. Sachs said that this disease had been carefully studied in the past six or seven years. The only autopsy on record was on a case under the care of Auerbach, and it was associated with tabes. There were changes found in the upper lumbar and sacral roots, but it was not shown that the erythromelalgia was dependent upon central disease. Mitchell and Spiller had recently observed a case in which it had seemed to them that the nerves were more involved than the blood-vessels. The specimen demonstrated had been taken from a man, thirty-six years of age, who had been first seen in 1898. At that time, when the part was pendent a few minutes there was a violet color of the foot and ankle, associated with severe pain and tenderness. A few months later a gangrenous ulcer formed on the dorsum of the foot. There was marked atrophy of the anterior tibial group. Owing to the rapid spread of the gangrene, it had been considered necessary to amputate through the thigh. According to Weir Mitchell, there was no gangrene in cases of erythromelalgia and the disease was asymmetrical, but in this case the appearance had been typical before the occurrence of gangrene, and, moreover, slight gangrene had been reported by others. Marked arterial changes were found in this case, particularly in the larger branches of the popliteal artery. This in itself seemed to be a sufficient justification for Dr. Gerster's opinion that the amputation should be done above the knee. The symptoms seemed to be explained by obliterating endarteritis. The changes in the nerves were so slight that he looked upon them as secondary. It was interesting to note in this connection that there were at the Montefiore Home several cases of cardiac disease and marked arterial sclerosis presenting the principal symptoms of erythromelalgia. There was an interesting analogy between erythromelalgia and Erb's description of intermittent candication.

DR. A. WIENER said that specimens of nerve, skin, muscle, and connective tissue had been given to him for examination, and in not a single one were the arteries normal. Only in the distal portions of the peripheral nerves could any distinct changes be found, and they were rather degenerative than inflammatory. In all of the specimens a very prominent feature had been the enormous quantity of connective tissue. He had not been able to find a single case on record in which arterial changes had not been found, whereas cases had been reported in which there had been no changes in the nerves.

DR. IRA VAN GIESON said that in this case the vessels were affected to a somewhat greater extent than in the Mitchell-Spiller cases. The specimens showed plainly the predominance of the arterial changes.

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The evening was devoted to a continuation of the discussion on malaria.

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Dr. W. S. Thayer, of Baltimore, said that there did not seem to be any good evidence of the existence of a capsule in the crescentic forms of the parasite. It was known that the flagellate forms of the parasite developed from round bodies, which were derivatives from

crescentic forms. It seemed to him that the crescents were sterile bodies, in so far as the individual in whom they were found was concerned. Within the last year, in India, Ross had succeeded in cultivating the malarial parasite of birds outside of its host, *i.e.*, in mosquitoes. Since then an Italian observer had found that if a certain variety of mosquito was fed on the blood of a person having crescent bodies in the blood, flagellate bodies would develop within the mosquito, and an æstivo-autumnal malarial fever could be transmitted in this way by the bite of the mosquito to human beings who had never had malaria. These experiments showed that while crescent bodies were sterile, they were capable of giving rise to another stage of the parasite, thus allowing of another cycle of development outside of the body and of re-entering the human system through the bites of mosquitoes. The late development of malaria in some instances might be explained on the hypothesis of a direct transmission from one person to another by means of mosquitoes. He had never seen anything to suggest that the different types of the parasite were interchangeable, except the tendency for recrudescent cases to be tertian. He would like to know whether Dr. Ewing had been able to trace in the same individual an æstivo-autumnal malaria in the summer, and a tertian in the fall.

Dr. Ewing replied that in one case the patient had had only rings and crescents in his blood during the summer, whereas in a relapse occurring the following February the tertian parasite had been present.

Malarial Nephritis.—Dr. W. S. Thayer, of the Johns Hopkins University, read a paper on this subject. He said that the attack was usually subacute, and ran a favorable course. Occasionally the attack was more severe, and passed into the chronic form. Acute nephritis might occur either during the attack or shortly afterward. The pathogenesis of malarial nephritis was apparently intimately connected with the elimination of toxic substances. Up to January of the present year 836 cases of malaria had been treated in the wards of the Johns Hopkins Hospital. In 68 of the earlier ones no urinary examination had been recorded. Of the 768 remaining cases, albumin had been present in 44.6 per cent., and renal casts in 16.4 per cent. Of 395 cases of the regularly intermittent or tertian fever, albumin had been present in the urine in 36.4 per cent., and casts in 12.6 per cent. Of 315 cases of æstivo-autumnal fever, albuminuria had been noted in 36.5 per cent. Doubtless this percentage was somewhat higher than if the cases seen in the out-patient department had been included. In this connection the greater susceptibility of the negro to renal disease should be borne in mind. The frequency of albuminuria in the æstivo-autumnal fevers was almost as great as in diphtheria.

Illustrative Cases.—Several cases were cited in illustration of the relation between malaria and nephritis. In one case in particular the renal symptoms had rapidly disappeared under the administration of quinine, and when the malaria had relapsed the nephritis had also returned. In one case which had been followed for eighteen months after leaving the hospital, the nephritis had persisted, the urine still showing blood cells, albumin, and renal casts, and being associated with polyuria and some thickening of the blood-vessels. In still another case, that of a colored child of seven years, daily paroxysms of chills and fever had occurred in the summers of 1895, 1896, and 1897. In July of last year there had been febrile paroxysms at rather long intervals. After the discovery of a single group of quartan parasites in the blood of this child, inquiry had shown that these paroxysms had been of the quartan type. When seen on September 24th, there had been pallor, general œdema, and ascites, and after having tapped the abdomen the spleen had been found to be decidedly enlarged. A paroxysm had occurred the following day, but under the administration of quinine the parasites had disappeared from the blood in four days. At first there had been a large percentage of albumin in the urine, with granular, hyaline, and epithelial casts. Under the use of quinine the condition of the patient had rapidly improved, and although the œdema had disappeared, the urine had remained abnormal. Some months later the child had been again seen in a condition of uræmic coma. The post-mortem examination had revealed considerable interstitial change in the kidneys. This last case seemed to establish quite definitely the relation between malaria and nephritis; the only other view possible would seem to be that the nephritis might have resulted from an attack of measles occurring a few months before the onset of the malaria. As this attack had been mild, and, according to the history, there had been nothing pointing to disease of the kidneys at that time, it was not at all probable that the measles had had anything to do with the nephritis. Of the twenty-five cases of nephritis that he had reported last May, sixty-eight had occurred in connection with æstivo-autumnal or combined infections. A study of these cases also showed the greater frequency of nephritis in long-continued and ill-treated cases. The renal changes appeared to be the direct result of damage to the kidneys inflicted during the elimination of toxic substances. Evidence of the existence of such substances had been strongly brought forward by many observers.

Prognosis.—The prognosis of acute nephritis occurring during or immediately after a malarial infection was usually favorable. If after the eradication of the malarial infection the renal disturbance continued, the prognosis must be based upon the same factors as in any other case of nephritis.

Treatment.—The treatment should be similar to that adopted under other circumstances. The fear which existed, both in and outside of the medical profession, concerning the supposed irritating action of quinine on the kidneys, was without foundation, either in literature or in his own experience. In the large number of cases of malaria observed at the Johns Hopkins Hospital, where quinine was systematically employed, there had never been any indication of such irritating action on the kidneys.

Dr. William H. Thomson reported a case of malarial nephritis that he had seen some years ago. Within twenty-four hours after the administration of a large dose of quinine the urine in this case had cleared up, and on suspending the quinine on two different occasions, the chill, fever, and nephritis had returned, the patient becoming comatose and the urine albuminous.

Some of the Less Common Effects of Malaria, with Remarks upon the Treatment of Chronic Infection.—Dr. William H. Thomson contributed a paper with this title. He said that in 1862 he had published a paper in which he had argued that the chief facts concerning the communicable diseases could be explained only on the assumption that they were due to micro-organisms, but this assertion had been received with much ridicule, as the prevalent belief at that time had been that these diseases were due to volatile poisons. But long after that time malaria held its own as a disease of this class—a distinct miasm, as its name implied. Our point of view in regard to malaria had, however, wholly changed, and our present view regarding it constituted a very great advance in medicine. If the inoculation theory should become thoroughly established, it would mean practically an effectual check to the spread of malaria. Dr. Thomson said that in 1896 he had had in his hospital

services two cases of fatal cerebral malaria, in which the diagnosis had been verified by autopsy. Both patients were Germans over sixty years of age, and both had contracted the disease while working in gardens on Long Island. The temperature had varied between 99° and 101° F. for eighteen days. Although vigorously treated, there had been no diminution in the large number of plasmodia present in the blood. Their condition had resembled that of one suffering from uræmia. At the autopsy the cerebral vessels had been found loaded with pigment. Such cases should suggest that when the origin of a febrile coma was obscure, the blood should be examined for the malarial organisms.

Ergot and Quinine in Periodical Neuralgias.—In those functional nervous affections, such as periodical neuralgias, dependent upon malarial infection, he had had much success from combining ergot and quinine, even when large doses of quinine, antipyrin, and similar remedies had totally failed previously to give relief. In every case of this kind ergot had been uniformly successful. In some of them the administration of moderate doses of quinine with the ergot had produced cinchonism, which had not been the case when much larger doses of quinine had been given without the ergot.

Prevention of Chronic Malaria.—If every first attack of malaria should be treated carefully for six weeks, he felt sure that there would be few cases of chronic malaria. Numerous observations on the incubation period following the first infection had shown that it varied very greatly in different persons. It was this feature of latency that persuaded patients to drift on without systematic and sufficiently prolonged treatment. The blood should be examined microscopically at intervals for at least nine months after apparent recovery. Chronic malarial infection implied a personal susceptibility, either original or acquired.

Treatment.—The treatment for malaria which he would recommend began with a mercurial laxative, given toward the close of the febrile paroxysm. The quinine should be administered from one to two hours before the time for the chill, but as one large dose was apt to disturb the stomach, it was better to give the desired quantity of quinine in three equal doses at intervals of two hours, the last one being given one or two hours before the chill. A most valuable adjuvant to quinine was ginger, given in the same dose as the quinine. Another useful addition was capsicum, in one-fourth of the dose of quinine. It was a curious fact that the first dose of this combination usually acted as a free purgative. In forty-seven cases of Cuban malarial fever that had resisted the usual treatment last fall, he had adopted the plan of giving camphorated tincture of opium as an adjuvant to the quinine, and with remarkably good results, as already published. Perhaps the most striking action of this combination was in the improvement of the general condition, and the buoying up of the spirits. A good method, at times, of administering the paregoric was by mixing it with the old compound infusion of cinchona.

SECTION ON MEDICINE.

Stated Meeting, April 18, 1899.

LOUIS FAUGÈRES BISHOP, M.D., CHAIRMAN.

An Unusual Cerebellar Tumor.—DR. L. R. MORRIS reported this case. The patient was a poorly nourished child of six years who had had numerous attacks of entero-colitis, and several falls on the head. In June, 1897, she had had an attack of appendicitis, and an ulcerated appendix had been removed by operation. In July, 1898, a peculiar look about the eyes had been noticed, and this had been followed shortly afterward by occasional severe headache and photophobia, associated with morning vomiting. In August there had been a marked internal strabismus of the right eye with dilatation of the pupil. When seen by him on September 27th, the tendon reflexes had been slightly exaggerated; she could walk with the eyes shut, and the head was not rigid except when she was walking or standing. There was inability to bend forward from the hips. Two weeks later paresis of the external muscle of the right eye had been observed. She had then become apathetic, and this apathy had steadily deepened into, first, a condition of lethargy, and then of coma. On November 20th, she had had the only marked general convulsion, and this had lasted about half an hour, and had affected both sides alike. It had been necessary to nourish by the rectum until her death on December 13th. Dr. Allan McLane Hamilton had examined her on November 4th, and had noted irritative pressure symptoms. His diagnosis had been hydrops ventriculi, and a median cerebellar tumor, probably of a gliomatous nature. Dr. J. E. Weeks had seen the patient on October 1st, and had discovered a papillitis in both eyes. From the history and examination he diagnosed a cerebellar tumor in the anterior border of the cerebellum. A post-mortem examination had revealed marked œdema of the tissues of the optic disc, but no evidence of inflammatory infiltration. Drs. J. S. Thacher and E. S. Steese had made a post-mortem study of the case. There was a brownish-red tumor, about the size of an egg, lying in the median line and touching the cerebellum. The lateral ventricles were open, and filled with reddish fluid. There were about six ounces of fluid in the cranial cavity. After hardening in formalin it was found that a mass measuring 4½ by 4 by 4 cm. was situated in the cavity of the third ventricle, reaching forward and downward into the infundibulum. The posterior pillars of the fornix had been obliterated, and the pineal gland had been destroyed. The fourth ventricle was intact, and the aqueduct, though still patulous, was very small. On section, the tumor presented a dark red surface, resembling clotted blood. Apparently two or three hemorrhages had occurred at different times. On microscopical examination the structure had been found to be that of a small round-celled sarcoma changed by repeated hemorrhages.

DR. J. E. WEEKS said that the tumor had apparently originated from the blood-vessels, and it had seemed to him that in all probability the tumor was congenital, and had been of exceedingly slow growth. It was quite likely that the repeated hemorrhages accounted for the exacerbations in the course of the disease. In this case there had been marked distention of the sheath of the optic nerve in connection with a similar state of the cavities of the brain. He had been surprised to find the tumor outside of the cerebellum, although in proximity to it.

DR. FREMONT SMITH said that he had watched the case with a good deal of interest for a number of weeks during the summer. At that time the symptoms had been very vague and illusive. The symptoms of pressure had been evident enough, but the cause of the pressure had been a matter of some uncertainty. The symptoms observed shortly before death had been such as might have resulted from a tuberculous node at the cerebellum.

DR. EDWARD D. FISHER said that the later symptoms seemed to him to have been sufficiently characteristic. The rigidity of the lower extremities and the exaggeration of the reflexes could be explained by the pressure exerted by the tumor on the motor tract. The falling forward would also suggest the involvement of the middle lobe rather than of the lateral lobes. The

speaker referred to a case of cerebellar sarcoma that had been situated external to the cerebellum, but had compressed it. In this case there had been considerable ataxia of the right side.

Demonstration of Jollis' Ferrometer. — Prof. John A. Mendel said that until recently the physician had not had any convenient method of directly estimating the quantity of iron in the blood. The ferrometer invented by Professor Jollis, of Vienna, was intended to enable the physician to estimate directly the quantity of iron in the ordinary sample of blood, *i.e.*, $\frac{1}{100}$ c.c. The blood should be evaporated in a platinum capsule over a water bath, and when perfectly dry, incinerated. The next step was to fuse the ash with a small quantity of acid potassium sulphate. Accompanying the apparatus were a number of papers containing 0.1 gm. of this salt. The heating process should then be continued until the acid sulphate had been decomposed, as shown by the evolution of white fumes, and until a dry whitish residue had been obtained. This was then dissolved in a little pure hot water, and transferred to a glass tube arbitrarily divided into fifteen parts. The tube should be filled with this solution up to the tenth division, and the solution allowed to cool. One cubic centimetre of hydrochloric acid (1 to 3) was next added, and the tube was filled completely with the sulphocyanide of ammonium. The test depended upon the red color reaction obtained when the sulphocyanide was added to a ferric salt. The quantity of iron in the specimen under examination was determined by comparison of the color obtained with that of a standard solution of iron. One cubic centimetre of this standard solution (each cubic centimetre of which contained $\frac{1}{500,000}$ gm. of iron) was placed in another graduated glass tube, and diluted up to the tenth division with cold water. The tubes were then placed side by side in a darkened chamber or tube, and sunlight was reflected through them by means of a plaster-of-Paris reflecting surface beneath. Having obtained the proper illumination in this way, a stopcock at the bottom of the second tube should be opened, and the fluid allowed to flow out slowly until the color in the two tubes was the same. A table accompanied the apparatus, so that without any troublesome calculations the quantity of iron in the blood could be ascertained. The best clinical method hitherto had been with the Fleischl hæmatometer, yet the varying results obtained showed that the iron was not only in the hæmoglobin but in the plasma of the blood. The speaker said that it would be possible by means of the ferrometer to obtain a much more accurate knowledge of the iron in the blood. The quantity of iron in the blood could be determined with this instrument in from ten to fifteen minutes. He purposed to make a systematic study of the blood with the aid of this instrument.

A Case of Septic Endocarditis Complicating Gonorrhœa.—Dr. H. W. Berg reported this case (see page 602).

Cases of Streptococcus Infection—Subdiaphragmatic Abscess.—Dr. Theodore C. Janeway reported the following complicated case of subdiaphragmatic abscess. The patient was a woman, forty-six years of age, who had suffered from a sense of oppression and weight in the region of the stomach for five years. She stated that for about the same length of time there had been a feeling of discomfort and weakness in the left hypochondrium. She had always been obstinately constipated. On December 21st she had been suddenly seized with pain in the left lower ribs extending up toward the shoulder, and had fallen to the floor in a fainting condition. When seen a few hours later the pulse had been 90, full and strong, and the rectal temperature 102° F. She had vomited a few times, and the abdomen was distended and tympanitic and very painful. Efforts had been made by enemata and cathartics to secure a good action of the bowel. Forty-eight hours later peritoneal friction sounds could be heard below the ribs. Five days from the onset there had been marked pneumonic consolidation of the lower lobe of the right lung. This had run its course with a very moderate temperature. The urine had contained a small quantity of albumin and some casts. On February 11th there had been some difficulty in swallowing, and a little vomiting. Deglutition had been more difficult on the 14th, and there had been an abdominal swelling pointing to subdiaphragmatic abscess. A day or two later this swelling had almost disappeared. On the thirty-second day it had been noted that the right chest at the base was flat on expiration and resonant on inspiration. The patient's general condition had improved somewhat for a time, but at the end of the eleventh week she had begun to suffer a good deal from dyspnœa, and to present evidence of an accumulation under the diaphragm. Aspiration in the eighth space had yielded twenty-four ounces of creamy pus, which was free from disagreeable odor. On the eightieth day the fifth and sixth ribs had been resected, and the pus cavity opened and drained. Since that time she had done well, the only untoward symptom having been a persistent cough and expectoration. Cultures had been made from the pus obtained at the time of the operation, and these had revealed numerous characteristic streptococcus colonies without other organisms.

Infective Sigmoid Thrombosis.—Dr. Gorham Bacon reported this case. The patient was a boy of fifteen years, who had come under observation last October. There had been a discharge from the left ear at intervals for ten years. The ear had been painful for the past two weeks, and the patient had complained of sore throat. On examination, he had presented a decided septic appearance, and there had been marked tenderness over the mastoid and along the external jugular vein. Examination of the eyes had revealed a double optic neuritis. Staphylococci, streptococci, and pneumococci had been found in abundance in the discharge from the ear. Under ether the usual operation for thrombosis of the sigmoid sinus had been done. The mastoid antrum and process had contained pus and necrosed tissue. The lateral sinus had been exposed by a supplementary incision and explored. It had been found necessary to ligate the internal jugular vein in two places, and remove the intervening portion. The patient's condition had been better on the following day, but the temperature had remained high, and meningitis and death had supervened. The pus from the mastoid cells and from the jugular vein had been examined during the operation, and streptococci found in much greater number in the pus from the mastoid cells. Only streptococci had been present in the pus from the jugular vein.

Hemorrhagic Pleurisy.—Dr. W. H. Katzenbach reported a case of hemorrhagic pleurisy seen last fall in a man about forty-five years of age. The man had been complaining of progressive loss of strength, and dyspnœa on moderate exertion, but there had been no cough. Examination had revealed the presence of an effusion in the left pleural cavity, and of considerable albumin in the urine. About forty-eight ounces of the fluid had been removed from the chest, and had been found to be hemorrhagic. On bacteriological examination of the fluid the presence of both streptococci and staphylococci had been demonstrated. The patient had done well for forty-eight hours, and had then had a paroxysm of coughing followed quickly by cyanosis and death.

Dr. H. W. Berg remarked that inasmuch as the streptococcus was so frequently the basis of mixed infections, the question of treatment by the antistrepto-

coccus serum was one of undoubted importance. Although some years had now elapsed since the publication of Marmorek's first paper, the profession seemed to be very undecided regarding the true value of this treatment.

Dr. J. H. Huddleston said that in this city at least there had been comparatively few cases in which the presence of streptococci in the blood had been demonstrated. This was partly due, undoubtedly, to the fact that streptococci were rarely found in the blood until just before death.

Dr. Edward D. Fisher asked regarding the post-mortem findings in the brain in the case reported by Dr. Bacon. He was reminded of a case of old otitis media in which death had followed the operation, and the post-mortem examination had shown an accumulation of pus at the base of the brain with apparently no direct connection with the caries in the ear.

Dr. Bacon replied that frequently the pus travelled through the internal auditory meatus to the base of the brain. In his own case the pus had been found at the base of the brain. There had been a direct communication found at autopsy between the inferior petrosal sinus and the internal jugular vein. It was probable that some meningitis had existed at the time of the operation.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, April 17, 1899.

Frederick Holme Wiggin, M.D., President.

Operation for Deformity Following Fracture.—Dr. T. H. Manley presented a man who one year ago had had his left leg shattered in a head-on collision. He had been left with a deformity of the ankle and an ankylosis of the knee. On February 18, 1899, the speaker had operated upon the deformed limb, liberating the muscles and nerves, and correcting the deformity. The good functional result obtained was an excellent illustration of what might be accomplished by secondary osteoplasty in cases of malformation after fracture.

Patent Meckel's Diverticulum.—Dr. R. Abrahams presented a female baby, seven weeks old, who had been born at full term, and who had weighed at that time seven pounds and a half. In ligating the funis a stump, two inches and a half long, had been left. The mother and midwife had noticed that every time the child cried the cord became inflated at its distal end. When examined by him the cord had been found completely atrophied, though still slightly attached to the umbilicus. After separation from the umbilicus there had been a protrusion measuring an inch and a half in length and half an inch in circumference. Its upper surface had presented a fine aperture in the centre, through which a thin probe could be passed into the abdominal cavity. A few days later small particles of fecal matter had escaped from this opening, along with much flatus. During the six weeks that this case had been under observation the projecting mass had become smaller, so that now it was about one-third of the original size. The diagnosis of patent Meckel's diverticulum had not been difficult to make, but it had not been so easy to determine the exact variety. It was his intention to treat the case by cutting off the protruding mass, paring the edges, and suturing the opening if possible.

Dr. David P. Austin said that the case recalled one or two that had occurred in his own practice. In one of these, a case of confinement that had been attended by a midwife, he had been called on the second day for the purpose of stopping an umbilical hemorrhage. He had again ligated the cord, as there had been a little spurting of blood since the previous day. The cord had separated on the fifth or sixth day, leaving a long and open stump. After this had occurred he had pulled out the cord, passed a silk ligature of one fine strand around it, and tied it tightly. This had completely closed the fistulous opening. In another case occurring in his own practice the same treatment had been equally successful.

Dr. Parker Syms thought it would be advisable to close the opening by some form of plastic operation if a simple suture was not sufficient. Sometimes rather extensive resections were required to close an intestinal fistula, but in these openings coming directly to the surface there was usually not so much difficulty. A useful method consisted in the use of an inverted skin flap.

Recurring Laryngeal Stenosis after Intubation.—Dr. Louis Fischer discussed this subject, and exhibited certain intubation tubes especially adapted for these cases. He said that recurring laryngeal stenosis was usually caused by forcibly pushing a tube into an œdematous or infiltrated mucous membrane. O'Dwyer had stated that it was caused by using a tube that was too large for the lumen of the larynx, usually by inexperienced operators. Metallic tubes that had been worn for a long time contained large deposits of lime salts from the diphtheritic membrane. When such a tube was removed the mucous membrane was easily lacerated, thus leading to ulceration. A most important paper had been read before the American Pediatric Society at its meeting in Washington on May 6, 1897, by the late Dr. Joseph O'Dwyer. It was entitled, "Retained Intubation Tubes," and in it he summed up the cause of persistent stenosis following intubation in laryngeal diphtheria in the single word "traumatism"; but added, that paralysis of the vocal cords might possibly furnish an occasional exception to this rule. Injury to the larynx might result from an imperfectly constructed tube, or from a perfect tube that was too large for the lumen of the larynx, although proper for the age, or from a tube that was perfect in fit and make, but had not been cleaned at proper intervals. According to O'Dwyer the seat of the lesion that kept up the stenosis was just below the vocal cords, in the subglottic division of the larynx, or that portion of the organ bounded by the cricoid cartilage. Exceptions to this rule might result from injury inflicted by the head of the tube on either side of the base of the epiglottis, just above the ventricular bands. As there existed normally a constriction in the cricoid region, and as when the mucous membrane became infiltrated or œdematous it swelled only toward the centre, because surrounded by the cricoid cartilage, respiration was obstructed, and intubation was demanded. If a tube was forced into the larynx under such circumstances, ulceration and sloughing were inevitable, and, in some instances, necrosis of the cricoid cartilage would result from interference with the circulation. The only safe way, then, was to introduce a tube of small calibre. In the early stage of such a case the dyspnœa returned slowly, so that hours or even days might pass before the former condition of laryngeal stenosis would return, and the reinsertion of the tube be demanded. The recurrence of the œdema was mechanically prevented so long as the tube was in position. Exceptional cases had been reported in which granulation tissue had grown from the antero-lateral aspects of the larynx, just above the ventricular bands. Dr. O'Dwyer had taught that the origin of this growth was a slight ulceration or erosion of the mucous membrane, produced at the points corresponding to the greatest transverse diameter of the shoulder of the tube by the pressure exerted in the act of swal-

lowing. Paralysis of the vocal cords was known to exist, but was very difficult to diagnosticate without laryngoscopic examination. Like other forms of paralysis it came very late in the disease. If after wearing an intubation tube for a short time laryngeal stenosis recurred, it was safe to assume that paralysis of the vocal cords was not the cause. Turning to the question of the prevention of recurring laryngeal stenosis in ordinary membranous diphtheria, the speaker said that every tube must be introduced in the gentlest manner possible, and it was advisable to remove it every two or three days, or at most every five days, to avoid irritation from calcareous deposits. That these deposits would form on metallic but not on rubber tubes had been pointed out by several writers, and had been corroborated by experience. If a tube must be introduced more than twice, he would recommend the adoption of a plan described by O'Dwyer, but not mentioned even in recent text-books. It consisted in coating a rubber tube with alum-gelatin by immersing it in a solution of hot gelatin containing twenty-five per cent. of powdered alum. He had personally had good results from coating the tube with a twenty-per-cent. solution of ichthyol gelatin, and also with hot paraffin containing three per cent. of iodoform or europhen. This mode of applying medicaments to the ulcer on the inside of the larynx had proved of great value in four cases recently seen by him in consultation. The value of the rubber tubes must not be forgotten; they were cheaper and cleaner than the metallic tubes, and did not exert such injurious pressure. This intralaryngeal medication would also be found advantageous when granulations were present.

Dr. Francis J. Quinlan said that it seemed to him that it was a common mistake to make insufficient preparation in case the œdema continued at a point beyond the termination of the intubation tube. Whenever intubation was contemplated, the operator should have at hand the instruments necessary for performing tracheotomy. He had been astonished in some instances at the rapidiy with which this œdema occurred. He recalled one case in particular in which the tube had been in the larynx twenty-three days, and within a few minutes after its extraction the œdema had become so excessive that the child would have died had not tracheotomy been promptly performed. He had seen two or three instances in which it had been necessary to do tracheotomy under these circumstances.

Extra-Uterine Pregnancy.—Dr. Herman J. Boldt read a paper on this subject, and presented in connection with it a placenta from a case of advanced extra-uterine pregnancy. The placenta had been attached high up on the abdominal wall. A portion of the membranes had extended from the pelvis to the placenta in the form of a small pouch. The only deformity found on the fœtus had been the one commonly present in fœtuses developed extra-peritoneally, *i.e.*, compression of the head from side to side. The placenta itself had been inclosed in a fibrous membrane, simulating a sac. A second specimen, one representing a more common form of extra-uterine pregnancy, was also exhibited. The paper dealt particularly with abdominal pregnancy, and was based on a case which had been apparently one of that nature, and the specimen from which had been carefully examined by Prof. William H. Welch. The first case reported was that of a widow who had been regular in her menstruation, but had flowed at intervals for sixteen days. Six physicians had seen her, and because of the flow had concluded that her fainting had been due to the loss of blood. The speaker said that on examination he had found the portio vaginalis enlarged and succulent, and apparently fluid filled the pelvis. There was no colostrum in the breasts. He had opened the abdomen, after having infused two litres of decinormal saline solution into a vein. She was still bleeding profusely, and the cause was an interstitial pregnancy. He had removed the placenta, and closed a large rent in the horn of the uterus by a continuous suture after having removed the adnexa on that side. The rupture had extended from the horn of the uterus some distance into the tube. The principal symptoms of extra-uterine pregnancy were: a missed menstruation for greater or less time, the intermittent loss of blood, often of a characteristic chocolate appearance, the passing of pieces of membrane, and moderate enlargement of the uterus with slight softening in its texture. The specimen exhibited had been taken from a woman, thirty years of age, who had been married seven years, and had had only one child, six years before. Menstruation had been regular up to October, 1897, after which some blood had been lost every two weeks. The quantity had been considerable in December, and had been associated with the discharge of a flesh-like clot. There had been no more hemorrhage until April, when there had been a flow for three days. At that time fœtal movements had also been felt. From May 30th she had been flowing moderately. Examination had shown the cul-de-sac of Douglas to be filled with a rather hard tumor, and a softer tumor in the left half of the abdomen on the line of the umbilicus, and apparently not connected with the other tumor. On the right side there was also nearly as large a tumor, and apparently connected with the pelvic tumor. The abdomen was excessively sensitive around the tumors. The os admitted the first phalanx of the examining finger. On performing laparotomy on August 6, 1898, the umbilical cord had been found apparently partly macerated, and the fœtus lying free in the abdominal cavity. There were no liquor amnii and no sac. The head of the fœtus was wedged tightly in the cul-de-sac, and it was this that had given the impression of a fibroid at the examination. The tumor in the left side was a globular ovary. The umbilical cord passed into the abdominal tumor. The uterus was but slightly increased in size, but was more succulent than normal. The tubes and ovaries were also somewhat enlarged. Convalescence had been uninterrupted. Dr. Welch had examined the specimen, and had suggested that there had probably been an entire separation of the abdominal end of the Fallopian tube, in which the placenta and fœtus had originally developed, from the uterine part of the tube. That the abdominal end was connected with the placental mass was evident. Apparently a small part of the placenta had protruded through the abdominal ostium into the abdominal cavity. The placental circulation had ceased at the time of the removal of the specimen from the body. The chorionic villi were completely necrosed. Calcification of the placenta was in progress. The placenta had been attached to the intestine, mesentery, and omentum.

Treatment.—The treatment demanded very serious consideration, and depended upon the viability of the child and whether or not it was alive at the time. If the fœtus was alive, the patient should be placed under constant skilled supervision, and on the occurrence of the first signs of labor the abdomen should be opened. It was best to operate as soon as possible after the seventh month. If the case was not seen until after the death of the infant, it was better to wait until such time as one could feel comparatively certain that the circulation in the placenta had ceased, in order to minimize the risks from hemorrhage. The management of the placenta in these cases was the most important element.

Electrical Treatment Discarded.—Dr. J. E. Janvrin opened the discussion, confining his remarks, for the most part, to the early stages of extra-uterine

pregnancy, or what was almost always tubal pregnancy. He had studied this subject quite thoroughly, he said, ten or more years ago, especially with reference to the propriety of operating. In 1857 an article had been published on the proper method of treating this form of pregnancy, in which had been recommended for the first time opening the abdominal cavity and removing the fœtus. This had been advised only for cases of actual hemorrhage, and patients suffering from shock. In 1867, Dr. Stephen Rodgers, of this city, had written an extensive paper on this topic, taking the same ground; but up nearly to 1886 the medical profession at large had contented itself with treating cases of extra-uterine or tubal pregnancy which had been recognized early, by means of electricity, and certainly with a good deal of success. Dr. Janvrin said that just thirteen years ago he had diagnosticated a tubal pregnancy, about six weeks advanced. It had been treated by three applications of electricity on three different days, and it had been supposed then that the fœtus had been killed; but he had been summoned very hastily the next day, and although he had arrived within an hour the woman was already dead. The autopsy had revealed a rupture of a small artery on the surface of the tube in which the pregnancy had been situated, and about a quart of blood in the abdominal cavity. He had never employed electricity in these cases since that time. A few months later he had reported this case, and had insisted that it was the duty of the abdominal surgeon to perform laparotomy. At that time his views had not been very favorably received. Two years later, Dr. S. C. Gordon, of Maine, and Dr. Arthur Johnston had each reported one successful case, making in all four cases successfully operated upon prior to the fourth month.

Symptoms of Ectopic Gestation.—The chief symptoms and signs of ectopic pregnancy, as given by him at that time, were: (1) The skipping of one menstrual period; (2) irregular bloody discharges; (3) the discharge of shreds of decidua; (4) slight nausea; (5) slight increase in the areola of the breasts; (6) slight enlargement of the uterus and its displacement toward the unaffected side, while a well-defined globular and semi-fluctuating mass—the pregnant tube—was to be detected on the other side; (7) marked pulsation of the artery of this tube; and (8) intense tenderness in the mass itself. This last symptom, he thought, was always present. He believed the colicky pains were never present until there had been some hemorrhage. The shock was always proportionate to the amount of tearing and accompanying bleeding. Laparotomy was the operation indicated, as it afforded an opportunity for an immediate and positive diagnosis, and, at the same time, for appropriate surgical treatment. In the paper referred to he had called this "the primary operation" in cases of tubal pregnancy. He had not lost any cases of tubal pregnancy in which he had been allowed to operate early. He fully agreed with all that the reader of the paper had said regarding the advanced cases.

Deformities of the Child.—Dr. Andrew F. Currier, present by invitation, said that in cases of abdominal pregnancy the child was usually deformed, and the deformity probably occurred in most instances in the later stages of fœtal development. He had been unable to find any record of deformity occurring in cases earlier than the fifth or sixth month. Not an inconsiderable number of fœtuses had been delivered alive through an abdominal incision, although this fact had not been generally known until quite recently. The largest collection of recorded cases of extra-uterine fœtation in which the fœtus had been born alive through the abdominal incision was that of Dr. Harris. Unfortunately no details were given as to the physical condition of the fœtuses. Dr. Harris had stated elsewhere that of all the children born alive in this way only four had survived more than a few weeks. Two of them had lived four years, one five years, and one seven years and a half. Champneys had collected a series of nineteen cases, and in this series he had found that the mortality was 61.1 per cent., and that deformity occurred in four. His conclusion was, that owing to deformities and poor development the child's life was not of such value as to warrant assuming any additional risk to the mother, in the hope of saving the child. Asymmetry of the head and face, with club-foot, was very common in these children. Pinard had reported last month a case in which the child had been delivered alive by operation at seven and a half months, and stated that the asymmetry of the face that had been present at birth had subsequently disappeared. The causes of death were much the same as in children born under natural conditions. It should not be forgotten that in children born normally the mortality in the first year or two was twenty-five per cent.

Causes of the Deformities.—The membranes seemed to be absorbed by the secretions of the peritoneum, thus depriving the fœtus of the protection usually afforded by the amniotic fluid. He thought in the future more attention would be given to the welfare of the child.

Management of the Placenta.—Dr. E. A. Ayers, present by invitation, discussed this phase of the subject. He said that the management of the placenta in advanced extra-uterine pregnancy was one of the most difficult problems in surgery. This fact seemed to him to modify very much the argument in favor of the fœtus. In any case the fœtus had but slight chance for life. He had elsewhere reported one hundred and one cases, with only twenty children still living. Probably not more than three or four of these children were alive at the present time. On the other hand, the mortality on the maternal side had been one hundred per cent. in 1840, and to-day it was still 38.5 per cent. Moreover the majority of the cases that had been operated upon had been treated by surgeons of exceptional skill and world-wide fame. Operation by the vaginal route, he thought, would be used only in those cases in which the operator was reasonably certain that the placental circulation had ceased, and that the fœtus was situated low down toward the vagina, and that it was not of great size. The control of the hemorrhage from the placenta would vary somewhat, depending upon whether or not the fœtus was outside of the peritoneal cavity. Inasmuch as it was almost impossible to differentiate these two classes before operation, the primary incision should be made low down in the abdomen, near the pubes, and enlarged upward afterward if necessary. In the extraperitoneal cases the placenta extended forward and pushed the peritoneum upward. The peritoneum might not rise very high along the inner layer of the abdominal wall, so that it was possible by a low incision to avoid opening the peritoneal cavity at all. The treatment by marsupialization in some cases was an actual necessity. The operator should endeavor to control the circulation by ligation before disturbing the placenta at all. In most cases the blood supply arose from the ovarian and uterine arteries on the side on which the placenta was situated. Martin had ligated these vessels, and in this way had reduced the blood supply to such an extent that he had been enabled to remove the placenta and uterus complete, and stitch the peritoneum over the pelvis. It might be desirable in some instances to ligate these arteries through the vagina. He had had experience in the removal of the placenta in only two cases of this kind. In the first one the placental circulation had arisen from the left broad

ligament by means of a sort of pedicle, and the placenta had been removed without much hemorrhage. In the second case the placenta had been macerated, and the greater portion of it had been removed without hemorrhage occurring. But in some cases the placenta would be attached to the abdominal wall, and would be liable to be divided in the first incision. In others the placenta was attached to the intestine or to the bladder, and obviously could not be removed at the first operation. Last December he had reported certain experiments that he had made, with the object of better controlling the placental circulation and preventing decomposition. They consisted in injecting various substances into the placenta. It was found possible to inject the umbilical vein with tannin and glycerin, also with alcohol, and possibly with formaldehyde, with comparative ease and safety. His experiments had certainly demonstrated the possibility of postponing the decomposition of the placenta for a considerable time.

DR. BOLDT closed the discussion. He said that the suggestions made by Dr. Ayers regarding the treatment of the placenta by injections were very interesting, and he thought were well worth future study. The reason the hemorrhage was so profuse in many cases was because the implantation of the placenta was a non-contractile structure.

Fractures of the Lower End of the Radius.—DR. CARL BECK read a paper on this subject. He said that a large experience with skiagraphy had shown him that fissure of the head of the ulna and simultaneous fracture of the styloid process were common accompaniments of fracture of the lower end of the radius. This fracture was caused by a fall on the hand while the latter was in dorsal extension. In classifying the different varieties it was essential to distinguish epiphyseal separation, fissures, incomplete and complete fractures, fractures of the lower end of the radius combined with fracture of the head of the ulna or of the styloid process. Fissure of the radius had been found much more frequently than had been hitherto supposed. A wire splint should be applied to the flexor side of the arm until the swelling had subsided, and then a "bracelet," about four inches wide, should be substituted. It limited the motion sufficiently, and allowed sufficient motion to prevent the formation of adhesions. It was very useful to have such patients practise rolling large marbles around in the palm of the hand. In the intra-articular type of fracture there was considerable tendency to displacement, and the joint was often seriously injured. A positive diagnosis could not be made without the aid of the Roentgen rays. After reduction of the fracture slight pressure should be applied over the fragments for a few days, and after that it should be treated just as if it were an extra-articular fracture.

Colles' Fracture.—The extra-articular fracture was the one best known, having been described many years ago by Colles. Reduction should be effected by forced extension, traction, and downward pressure, if need be under anæsthesia. He did not favor the use of the dorsal splint or of short splints at first. After the third week massage and passive motion should be resorted to. In neglected cases, or those in which deformity had followed the fracture, a good result could be secured by osteotomy.

Avoid Immobilization of the Wrist.—DR. J. W. S. GOULEY said that it was evident from the paper that all fractures of the lower end of the radius should not be treated in the same way. The ordinary cases which were not attended by great deformity or great contusion of the surrounding tissues required the simplest methods of treatment. Some of them did not need any splint, and certainly bandages should be avoided, and immobilization of the wrist guarded against. He believed that under no circumstances should the wrist be immobilized; it should be given free play to avoid adhesions and false ankylosis so commonly resulting from immobilization. In ordinary cases it seemed to him that the splints could not be too short. All that was necessary was to confine the lower end of the radius; the splint should not extend beyond the lower extremity of the radius. He had generally employed two short splints, simply to confine the radius. They were fastened in position by a broad band of adhesive plaster, about fourteen inches in length, to allow of making several turns. Another band was placed on the inner side of the forearm. The splints should be quite narrow in order to be effective. Very suitable splints could be made out of cigar-boxes, and these should be slightly padded. By the second or third day the plaster strips should certainly be loosened, and the parts carefully examined, and this inspection should be repeated at intervals of three or four days. In young, healthy subjects he was accustomed to remove all splints at the end of three weeks, applying a band of plaster around the lower extremity of the forearm. When there was great injury to the surrounding parts, and the fracture could not be reduced without very great force, he preferred to allow the case to go with a certain amount of deformity.

The Golden Rule in Fracture Cases.—Young physicians especially should be exceedingly cautious about making even the slightest criticism of the treatment of a fracture by another physician; they should be very charitable regarding all cases of fracture. If this rule was generally lived up to, there would be very few suits for malpractice. When a bad result was obtained, it was usually the fault of the patient. The latter should be warned that there was always a liability of the joint becoming stiff.

DR. CHARLES PHELPS, present by invitation, said that it seemed to him that this fracture was generally badly treated. The necessity for reduction was the same, no matter what the variety of the fracture. The only part of the treatment about which there was much difference of opinion was regarding the length of the splints. He believed that Dr. Gouley had been the first practitioner in this country to use the absolutely short splints, and he had been followed by the late Dr. James R. Wood and others. He had himself treated these fractures in this way throughout the whole course of his practice without a single exception. Union of the bone would take place without much difficulty, no matter what the treatment, but the great point was to secure a good functional result in the joint, and to diminish as far as possible the length of time that elapsed before the function of the joint was restored. If the splints were long enough to immobilize the joint, usually several months would elapse before the patient would obtain any good use of the joint. It had been objected that the very short splints did not immobilize the fragments, but this had not been found to be true. Both the elbow and the wrist joints should be left free, and if this was done there would be good motion almost immediately upon removing the splints. He did not think the width of the splints was very important; the main point was not to interfere with the motion of the joint. This treatment would give a perfect result in almost all cases.

A Comfortable Splint.—DR. PARKER SYMS said that he agreed as to the treatment of the simple fractures, but when the joint had been severely injured, or when there had been much dislocation at the time of the injury, he was of the opinion that immobilization was a benefit rather than a detriment in the early part of the treatment. This was in accordance with the usually accepted treatment for arthritis elsewhere. Reduction of the deformity was, of course, very desirable, but too much force would be liable to aggravate the arthritis.

He could fully indorse what had been said by Dr. Gouley regarding the use of short splints for this fracture. In 1883, the speaker said, he had devised a splint that seemed to him rather more comfortable and secure. It was made of thin sheet lead, which was perfectly fitted to the forearm and down to the ends of the bones of the forearm. It was lined, but not padded, with sheet lint. These splints were kept in position by strips of adhesive plaster. One great cause of stiffness at the wrist joint was immobilization too soon after the injury, and the disturbance of the circulation by faulty bandaging.

DR. BECK, in closing the discussion, emphasized the importance of accurate diagnosis, and the use of the Roentgen rays as a guide in the treatment of fractures.

Report of Committee on Legislation.—This committee reported through its chairman, DR. E. ELIOT HARRIS, that it had succeeded in defeating the much-talked-of poison-container bill, because of its ridiculous and objectionable features, and also the bill which had proposed to restore to good professional standing one who had been convicted of a felony. Dr. Harris also stated that the dispensary bill had passed both the Senate and Assembly, and was now before the governor. On motion, the association unanimously resolved to send a telegram to Governor Roosevelt, petitioning him to sign the dispensary bill. A petition was also sent to Mayor Van Wyck, asking him to consider favorably the Buckley tree-planting bill.

The Late Dr. W. W. Van Arsdale.—The following memorial notice was adopted by the association, and ordered published in the medical journals:

"*Resolved*, That in the death of Dr. W. W. Van Arsdale the New York County Medical Association has lost one of its most accomplished members. In addition to a thorough academic education, Dr. Van Arsdale passed successfully through the long course of study required at the University of Leipsic in Germany, from which institution he graduated with honors, and afterward served the required term of service in the great hospital of that city as pupil of, and assistant to, the distinguished Professor Thiersch. Returning to his native country, he located in New York City, became connected as an assistant to the chair of surgery in the New York Polyclinic Medical School and Hospital in the early days of its organization, and served with such faithfulness and proficiency that he gradually rose to the professorship of surgery, which position he filled with entire satisfaction and held at the time of his lamented death. He was also assistant surgeon to the New York Cancer Hospital. For four years before his death he had been assistant visiting surgeon to Mount Sinai Hospital, where his conscientious and thoroughly scientific work was fully appreciated, and where his loss will be keenly felt.

"Dr. Van Arsdale was twice elected chairman of the Section on Surgery in the New York Academy of Medicine, and was an earnest working member of the New York Surgical Society. He contributed many valuable papers upon scientific subjects to the various medical journals, and was justly considered one of the clearest writers of his day upon surgical topics.

"Committee: JOHN A. WYETH, M.D., *Chairman;* FRANCIS J. QUINLAN, M.D.; A. ERNEST GALLANT, M.D."

A New Review, entitled *La Revue des Rhumatisants*, intended particularly for persons suffering from rheumatism, has just been started in Paris. Frenchmen of letters are said to be sufferers from this malady to a remarkable degree. It is hoped, however, that the writers who have contributed to the initial number are not in sympathy with their readers through personal experience.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEDICAL BILL—SECRET COMMISSIONS—MULTIPLE CALCULI IN SACS—ANTI-TUBERCULOUS SERUM—DEATHS FROM FUNCTIONAL NEUROSES—PATHOLOGY OF THE PERICARDIUM—GYNÆCOLOGY AND THE GERM THEORY—DEATH OF DR. SQUIRE.

LONDON, April 7, 1899.

THE bill introduced into the House of Lords to prohibit medical practice by companies may be considered as sure to pass that august assembly. It has been drawn by the lord chancellor, and is one of the little bills of the government. Whether it can be piloted through the Commons is more doubtful, as, apart from the enormous amount of pressure there, some crank or other is likely to find objections. And yet the bill is so brief—a single clause—and directed against so palpable an abuse that it may perhaps be allowed to pass. It is not quite the same with the pharmacy bill, as in that case trade enters into the question. It is well, therefore, that the bills have been separated, but I should hope both may become acts.

The London Chamber of Commerce, being shocked at the prevalence of secret commissions, appointed a committee to examine into the facts. This committee in its report suggests that all professions and trade bodies should expel members guilty of indulging in such practices. The medical, legal, artistic, and other professions are coupled with the trading bodies in this matter. It appears that some chemist gave evidence that he had known commissions given on prescriptions and surgical appliances. It seems rather too bad to asperse a whole profession on such flimsy evidence. Though possibly here and there some one may have fallen so low, it is undeniable that nearly all members of the profession would disdain to put themselves in a position which is not considered respectable. The suggestion will not hurt the medical any more than the other professions, but it may serve as a warning not to be trapped by the tricks of traders.

At the Medico-Chirurgical Society Mr. Reginald Harrison gave some account of two cases of removal of multiple calculi from narrow-necked sacculi connected with the male bladder. He said the difficulty in the two cases was to provide for the drainage and subsequent obliteration of the sacs containing the stones. He raised the question of draining some of these sacs, after exploration by suprapubic cystotomy, from the perineum. He mentioned two other cases which seemed to favor this proposition.

Mr. Bruce Clarke said he had had several similar cases, and advocated suprapubic cystotomy and drainage.

Mr. Bryant, who mentioned three cases, could not support this plan, as drainage by the perineum is much more effective, and he had resorted to it in each case.

Drs. C. T. Williams and H. Horrocks related experiments on nine cases of tuberculous diseases, with a serum obtained from the Jenner Institute. A serum taken twenty-one days after the horse's inoculation was first tried, and the effects closely resembled those of Koch's first tuberculin. Afterward a serum was tried which had been taken seventy-two days after the horse's inoculation. This was better borne and continued longer. The four patients gained weight and strength. Cough and expectoration diminished, and in one case ceased. In three cases the bacilli decreased in number, but not in the fourth. The authors

thought their experiments encouraged a further trial of the milder serum in early cases with only limited lesions.

At the Medical Society Dr. R. Maguire read a paper on "Deaths from Functional Nervous Disease." He attributed them to exhaustion of gray nerve matter. Thus, though in death from senile decay there was usually a predominant failure of one system or organ —frequently the heart, which had no chance of rest— the fault was in the highest nervous system. Dr. Maguire thought this explained the sense of impending death, a serious symptom in the old and those who had long been ill, but signifying nothing in young persons or in acute cases. So, too, patients of Eastern nations would die if they made up their minds that they must, while the morbid fears of Western peoples were of little significance, for even when neurotic they had more reserved vitality.

One speaker suggested that in cases of any duration, if death was due to exhaustion of the gray matter, some microscopical change ought to be detectable; but Dr. Maguire replied that in one of his cases recovery had taken place after three months' unconsciousness.

Mr. H. L. Barnard then read a paper on "Some Points Relating to the Pathology of the Pericardium." He said it was proved that the heart alone could not carry on the circulation in the erect position, but the return of the blood from the limbs and abdomen was effected by the skeletal muscles. In walking or running the muscles of the limbs forced forward the blood in their veins, and the contractions of the abdominal muscles were a part of the respiratory movements. In rest and sleep the enlargement of the thorax during inspiration sufficed to suck the blood from the abdomen into the right heart. But in vigorous exercise blood might be forced too suddenly on the heart, and the thin wall of the auricle would be dilated but for the support of the tough, fibrous pericardium. Experiments showed that the pericardium limited the capacity of the heart in diastole to the extent of about half. If the pericardium became softened, as from inflammation, it might become stretched by exercise or coughing, and probably would not fully retract again, so that the heart, losing some of this support, would dilate. In pericarditis with effusion, the dyspnœa was the result of violent muscular spasms directed to forcing the blood through the compressed heart. So far it was preservative.

The Gynæcological Society lately had a lively entertainment on the germ theory. Dr. Granville Bantock read a paper on the subject, and as he is known as one of the most distinguished opponents of the theory, as well as one of the most successful operators, the Listerites were put on their mettle. Dr. Bantock argued that micro-organisms are the results rather than the causes of diseases, and naturally pooh-poohed the "superfluous ritual" of Listerism as useless in the presence of simple cleanliness. He holds that variola, syphilis, diphtheria, gonorrhœa, and so on are not caused by micro-organisms, which are constantly found under conditions consistent with health, and sometimes may exercise a beneficent influence, as, *e.g.*, those which Mr. George Stoker found in the course of his oxygen treatment to hasten the healing of wounds.

These heterodox views, which were further enforced by references to tubercle, typhoid, and comma bacilli, excited the opposition and even anger of the Listerites, who one after another denounced them in terms which at times seemed scarcely such as we are accustomed to consider fitting for a learned society. Dr. Macfadyen led off with a statement that he had come to take part in a serious discussion, but it was a new experience to listen to such theories in Lister's own country, and he must leave those acquainted with the elementary facts of bacteriology to choose between Pasteur, Lister, and Koch on the one hand, and Dr. Bantock on the other. A cheap sneer of this kind is safe enough, but has no force as an argument, and the eminent bacteriologists would have done better to meet the surgical facts brought forward than to complain that Dr. Bantock neglected the experimental research of the last ten years. If Dr. Macfadyen came to the society unprepared to hear such theories, he must have equally neglected the medical literature of the decade; for Dr. Bantock has reiterated his views on various occasions, and has engraved his name in indelible characters among those of the most successful operators of the age. It is therefore the business of the bacteriologist to explain these surgical triumphs rather than to affect a supercilious ignorance of their existence.

The speakers who followed made up for the reticence of the bacteriologists. All were orthodox followers of Lister, and held to the germ theory as gynæcologists in opposition to Dr. Bantock's views, so that the attitude of the society was such as the president said it ought to be—an unmistakable verdict repudiating those views.

Great disgust is felt at the sale by auction of some hospital case books. It seems twenty-one volumes fetched the sum of 3*s.* 6*d.* Whoever was responsible must by this time feel ashamed. The inquiry has often been made as to what becomes of deceased doctors' private case books; but no one seems to have expected hospital books to be scattered, even by accident.

Dr. William Squire died on the 2d inst., aged seventy-three years. He was a nephew of the late Peter Squire, and helped in his experiments with ether prior to Liston's first capital operation under that anæsthetic in University College Hospital in 1846, being then a student there. Dr. Squire was much interested in epidemic diseases, and contributed a number of papers to the Epidemiological Society, of which for some years he was secretary. His "Collected Essays in Preventive Medicine" were issued in 1887. He was for many years physician to the North London Consumption Hospital.

MEDICAL MATTERS IN NEW ZEALAND.

(From our Special Correspondent.)

AUCKLAND, NEW ZEALAND, March 10, 1899.

THE principal subjects which are attracting the attention of both the profession and the public in this colony are (1) the prevention of tuberculosis, (2) the increase of cancer, and (3) the extremely low birth-rate.

A wild and ridiculous measure was proposed by the government to prevent the introduction into the colony of persons suffering from any form of tuberculosis, which not only would have prevented such persons from landing, under a heavy penalty, but which would also have made the captain of the ship liable to a penalty for any person who might prove to be tuberculous within three months after landing! This preposterous measure was of course strangled. The idea that a country like this, with a white population of about three-quarters of a million, and easily capable of maintaining ten millions, should shut itself up and refuse to admit any one suffering from any form of tuberculous disease, was too much for even a New Zealand legislature, and Heaven knows that there is not much in the shape of absurdity that would frighten them. Cattle are being slaughtered by hundreds, when pronounced tuberculous by an inspector, with-

out any compensation, unless it should be proved, by a post-mortem examination, that the beast was not tuberculous.

The increase of the death rate from cancer is attracting much attention, and many speculations are being made as to the cause or causes. Since 1881, the death rate from cancer has doubled; in 1881, it was 2.69 per 10,000 of population; in 1897, it was 5.50 per 10,000. The death rate for males and females was nearly equal, being 5.51 of males and 5.43 of females. This was for 1897, the latest statistics published. Some attribute this increase to greater accuracy of diagnosis, but this is very doubtful. What improvement has been made in the diagnosis of cancer since 1881? We had microscopes then, as we have now. I am rather inclined to attribute it to the mental depression which has attended the great losses incurred by all classes owing to over-speculation in land and mines. The glowing hopes which induced tens of thousands to emigrate to this colony in the seventies have been disappointed, and very many find it harder to get a living here than in the old country.

One consequence of this is the lowering of the birth rate. That this is voluntary, no one disputes. One of our principal papers has opened its columns to the discussion of the question, and the women have spoken out with a frankness which leaves nothing in doubt. The use of preventives—French and American—and the practice of early abortion, are responsible for the diminution. Our birth rate has fallen to less than 26 per thousand (25.96) in 1897, which is lower than that of any European country except France and Ireland. There is a quotation in our Year Book for 1898, from the report of the Hon. Washington Gardner, Secretary of State for Michigan, which so exactly describes the condition of things here, that I venture to requote it even for an American journal. Mr. Gardner says that the diminution in the birth-rate in Michigan arises from—"(1) The great diffusion of physiological information; (2) Lessening of restraint from religious and social opinion; and (3) The greater cost of family life, which leads to the desire to have fewer children in order that they may be better provided for." Referring to marriage in the United States of America, he continues: "In the struggle for what is deemed a more desirable mode of existence at the present day, marriage is held less desirable, and its bonds less sacred, than they were forty years ago. It is becoming less an institution of lasting character, whose primary object is the establishment of the family, with all that that term once implied, than a mere social function, easily abrogated when convenience or caprice makes such a step seemingly desirable, and one whose lack of permanence and generally unstable character do not make children desirable additions." We have not quite reached the most advanced American standard as respects facilities for divorce, but we are rapidly tending that way, as divorce can now be obtained for adultery of either party, for habitual drunkenness, for conviction to a lengthened term of imprisonment, and for violence to the wife endangering life. The instability of our marriages arises from the facility for leaving New Zealand for Australia or Europe, when the deserter is lost almost as much as if he or she were in the great desert of Sahara.

The numbers of applications made by married women, living with their husbands, for abortion to be produced at the second month is appalling. The women seem to have no moral sense in the matter, and the maternal instinct is entirely absent.

I believe that the system of education in our state schools has a great deal to do with the matter. A large proportion of our young women, by far the majority, are pale, anæmic, flat-breasted, suffer much at the menstrual periods; if they marry they cannot suckle their children, and consequently have them very fast. Naturally they use every effort to prevent conception, and when this does occur they have recourse to medicines of abortifacient operations.

The utter want of a healthy opinion among the women was strikingly shown here a few months ago. A well-known practitioner was tried for murder, in having caused the death of a young woman by an illegal operation. There was no question about his guilt, as he admitted it himself in a letter to a medical friend, which was produced in court. Yet he was acquitted unanimously by the jury, and the women in court cheered and waved their handkerchiefs, to the great indignation of the judge. Now, it was known beforehand that an acquittal was certain, for all the women, without an exception, pitied him and blamed the girl for "betraying" him.

The feebleness of our women is no doubt in part caused by the substitution of tea for the beer their forefathers used to drink. Excessive tea-drinking ruins their nervous system and digestive organs. We English were a race of beer drinkers; as such we had our special diseases both physical and moral, but I feel certain that the race which for centuries habitually drank beer cannot produce the same vigorous men and women when it drinks tea. Unfortunately our religious teachers, by no means models of health themselves, are perpetually preaching total abstinence from alcoholic liquids. The old home-brewed beer is denounced as wicked, and poor women with children at their breasts, to whom a pint of good beer would be salvation, are compelled to drench themselves with the everlasting tea, which is brewing on the stove all day long. The public opinion of the vast majority of our people, especially of the colonial-born, is gradually enforcing total abstinence on our women. They never have anything alcoholic in the house, and public opinion here prevents any decent woman from going to any public house or bar for it. Of course this very much simplifies medical treatment. In the vast majority of neurotic or neurasthenic invalids, what they mostly require is wine or beer.

NOTES FROM CONSTANTINOPLE.

(From our Special Correspondent.)

WOOLSORTER'S DISEASE.

April 2, 1899.

A FEW years ago this disease excited much attention in medical circles. Dr. Bell, of Bradford, made the subject a special study, and described the disease as being of two forms—an internal or constitutional, and an external, caused by the introduction of the poison to some infected part. The former, named anthracæmia, was a general blood-poisoning caused by the introduction into the circulation of the spores of "bacillus anthracis," derived from the fleeces of animals who have died of anthrax. Professor Lister, now Lord Lister, described the "bacillus anthracis" as capable of being communicated to various animals and also to man. He described also the various stages and appearances of the pustule.

It will, I think, be interesting to compare the description of the above-mentioned observers with the following folk-lore. My attention had often been directed to a special form of pustule occurring to the sorters of wool coming from the districts of Angora and Van in Asia Minor, said to be often fatal. Though it was reported to be so common that a special class of native practitioners lived by curing it, I found it no easy matter to discover typical cases, and succeeded in seeing only six cases altogether among the employees of

the two principal wool-sorting establishments at Stamboul; and three of them, though declared to be the true wool-sorter's pustule, did not present the marked characteristics usually ascribed to the disease. They were in different stages, from the second or third to the ninth or tenth day. These patients were all very anæmic, and besides the chief pustule had many other red and angry-looking pimples on various parts of the body, particularly on the exposed parts; more numerous about the face, neck, and forearms. I was informed that the large pustules presented this appearance at first, but that after one or two were fully developed the others remained stationary and gradually disappeared in proportion as the patients gained strength.

Symptoms: A feeling of great prostration for two or three days; headache, often accompanied with shooting pains in the course of the spinal column; chills, but no marked pyrexia (there was no opportunity of taking the temperature); great thirst, and almost total anorexia; respiration rapid and short; tongue furred, but moist; bowels irregular; no pains of abdomen nor tympanites; urine said to be scanty and dark-colored.

The pustule, generally on the face or neck, begins with a slight swelling. The pimple rapidly forms, and about the third day discharges serum; the swelling then goes on increasing and takes the true anthrax character. The constitutional symptoms then assume the low typhoid type. This is from my own observation. The natives will be treated only by the professional boil-curers, called "dullukdjis," in whom they have entire confidence.

At Stamboul, Van mohair is only occasionally sorted by the men, the Van "clip" being in the proportion to other mohair of five to thirty. The sorters are generally young men. They are poor, and, owing to the fluctuations of the trade, often out of work. They are dirty in their habits. The localities in which the wool is sorted are closed and covered rooms, so that the sorters habitually inhale the dust. There is always an unwholesome effluvium floating about the rooms, a kind of greasy atmosphere, perceptible even to the taste, and capable of holding any amount of light volatile matter in suspension. In one establishment all the men looked unhealthy; most of them were suffering from boils and pimples, and this was at the time when they were sorting some lots of Van mohair. The proprietor stated this was always so after sorting Van mohair. Another proprietor said that, under similar conditions, numerous deaths had occurred from this disease, and especially mentioned a case of a man apparently strong and in good health who was "taken off" in a few days. The latter proprietor gave the following statement of his own observations of the course of the malady: "The first symptom is a slight swelling on an exposed part of the body. This soon assumes the character of an ordinary pimple and gives out, on being pricked or in any way opened, a whitish fluid, very much like the water a blister exudes. Should the boil be caused by the mohair disease a general swelling takes place, and this is how the patient is enabled to tell the difference between this and an ordinary boil. The swelling continues, and (if it began on the face or neck) when it reaches the chest the whole body is affected in the same manner. The course of the disease is about from seven to ten days from the first appearance of the swelling, and should the patient have neglected to use effectual remedies in the mean while, it proves fatal in the majority of cases. When once the swelling has assumed any importance, remedies are of no avail. The centre of the hole containing the fluid above mentioned is black." This is a good description from a non-medical observer.

"Dulluk" is the Turkish name of this disease. "Dulluk" means gall or bile. The native theory is that the animals of these districts of Asia Minor suffer periodically from a disease of the gall which shows itself on the skins of the animals, and that the matter from the boils becomes attached to the hair, and, if absorbed by the skin or lungs of the sorters, produces this dangerous and often fatal disease. The native doctors, or "dullukdjis," who profess duly to cure this disease, practise among the butchers, fell-mongers, and mohair workers. They treat it by cutting away the flesh all round the pimple, and then applying poultices of linseed or herbs, or using the red-hot cautery. The patient suffers no pain from either operation so long as the unaffected flesh is not touched. They then prescribe an absolute diet of "caviare" (the salted and compressed roe of the sturgeon) and mastie or "raki" (a coarse spirit).

In the bales of Van mohair there is sometimes mohair taken from fallen fleeces, which has a most disgusting smell, and last year I visited a sorting-house, at the owner's request, to examine several of his men, who showed incipient symptoms of blood-poisoning after sorting a bad-smelling lot of hair; none of them, however, presented the pimple or pustule, and they all recovered. In this same establishment several hundreds of choice Angora goats were herded for a fortnight previous to being shipped for the Cape, and though freely handled by the men, the disease was not communicated.

The "dullukdjis" say that when the boil develops internally the patient always dies. This is but folk-lore; yet considered with pathological intelligence, it clearly establishes the relation between cause and effect, and agrees in detail with the description of the disease by the eminent authorities who have made it a special subject of investigation, even to the distinction of the two forms, external and internal.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 22, 1899:

	Cases.	Deaths.
Tuberculosis	191	141
Typhoid fever	15	7
Scarlet fever	217	16
Measles	335	16
Diphtheria	180	26
Laryngeal diphtheria (croup)	13	7
Cerebro-spinal meningitis	0	11
Chicken-pox	26	0
Smallpox	2	1

A Pioneer in Waterworks.—Hezekiah, king of Judah, who reigned in the years 717 to 688 B.C., was a pioneer in constructing a system of waterworks, bringing water into the city of Jerusalem. In the Holy Book we read: "He made the pool and the conduit, and brought the water into the city, stopping the upper part of Gihon, and brought it straight down to the west side of the city of David. And Hezekiah prospered in all his works." From the "Pools of Solomon," near Bethlehem, water was conveyed to Jerusalem, a distance of six or seven miles, through a conduit of earthen pipe, about ten inches in diameter. The pipe was encased within two stones, hewn out to fit it, then covered over with rough stones cemented together. —*Sanitary Record.*

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Original Articles.

SOME OF THE OBJECTIONS TO THE NEURON THEORY.

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ON account of the very rapid increase of literature in every department of science, it is imperative that dissent from any given proposition should be accompanied by a well-defined statement of the reasons for the expression of the adverse criticism. The ultimate aim of criticism should be positive and constructive, and not the mere expression of iconoclastic enthusiasm. The denial of the validity of the neuron theory is not an attempt simply to destroy belief in an accepted theory, but, on the contrary, the denial necessitates a presentation of facts which are irreconcilable with certain theoretical conceptions. Barker's[1] article reviews and brings together the essential points in the development of the neuron theory. The importance at the very start of a clear understanding of just what is included in the term "neuron theory" is obvious, if the validity of that theory is under discussion.

According to the neuron theory, the nervous system is made up of numerous "nerve units," which are neither anatomically nor genetically connected with each other. In addition to this, it is assumed that these nerve units have no connection with, or any origin out of, a fibre network. This is a definite statement, which can be successfully refuted only by the presentation of evidence to show that connections do exist between the network or intercellular substance on the one side and the nerve cells or units on the other. The evidence which demonstrates the existence of such connections will be reviewed as briefly as possible. In passing, attention is directed to one of the assumptions which have been used in the support of the neuron theory—namely, that because no connections between the units have been demonstrated, therefore they do not exist. Darwin has borne testimony as to the errors into which he was led by adopting this method of reasoning.

The evidence which shows that there is a more intimate connection between the nerve cells and the intercellular substance than the believers in the neuron theory are willing to admit, is based chiefly upon the observations of Apáthy,[2] Bethe,[3] and Nissl.[4] It is a singular fact that many believe the acceptance or denial of the credibility of the doctrines of the neuron theory is equivalent to acquiescence in or denial of the truths of the cell doctrine. It is impossible to say why the connection of the fibrillar substance of the nerve cell with an intercellular network, or their origin out of such a network, should be irreconcilable with the tenets of the cell doctrine, for no one questions the statement that the nervous system is composed of cells and the products of cells. His showed that in the development of the cord the cells in the outer layer (*Randschleier*, His; outer neuroglia layer, Minot) gave off lateral branches, which united to form a delicate network. This observation has been confirmed by Popoff[5] in studying the development of the cerebellum, and the writer has observed it in the cerebral cortex; but while these facts are interesting as showing the possibility of the existence of connections between the processes of cells in the central nervous system, it is essential that it should be clearly understood that the discoveries of Apáthy and Bethe have reference, not to the connection of nerve cells by means of their processes or by cell bridges, but to the connection of nerve cells with each other and with the intercellular substance by means of a specific fibrillar substance essentially different from the protoplasmic substance of the processes.

Most of "the evidence" offered as the proof of the absence of any connection between the cells depends upon the pictures given by the Golgi stain or some of its modifications. No one will question the fact that this stain has been of great service in studying the general topography of the nerve cells, and its introduction marked a new era in the study of the anatomy of the nervous system; but the method is totally inapplicable to the study of the finer structure of the nerve cells and their processes. It may justly be said that the investigations and methods of Golgi stand in the same relation to the study of the nerve cells as does the work of Rennell to the rise and development of modern geography. It was essential that the outline charts and maps of Africa should first be drawn before the details could be accurately filled in. The attempt to use the Golgi stain or its modifications other than as a means to obtain "a very general topographical survey," is as unwarrantable as would be the attempt of any one to study the geography of Africa solely by aid of Rennell's maps, which were the best there were in their day; but they naturally make no mention of later discoveries.

Meyer,[6] in his excellent article on the data of modern neurology, has emphasized the fact that Golgi has never accepted as proved the assertions of those who insist that no connections exist between the nerve cells or so-called "units" and the intercellular substance. Golgi's sceptical attitude on this point would seem to indicate that he has appreciated the natural limitations of the silver methods better than have some of his too enthusiastic followers.

I hope soon to have an opportunity of referring more in detail to the fallacies (often not recognized as such) revealed by the silver stains when used for purposes of investigations outside of the comparatively narrow field for which they are adapted. All are familiar with the "silhouettes" given by the silver methods. These pictures doubtless convey the idea that the cell processes are simple homogeneous structures. More recent investigations, particularly those of Nissl, Apáthy, and Bethe, have demonstrated the fact that the cell processes, dendrites and axon, consist of at least two constituents—a fibrillar and a non-fibrillar portion.

To Apáthy certainly belongs the credit of having called attention to the structural and probably great functional importance of this fibrillar substance. No one who has had an opportunity of studying Apáthy's preparations, and particularly some of his more recent

ones, can doubt the existence of this fibrillar substance. Of the histogenesis of the fibrils little is known, but their existence cannot be denied. Those who are interested in a more detailed account of the relations and distributions of the fibrillar substance, which has as yet been studied chiefly in the invertebrates and lower vertebrates, should read Apáthy's publication. Reference will be made here simply to the facts which are of more immediate interest to all those who are engaged in studying the structure of the human nervous system. The fibrillary substance, according to the views of Bethe, Nissl, and Apáthy, is a highly differentiated form of protoplasm which is found in the vertebrates, both inter- and intra-cellular. There is considerable evidence to show that this fibrillary substance enters into the formation of large masses of the gray matter. Some of the reasons for this belief are mentioned by Nissl in the paper to which reference has already been made. In studying the histogenesis of the elements of the cerebral cortex, I believe there is also proof which cannot be given here of the correctness of Nissl's view. It is capable of demonstration that this "specific nervous substance" (the fibrils) is intimately connected with the nerve cells. A comparison of specimens stained by either the Bethe or Apáthy method with those stained by Held's methylene blue and erythrosin stain shows clearly that the latter does not stain the fibrillary substance. Apáthy has shown, chiefly in the invertebrates, that the fibrils are the means of connecting two or more cells as the wires connect the elements in an electrical apparatus. The fibrils also have the function of connecting the cells, as has already been said, with the intercellular substance. At first sight one is led to believe that discrepancies of considerable importance exist in comparing the results of Bethe's investigations with those of Apáthy. According to the former, no intracellular network similar to that demonstrated by Apáthy in the ganglion cells in hirudo, pontabella, etc., exists in the human ganglion cells, but the fibrils pass directly through the cell without connecting with each other. Further investigations may show that no real discrepancies exist, and that the arrangement of the fibrils forming the intracellular network in nerve cells in the invertebrates and lower vertebrates is different from the distribution in the nerve cells of the higher vertebrates, and particularly in the nerve cells in the human nervous system.

The assertion that the fibrils in the Apáthy sense are either artefacts or optical delusions would have greater force if the fibrils had been demonstrated only in material which had been fixed and stained by one method. They are, however, easily demonstrable in sections which have been prepared and stained in one of at least five or six different methods. The fact that the fibrils are as easily recognizable in cross as in long sections is evidence that they are not optical delusions. It is impossible to enter upon a full discussion of the function of the fibrillary substance. Some time ago Nissl advanced the opinion, and his belief has been substantiated by the statements of Goldschneider, Flatau, and others, that the achromatic parts of the cell and its processes in specimens stained by the Nissl methylene-blue method were the probable paths for the conduction of impulses. The Bethe stain gives pictures which are the exact negatives of those obtained by the methylene-blue method. In other words, the unstained tracts in the Nissl specimen correspond with the deeply stained tracts or the fibrils in the Bethe specimen. Those who affirm that the fibrils have no conducting functions are therefore compelled to defend the statement that the achromatic tracts in the sections stained by the methylene-blue method are non-conducting portions of the nerve cell.

In the criticisms which have been made upon the work of Apáthy, Nissl, and Bethe, in reference to the existence of fibrils, it is a curious fact that the main points at issue have been almost entirely ignored. So far as I know, no one has questioned the existence of the fibrils in the cells and their processes, nor the more remarkable fact of the passage of the fibrils from the process of one cell to the process of a second cell, nor has the possible connection of the nerve cell by means of fibrils with the intercellular substance been denied; but objections have been raised to two of what may be called the non-essential points in Apáthy's work. This investigator said that the passage of the fibrils from one cell to another was in some measure determined by the intercellular protoplasmic bridges. The existence of any considerable number of such bridges is not accepted by many investigators. The debate as to the presence or absence of such bridges is irrelevant, and as far as I can see has no immediate significance. The fibrils exist whether the bridges do or do not, and the question is of importance only in studying the development of the fibrillary substance. Of the origin of the fibrils nothing is known. Apáthy has suggested—and he has emphasized the fact in conversation, that the statement was offered merely as a working hypothesis—that the fibrils developed from what he calls nerve cells in contradistinction to the ganglion cells or the cells which produce the impulse. Although the truth of this hypothesis can as yet be neither confirmed nor denied, it has essentially no bearing on the question as to the existence or non-existence of the fibrillary substance. Only two courses appear to me to be open to the supporters of the neuron theory. They must either deny the existence of the fibrillary substance both intra- and inter-cellular, and this task would, in the light of the most recent investigations, be an exceedingly difficult undertaking; or, if they admit that the fibrils exist as demonstrated by Apáthy and Bethe, they must then assume that the inter- and intra-cellular fibrillary substance develops from the nerve cells. I know of no reason why the nerve cell and its processes without the fibrillar substance should not be considered "a unit," but I know of no reason why it should be assumed that the fibrillary substance develops in the nerve cells (the term nerve cell is here used in the

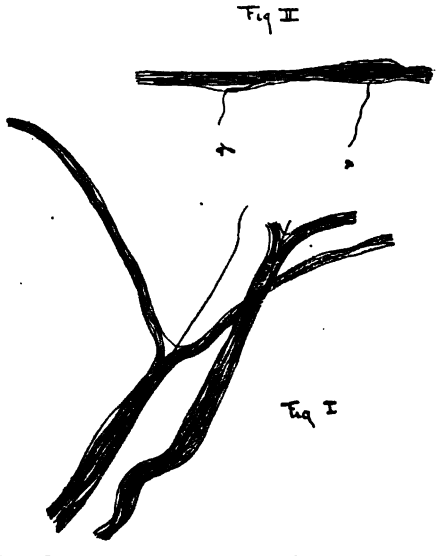

PLATE I. (after Bethe). FIG. I.—Two Fibres, Posterior Roots, Dorsal Cord of Dog. FIG. II.—Fibre from Posterior Columns, Dorsal Cord of Dog, Showing Collaterals.

ordinary sense), an assumption that is a logical sequence if one persists in calling the cell and its processes plus the fibrillary substance a unit. Possibly it may be demonstrated some day—but personally I do not believe that it will—that the fibrillary sub-

stance develops from the ganglion cell. If that is the case it will no longer be, as it is at present, an assumption to speak of nerve units or neurons.

The methods of Apáthy and Bethe have not to any extent been applied to the study of pathological conditions, and therefore no very definite data exist from which inferences can be drawn as to the relation of the fibrils to the degenerative processes. If, as is probably true in the nerve cells in man, the fibrils in the main follow the distribution of the dendrites and axon, there will be no difficulty in reconciling this fact with the degeneration of the various definite tracts as they are now known. Although the majority of the fibrils pass through the cells, Bethe has also been able to trace fibrils which pass from the dendrite of one cell to that of another without passing through the cell body.

Bethe has shown that the fibrils in the posterior nerve roots as they enter the cord correspond in distribution to the ascending and descending branches. In Plate 1, Fig. I., a fibril somewhat darker than the others can be seen passing to the gray substance. In Fig. II. the fibrils in a nerve from the posterior columns of the spinal cord of a dog can be seen. At *a* and *b* fibrils (collaterals) leave the main bundle.

In Plate 2 the distribution of the fibrils can be seen in two pyramidal cells from the central gyrus of the human cortex (man, forty-five years old).

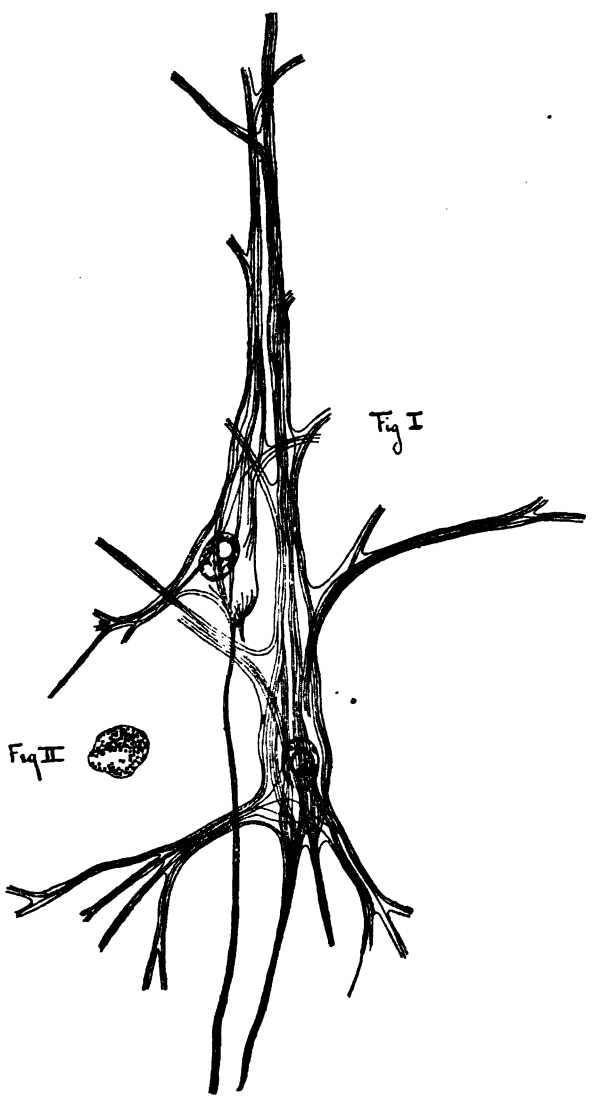

PLATE 2 (after Bethe). FIG. I.—Two Medium-Size Pyramidal Cells from Central Gyrus; man aged forty-five years. FIG. II.—Cross Section of Process of Motor Cell, Anterior Horn (Dog).

In the Bethe preparations the absence of the Nissl bodies is apparent. These bodies are dissolved in the process of staining, so that the fibrillar substance can be more easily studied. I have referred somewhat briefly to what may be considered one of the chief objections to the neuron theory—namely, the fact that within the nerve cell and its processes there exists a definite specific fibrillar substance which connects the cells with each other as well as with the intercellular substance. Although probably the conducting function of this substance may be denied by many, the most ardent supporters of the neuron theory must admit that the assertion that the nervous system is made up of units, in view of the absence of any definite information as to the origin of the fibrillar substance contained in the cell and its processes, is a statement which, to say the least, shows considerable faith in the fulfilment of prophecy. No one doubts that the fibrillary substance is a product of cells, but, as has already been said, there is no reason for believing that it is a product of the ganglion cell. The objections to the validity of the neuron theory necessarily suggest the consideration of the functional as well as the structural relations of the nerve cell. I have purposely refrained from referring to the former, as this would add unduly to the length of this paper. Nissl has shown conclusively that at present no definite inferences can be drawn as to the exact nature of the functional disturbances of the nerve cell from the study of its structural changes. The correlative values of structural and functional changes of the nerve cell cannot be so definitely expressed as the majority of clinicians are willing to assume. Whether Bethe's experiments on the reflexes in Carcinas mænas' are free from criticisms, or whether the observations of Nissl regarding the structure and function of the ganglion cell may not in time be differently interpreted, I am unable to say; but of this I am confident—that the attempt so often made, particularly by clinicians, to define categorically the functions of the nerve cell is purely empirical. When the histogenesis of the fibrillar substance has been more carefully investigated, and the relations of the fibrils to the cells and the intercellular substance, particularly the gray matter, has been more exactly defined, it will be possible to hold clearer and more definite conceptions regarding the structural and functional relations of the nerve cell. The neuron theory apparently simplified many problems in the anatomy and the physiology of the nervous system, and for the time being smoothed the path for the psychologist on the one hand and the clinician on the other; but the study of the fibrillar substance in the nerve cells and in the gray matter has served to emphasize the fact that the structural and functional independence of the nerve cell, as assumed by the believers in the validity of this theory, is untenable.

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Intestinal Obstruction.—We must all learn that purgatives are dangerous in suspected intestinal obstruction, and that a surgeon should be called in consultation as soon as enemas sufficiently given fail to relieve the obstruction. Many lives will be saved by the recognition of the necessity of such a course of treatment.—JOHN B. ROBERTS.

THE THIRD HITHERTO UNDECIDED DISEASE OF THE OVARY: MYXOMATOUS DEGENERATION.

BY MARY A. DIXON JONES, M.D.,
NEW YORK.

MYXOMATOUS tissue is the earliest formation in normal embryonic development, and during the entire period of intra-uterine existence this tissue largely prevails. Though not a highly organized tissue, yet it is of wonderful formation, consisting of a reticulum of living matter; so in itself it is almost infinite in its capabilities and possibilities. This reticulum, so beautiful in its formation, has spindle-shaped enlargements mainly at the points of intersection, the meshes being filled with so-called granular protoplasm, holding large protoplasmic bodies, mostly in the centre of the meshes. From this tissue are differentiated all varieties of fibrous connective tissue. The derma of the skin, the perimysium, periosteum, and perichondrium appear in the second or third month as myxomatous tissue; yet, later on, they are markedly fibrous. The placenta and umbilical cord are of this tissue. It was once supposed that the umbilical cord was a gelatinous tissue containing Wharton's fluid, but as early as 1851 Virchow discovered that it was a mucous tissue traversed by a delicate reticulum of branching cells. So it is a true myxomatous tissue, a reticulum of living matter, but not of "branching cells"; the living organism is one complete whole, not composed of separate existences.

The ovaries consist of fine and well-organized muscle fibres, fibrous connective tissue, nerves, and other vital structures, as the ova, blood-vessels, etc.; but all of these may be displaced and destroyed by this remarkable form of degeneration. When an ovary becomes inflamed (that is, reduced to medullary tissue) this medullary or embryonal tissue may take on any form—change to fibrous connective tissue, be reduced to pus, or become a malignant growth. Carcinoma may be developed directly from medullary or embryonal tissue; as I demonstrated in 1888[1] that the inflammatory or embryonal corpuscles were changing directly into cancer epithelia. This was a wonderful revelation, and, so far as I know, it had never before been observed or mentioned. So in oöphoritis, when the tissues are reduced to protoplasm or embryonal corpuscles—and I have seen ovaries and portions of ovaries in such intense inflammation that there was scarcely left an element of the original anatomical structure—when thus reduced, an ovary may degenerate into carcinoma, endothelioma, gyroma, or, as I now present, into myxoma. This remarkable degeneration seems to have a withering and blighting effect upon every structure of the ovary. We see, in Fig. 5, how it is gradually destroying muscles, perimysium, etc. In Fig. 6 we see the ova being transformed into myxomatous tissue, while Fig. 7 shows a more advanced myxomatous degeneration. So this degeneration goes on devastating and destroying every part of these most vital organs. The ovaries are of such fine, delicate organization, so full of life and activity, that they are apt to become the field of wonderful and rapid life changes, and at any time develop into more dangerous and fatal conditions. And, what is of greater interest, this myxomatous tissue seems near akin to malignant disease; and, as many have recognized and recorded, in its anatomical features it resembles myxosarcoma. Patients who have this form of degeneration seem in their constitutional symptoms as seriously disturbed as if they had malignant disease; each one gives evidence of some grave condition, and each one complains of great distress and local pain.

Studying the anatomical features of this growth in connection with its clinical symptoms, one becomes more and more impressed with its possible malignancy; for we know, malignant neoplasms uniformly consist of embryonal tissue. Lazarus Bartow[2] says: "The malignant tumors are composed of cells for which the counterpart exist in embryonic life alone." Greene[3] says: "The sarcomata are tumors consisting of connective tissue of a more or less embryonic type. Round-celled sarcoma histologically is elementary embryonic tissue."

In no work on pathology or surgery have I found any mention of myxomatous degeneration of the ovaries, but frequently attention is called to a tumor found in various parts of the body, known as myxoma, which tumor seems to be a circumscribed growth of myxomatous tissue. In the above work Professor Greene says: "The myxomata are very closely allied to the sarcomata, and by many are included in the same class of new formations." Delafield and Prudden[4] say: "Myxomata are essentially embryonic-tissue tumors. They very frequently become sarcomatous." Rose and Carloss, of King's College, London,[5] class myxomata under tumors "composed of embryonic connective tissue," and say: "A similar type of material occurs normally in the substance of the umbilical cord." Adding: "It is not uncommon for this form of growth to be associated with sarcoma; hence a thorough and early removal of this mass is always called for."

MacDonald[6] says: "Myxomata consist of connective tissue as a framework, in the meshes of which a fluid is contained that is almost identical with Wharton's jelly of the umbilical cord." Other authors repeat the same statement. Profs. H. R. Wharton and B. F. Curtis[7] say: "Myxoma is a tumor formed of a tissue like the so-called Wharton's jelly of the umbilical cord. These tumors should be removed for fear of sarcomatous degeneration. A sarcoma may be defined as a tumor composed of embryonic tissue of a mesoblastic origin."

E. K. Dunham,[8] professor of general pathology in the University and Bellevue College, says: "The mucous tissue of myxoma has its normal prototype in Wharton's jelly of the umbilical cord." Prof. J. C. Warren,[9] of Harvard University, says: "Myxoma is a tumor composed of tissue that finds its type in mucous tissue. This tissue is found in abundance in embryonic life. It is seen in the fœtal cord. The possibility that myxoma may be combined with sarcoma should always be kept in mind." Prof. J. Wyeth[10] says: "This neoplasm is made up of primitive connective-tissue cells similar to those observed in the umbilical cord at birth. The treatment is early and complete removal."

Prof. Frederick Treves,[11] of London Hospital, says: "Myxomata are tumors composed of a tissue identical with that which surrounds the vessels of the umbilical cord." Profs. W. W. Keen and J. William Wharton[12] say: "Mucous tumors are myxomatous, resemble both to the naked eye and under the microscope the Whartonian jelly of the umbilical cord." Cornil and

[1] "Carcinoma on the Floor of the Pelvis," the MEDICAL RECORD, March 11, 1893, p. 292.

[1] "Manual of Histology," p. 551.
[2] "Pathology and Morbid Anatomy," 1898, p. 225.
[3] "Pathological Anatomy and Histology," p. 300.
[4] "Manual of Surgery," 1898, p. 137.
[5] "Surgical Diagnosis and Treatment," 1898, p. 665.
[6] "Practice of Surgery," 1898, p. 95.
[7] "Histology, Normal and Morbid," p. 353.
[8] "Surgical Pathology and Therapeutics."
[9] "Text-Book on Surgery," 1898, p. 460.
[10] "System of Surgery," 1893, p. 460.
[11] "An American Text-Book of Surgery," Philadelphia, 1897, p. 197.

Ranvier[1]: "Myxoma is a tumor formed of mucous tissue, and this tissue forms the umbilical cord." Roswell Park[2]: "The myxomata are composed of mucous tissue, whose best known normal representa-

FIG. 1.—Myxomatous Degeneration of Cortex of Ovary, × 1,000. *L*, *L*, Longitudinal section of smooth muscular fibres; *T*, transverse section of same; *M*, *M*, myxomatous tissue; *C*, capillary blood-vessels, transverse section.

tion is the Whartonian jelly of the umbilical cord. Myxomata require complete removal."

Thoma,[3] professor of pathology in the University of Dorpat, says: "Myxoma consists of mucoid tissue. It should rank among the organized tumors as relatively malignant, and the malignancy being shown by its tendency to pass into myxosarcoma."

The above quotations emphasize the fact that tumors composed of circumscribed portions of myxomatous tissue readily become malignant. Even portions of myxomatous degeneration here presented have a resemblance to spindle-celled sarcoma, and some portions resemble small round-celled sarcoma, which is even more malignant. H. T. Butlin[4] says of two myxomata which he had removed: "I believe that both of these tumors were in reality sarcoma." In the Transactions of the same society[5] is given an account of a myxoma repeatedly recurring after removal. Mr. Wharton exhibited before the Surgical Society of Ireland a myxoma, and said: "These myxomatous tumors were allied to sarcomatous growth."

In the thorough and careful microscopical examination of over one hundred ovaries, I have as yet found but five or six marked instances of myxomatous degeneration.

In the drawings here given, the object was to present the tissues in process of being broken down instead of the completed degeneration, which would have been properly represented only by continuous fields of myxomatous tissue.

Fig. 1 is a beautiful illustration of one degree of myxomatous degeneration. Under a power of one thousand diameters we see how the muscle fibres are pushed apart by the new development of myxomatous tissue. This pushing apart must necessarily interfere with the action of these most important structures, and render them incapable of performing their anatomical functions. In the cross sections we see even more clearly how the myxomatous tissue separates the muscle fibres, occupies space, and must make more or less pressure.

In Fig. 2 we have a further step in this destructive degeneration. Some muscle fibres are destroyed. The medullary and embryonal corpuscles are invading the muscles, reducing their fine and wonderful contractile fibres to this curious form of degeneration. Under the microscope, we can see again and again the muscles of the ovaries thus being changed.

That muscles should enter so largely into the anatomical structure of the ovaries, that so large a portion of these organs should be composed of well-organized and well-defined muscle fibres, at once indicates the importance and necessity of these structures. If we magnify the cortex of the ovaries five hundred diameters, as in Fig. 3, we realize the large amount of muscle fibres present in their anatomical formation. This immense muscle structure must be for some purpose, must have some important function. No one yet has told the work of these millions of muscle fibres. Do they by their contractile power help expel the ova; or is this immense system of muscles placed there to render more active the circulation of these most vital organs? When the muscles are thus changed to myxomatous tissue, is not their physiological usefulness destroyed; and when the same myxomatous degeneration sweeps over the whole ovary, where is its functional utility?

Fig. 4 illustrates myxomatous degeneration of the medulla. The muscle fibres are not so large or so strongly marked, yet even here, in this central portion of the ovary, myxomatous degeneration is doing its work.

FIG. 2.—Myxomatous Degeneration of Ovary, × 500. *L*, *L*, Longitudinal section smooth muscular fibres; *T*, *T*, transverse section of same; *M*, *M*, myxomatous tissue between the muscle fibres; *O*, atrophied ovum.

Fig. 5 is an illustration of the incipient tissue changes in the ova. The vesicula is coarsely granular, the yolk broken up into indifferent protoplasmic bodies, as in a subacute inflammatory process. At the upper pole we notice hydropic epithelia with com-

[1] "Manual of Pathological Histology," p. 89.
[2] "Treatise on Surgery by American Authors," 1896.
[3] "Text-Book of General Pathology," p. 542.
[4] Trans. of Pathological Society, London, 1882, p. 324.
[5] *Ibid.*, 1870, p. 269.

pact nuclei in their centres. The rest of the epithelia is partly unchanged, partly transformed into embryonal corpuscles. Outside the smooth muscles are either pushed apart by an interstitial myxomatous tissue, or

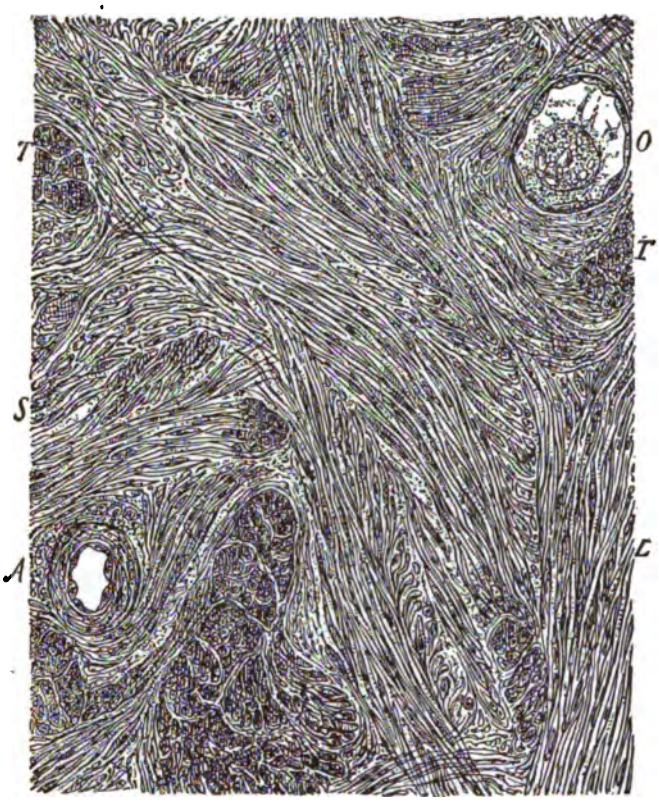

FIG. 3.—Cortex of Normal Ovary, × 500. *L*, Longitudinal bundle; *T*, *T*, transverse bundles; *S*, oblique bundles of smooth muscle fibres; *O*, ovum in the state of indifference; *A*, artery, transverse section.

lost to a certain extent, both of which features explain their scantiness. The muscle spindles themselves are enlarged and coarsely granular, as is seen in parenchymatous oöphoritis.

The same change is represented in a more advanced degree in Fig. 6. In both ova the epithelia are in a state of considerable hydropic swelling. In the ovum *B*, at the right periphery, we notice a broken, structureless membrane, through which the myxomatous tissue inosculates with the remnants of the yolk.

Although the ova are of epithelial origin, they may be partially or entirely transformed into myxomatous tissue, in which change the epithelia surrounding the yolk partake, as well as the yolk and the vesicula. In some instances the ova become atrophied, the remnants of the yolk being invariably found in waxy degeneration (see Fig. 7). In the scanty yolk visible, the vesicula appears to be broken up into a number of highly glistening waxy lumps; whereas the granules of the yolk are enlarged, and to a great extent fused together into a waxy mass of considerable refraction. In the ovum *A*, the greater portion is transformed into myxomatous tissue, in connection with that around the ovum. The ovum *B* is a waxy lump, and a mere remnant of the previous ovum; it is embedded in myxomatous tissue, which pervades the whole cortex of the ovary, with a reduction in the size and number of the muscle spindles, many of which, as seen especially in transverse sections of the muscle bundles, are transformed into points of intersection of the myxomatous tissue itself. No doubt that, in such ovaries, the ova will perish altogether by being transformed into myxomatous tissue.

Inflammation of Myxomatous Tissue.—After an ovary has been reduced to myxomatous degeneration, this new tissue may again be the seat of inflammation, be again reduced to inflammatory corpuscles. Fig. 8 is an illustration of inflamed myxomatous tissue. This was seen in the centre of a gyroma. Gyromata are hard, solid bodies, which seem peculiarly to affect the nervous system. The patient in whose ovaries these gyromatous formations were found was for years subject to hystero-epilepsy, and at times had great mental depression. She had besides a large hæmatoma, or blood cyst, in each ovary.

Fig. 9 shows inflamed myxomatous tissue under a power of one thousand diameters. At *I*, where is the highest degree of inflammation, we see the masses of protoplasm and the great multiplication of living matter. It is in such masses of protoplasm that new tissues are developed, or there may be the formation of pus. As early as 1890 I recognized instances of inflamed myxomatous tissue in the ovary, and I then said:[1] "The myxomatous tissue is filled with inflammatory corpuscles, and in many places there is a new formation of blood-vessels."

In an article, September 6, 1890,[2] I give an instance of another new degeneration breaking down into inflammation and suppuration. In this case the left ovary was the seat of a most remarkable formation, viz., "suppurating endothelioma." This is the first instance of an endothelioma being found in a state of suppuration. I could see, step by step, the transformation of this growth into pus corpuscles. This strongly supports the assertion of S. Stricker and C. Heitzmann, that the constituent parts of living tissue themselves become transformed into pus corpuscles.

Myxomatous degeneration is a most interesting study; and all such pathological changes are necessarily accompanied by constitutional disturbances and local pain. The first glimpse I had of myxomatous degeneration of the ovary was in 1886. I was studying the remaining tissue of an ovary, where most of

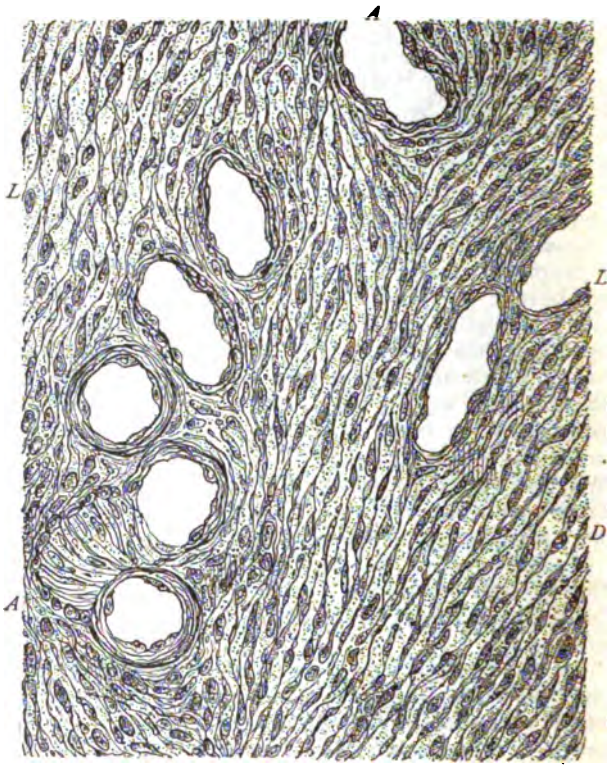

FIG. 4.—Myxomatous Degeneration of Medulla of Ovary, × 500. *A*, *A*, Tortuous artery; *V*, vein; *L*, loose myxomatous tissue; *D*, dense myxomatous tissue.

the organ had been destroyed by an abscess, and in my report of the case I said:[3] "Sections from the vi-

[1] New York Medical Journal, May 10–17, 1890.
[2] MEDICAL RECORD.
[3] MEDICAL RECORD, August 25, 1886.

cinity of the abscess exhibit a marked infiltration of the tissue with inflammatory corpuscles. Both the myxomatous and fibrous connective tissue are transformed into inflammatory corpuscles to a considerable extent. The smooth muscle fibres are likewise transformed into such corpuscles, and in many places rows of corpuscles indicate their origin from smooth muscle fibres. This transformation also invades the endothelia and the smooth muscles of the middle coat of the artery, which near the apices appear to be completely destroyed. The cortical substance of the ovary not invaded by inflammation is of a marked myxomatous character. The right ovary is in a condition of subacute inflammation." The ovaries of this patient, from long-existing oöphoritis or repeated attacks, had evidently first been transformed into fibrous connective tissue, and then, after a new inflammation, into myxomatous tissue. This myxomatous tissue, instead of passing into its near of kin, sarcoma, broke down into dead tissue, forming an abscess filling the whole ovary except the extremest boundaries, where were found fields of intense inflammation, and a few remnants of myxomatous tissue were still left. I removed the ovaries of this patient, January, 1887, when her temperature was 101° F., and her pulse over 100. The patient made a good recovery, and when last heard from was in the enjoyment of excellent health. If the operation had not been performed, she would, long years ago, have been in her grave.

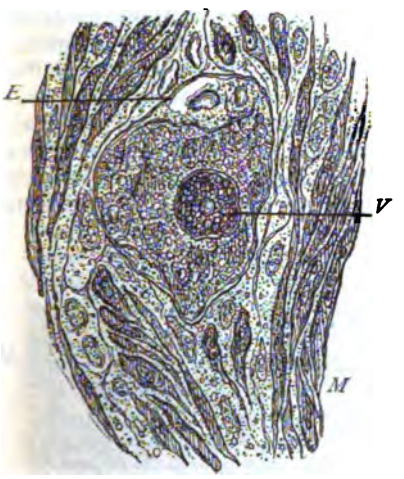

FIG. 5.—Incipient Myxomatous Degeneration of Ovum, × 600. *V*, Vesicula germinativa, coarsely granular, yolk broken up to medullary corpuscles; *E*, hydropic epithelium; *M*, bundles of smooth muscle fibres, between these myxomatous tissue.

In studying various pathological specimens of diseased ovaries, light was occasionally thrown on the subject of myxomatous degeneration. In an article in the *Pittsburg Medical Review*, 1889, I remarked: "There were many lobulated fibromatous bodies inclosing a myxomatous or myxofibrous reticulum." In the next year I said in the *New York Medical Journal* (May 10 and 17, 1890): "In many instances the myxomatous tissue within the walls (of anomalous menstrual bodies) shows the highest degree of inflammation, and, what is more curious, the inflamed myxomatous tissue seems to stretch beyond the walls of the follicle, and apparently transforms large portions of the ovary into its own structure, which structure shows the same inflammatory action and the same new formation of blood-vessels." [1]

Here was the whole subject—myxomatous degeneration invading the ovary. I continued studying various manifestations of this disease, and in 1896 I presented before the New York Pathological Society this form of degeneration of the ovary, and microscopical sections showing the same. The Transactions of the Society, as they appeared in the MEDICAL RECORD, September, 1891, say: "A new form of degeneration of the ovary, by which most of the organ was changed to myxomatous tissue. Out of over eighty diseased ovaries examined, there have been found four specimens showing this degeneration. This condition was associated clinically with marked deterioration of the general health."

Professor Waldeyer, of Berlin, wrote me, May 18, 1896: "I have never seen a myxomatous degeneration of the ovary; perhaps it has hitherto not been seen by any one."

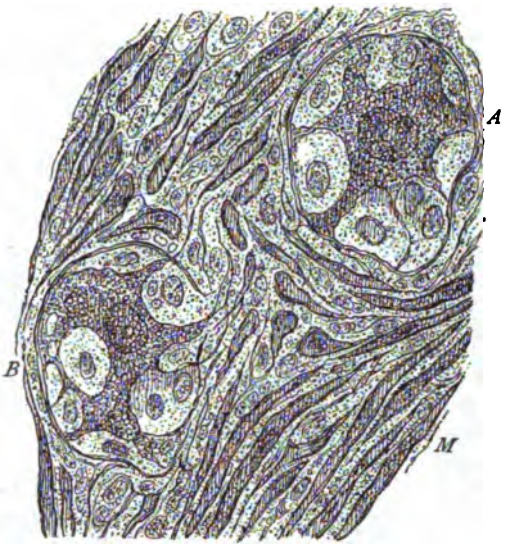

FIG. 6.—Advanced Myxomatous Degeneration of Ova, × 600. *A*, Ovum with all epithelia in hydropic swelling, *B*, ovum, the right periphery of which is blending with myxomatous tissue; *M*, bundles of smooth muscle fibres, between these myxomatous tissue.

In 1897, in a paper before the Alumnæ Association of the Woman's Medical College of Pennsylvania, I referred to this new form of degeneration.

Myxomatous tissue has most important life functions. It constitutes the granulating tissue, always appearing when a loss of substance is to be filled in, as after the bursting of an abscess or any wound complicated with the loss of tissue. In cases of laceration of the cervix uteri, it is the myxomatous tissue that first fills up the gap; and, no doubt, this new-forming myxomatous tissue has often developed into sarcoma. On April 25, 1888, I presented before the New York Pathological Society microscopical specimens of sarcoma of the cervix uteri, and said:[1] "This specimen was not so much to demonstrate a sarcoma as to show that the cervical portion of the uterus was

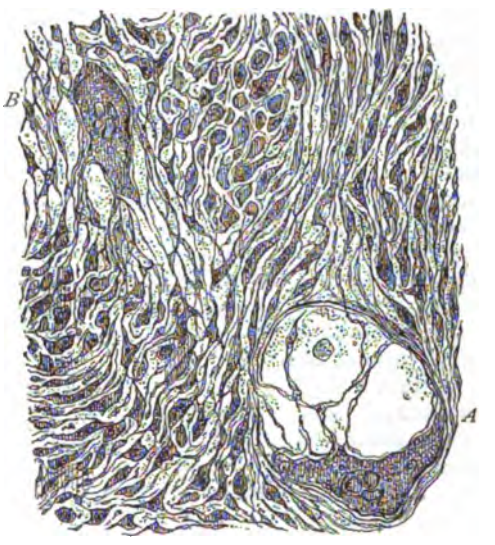

FIG. 7.—Combined Myxomatous and Waxy Degeneration of Ova, Resulting in Atrophy, × 600. *A*, Ovum transformed into myxomatous tissue, vesicula and yolk waxy; *B*, waxy remnant of vesicula and yolk, embedded in myxomatous tissue.

[1] This was seen in the patient, who had a large orange-sized blood cyst of the ovary.

[1] Proceedings of the New York Pathological Society, 1888, p. 65.

hypoplastic before the invasion of the sarcoma, and that the protoplasm of the sarcoma invaded the inflamed and newly formed fibrous" or myxomatous tissue.

One day a young woman was brought to the Wo-

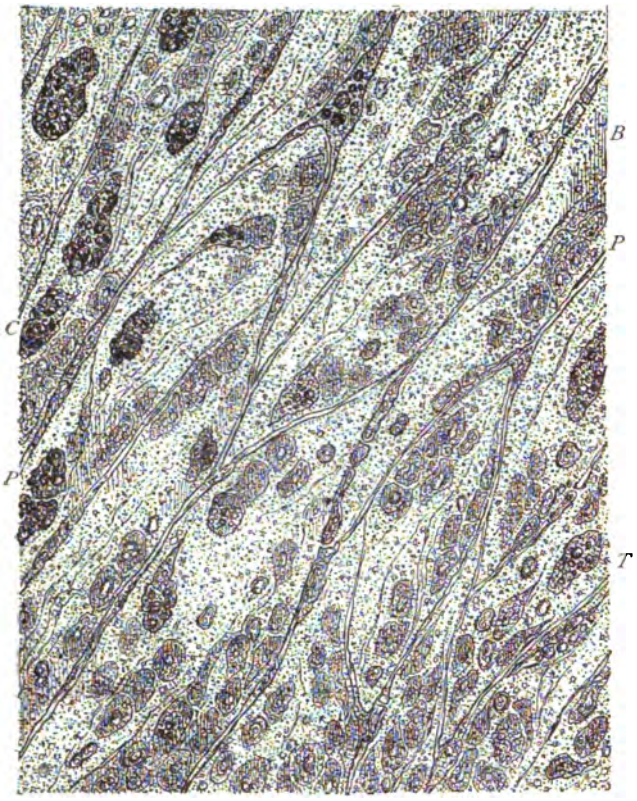

FIG. 8.—Acute Inflammation of Myxomatous Tissue in Centre of Gyroma, × 500. *T*, *T*, Trabeculæ of the myxomatous tissue; *B*, basis-substance transformed to protoplasm; *P*, *P*, protoplasmic bodies arisen in the basis substance, in all stages of development; *C*, pigmented protoplasmic bodies of the original myxomatous tissue.

man's Hospital of Brooklyn, who had a destructive wound of the leg; myxomatous tissue filled this space, and in this repaired tissue sarcoma had developed.

Wherever there is a burst Graafian follicle, there is a loss of tissue, and this repair is by myxomatous formation. The mass that usually surrounds a ruptured follicle is first protoplasm, known as embryonic or medullary tissue, leading to the first and earliest typical formation, that of myxomatous tissue. The gap is first filled up with an embryonal and next with a myxomatous tissue.

Histories.—As all pathological investigation is to show more clearly the nature of the disease, and how by the accompanying symptoms we may recognize it, and if possible relieve and prevent suffering; so, while considering the pathological changes, it would seem desirable to refer a moment to the clinical history of the patients in whose ovaries was found this remarkable form of degeneration.

One patient (Mary L. W——) came with her mother to consult me, March 30, 1887, so emaciated, with such a death-like pallor, that I at first thought there was some fatal tuberculosis, or, more likely, cancer of the liver. I could eliminate disease of every organ except of the ovaries. These were enlarged to six or eight times their normal size, soft, doughy, and extremely sore and sensitive. It was evident there was some unusual form of disease. The patient stated that she suffered with constant pain on both sides of the pelvis, sharp, severe, and lancinating; that she had had much local treatment, by various physicians, but had found no relief. I did not believe the organs, by any treatment or otherwise, could be restored to their normal condition, or be made capable in any degree of performing their physiological functions; and besides, the organs were doing positive and continued injury in the system, were a continued cause of suffering, and a source of constant danger. I informed the patient and her mother that their removal was the only safe course. They expressed themselves as anxious that the operation should be performed, and the husband sent his written wish. The operation I performed at the Woman's Hospital in Brooklyn, May 10, 1887. It was completed in about fifteen minutes, and the patient recovered without a bad symptom.

These ovaries proved to be a mine of pathological wealth. It was in them that I, for the first time, recognized many forms of diseased ova, and they contained a most remarkable development of the disease, endothelioma changing to angioma and hæmatoma;[1] but back of all this was the wonderful myxomatous degeneration. I returned repeatedly to the study of these ovaries and their remarkable developments, and had many sections made and mounted according to the most approved methods, and it was wonderful to look into the presentation of the various diseased conditions, to study them under high and low powers of the microscope. From my frequent drawings, I began to realize more and more the possibility of the malignancy, first, of the endothelioma, and, later, of the myxomatous degeneration. I had more sections made of this growth, still making drawings of the new degeneration, and always found the neighboring fields in the most intense inflammation. Myxomatous degeneration, like endothelioma, is "progressive and destructive." When I consider the history of the patients that had this form of degeneration, and the tendency of the disease, I am forced to the belief that without

FIG. 9.—Inflamed Myxomatous Tissue of Cortex of Ovary, × 1,000. *M*, Myxomatous tissue slightly inflamed; *P*, protoplasmic bodies in basis substance; *T* and *I*, trabeculæ of myxomatous tissue broken up in inflammatory corpuscles; *C*, capillary blood-vessel.

the operation a fatal result would in each case have ensued.

I beg to say here that I have presented to the kindly consideration of the medical profession two hitherto

[1] The New York Medical Journal, September 28, 1889.

undescribed diseases of the ovaries.' These were presented only after the most thorough and careful investigation under high and low powers of the microscope. And now, in presenting this, the third hitherto undescribed disease of the ovary, I do it only after the most careful investigation, and, as has been demonstrated, by repeated examinations. These investigations were mostly pursued in the laboratory of the well-known anatomist and pathologist, Dr. Charles Heitzmann.

Another marked instance of myxomatous degeneration of the ovary was in a young woman, Emma M—— who called at my office in the spring of 1888, extremely feeble and emaciated, and complaining of constant distress and severe pain in the pelvis. She wrote: "For five years I have not had one well day, and the pain makes me so weak that I cannot work." I found the uterus in complete retroversion, and in front and adherent to the pelvis was an enlarged ovary, three and one-half inches in diameter, soft, doughy, and extremely sensitive; in one portion, apparent fluctuation. The left ovary was atrophied and dragged far up to the left, and there firmly bound by many adhesions. This patient was admitted to the Woman's Hospital of Brooklyn. The operation for removing the diseased structures took place April 21, 1888.[2] The patient made an excellent recovery, and at the end of three months was the picture of health, happy that she was free from suffering that previously was incapacitating her for any useful work. I then said: "Without the operation the patient would have remained a confirmed invalid, steadily growing worse." Now, I believe that without the operation there would soon have been a fatal termination.

The specimens removed were presented before the New York Pathological Society, April 25, 1888, with the following report: "An ovarian cyst, and cirrhotic ovary.[3] The right ovary, even after the rupture of the two-inch fluid cyst, was still a large, massive organ, many times larger than the normal size. Must we simply label it, 'enlarged and diseased ovary,' and learn nothing of the pathological conditions that made this enormous enlargement, or why this ovary was so soft, doughy, and so extremely sensitive? I felt that the nature of this disease must be understood, when it was so destructive to this important organ and to this young woman's health. I had a number of sections made of this ovary, and mounted according to the most approved methods. All normal structure seemed to have been destroyed. In one section of the left ovary I counted forty-three ova, all waxy. In other sections there were varying numbers, and all equally diseased. Many of the blood-vessels were also in waxy degeneration."

The next patient in whom I recognized myxomatous degeneration was a young woman, Mrs. R——, who came from western New York to consult me. She said she had been married some years, had no children, and that her whole married life was a period of invalidism, and the severe and continued sufferings were wearing her out, mentally and physically. The uterus was found enlarged and in extreme retroversion, and pressing upon it were the dislocated ovaries, five or six times their normal size, soft, doughy, and extremely sensitive; the slightest touch giving pain and producing nausea, and any force sufficient to replace the uterus or ovaries would cause great distress and suffering. Prof. W. Gill Wylie kindly saw the patient in consultation, and recognized the serious trouble, but neither he nor any one could then tell the nature of the pathological changes. I performed the operation for removing these diseased organs at the Woman's Hospital in Brooklyn, August, 1888. The patient was able to return home in three weeks. The husband wrote May 9, 1889: "I believe the operation and treatment my wife received at your hands were the means of saving her life. Previous to consulting you, she had received treatment from the best physicians, but I could not see that she was any better. Since coming home, there has been a gradual improvement, and now she enjoys better health than at any time since we were married." The uterus of this woman was probably in the same myxomatous degeneration. At the time of the operation, I had the impression that the peculiarly enlarged, soft, and sensitive uterus was so unusually diseased that it should also be removed. I then hesitated to enter upon so radical a procedure; but I believe, if it had been done, it would have been far better for the patient's subsequent health and comfort.

I studied the minute anatomy of these enlarged ovaries, and recognized, first, those peculiar gyromatous formations, the intense oöphoritis, and the ruined ova. All this would have seemed sufficient, but besides, there was this wonderful myxomatous degeneration. Had there been simply the gyromatous growths, the ovaries would probably have been small, hard, and shrivelled. It was the myxomatous degeneration that made them large, soft, and doughy. When such grave conditions are allowed to remain for years, even if finally the offending trouble is removed, they have already done serious and lasting mischief to the system. The only right and safe method is the early removal of such hopelessly diseased organs.

The next case in which I recognized myxomatous degeneration was that of an unmarried woman, thirty-five years of age; the left ovary was entirely converted into an abscess, the right enlarged, swollen, and all the normal structure destroyed by myxomatous degeneration, except some portion showing intense oöphoritis. Most of the ova had disappeared. In one section I counted three, and these were being invaded by myxomatous tissue; all the rest were doubtless destroyed by this degeneration (see Fig. 6; *B* shows the commencement of the reduction of an ovum to myxomatous tissue).

Remarks.—In a paper read before the American Association of Obstetricians and Gynæcologists,[1] on "Conservation of the Ovary," the author said: "Brown-Séquard believed and taught, as a principle of physiology, that every gland, whether or not provided with excretive ducts, gives to the blood a certain useful principle." This all may be true. We cannot now see in a clear light the importance and good of any function of the body; we cannot begin to comprehend the vast capability, or the wide-spreading influence, of the healthy action of any single organ. I said in an article in the *New York Medical Journal*, May, 1890: "The normal action and physiological function of healthy organs will always assist in restoring the system, in whatever way diseased, to a state of health."

The ovaries are small, but there are wonderful and unknown uses of each part of these marvellously constructed organs. Wise men have been studying them, but we yet do not realize or understand their power or their usefulness. We cannot begin to comprehend how they form or grow four hundred thousand ova,[2] or how they make the marvellous changes in these little structures, how they develop any of them into the embryo of a human being. We can only imagine in part the wonderful work of these little organs.

The author of the above-mentioned paper further

[1] The MEDICAL RECORD, August 25th, 1886, p. 198; *Ibid.*, September 5, 1890, p. 262; New York Medical Journal, September 28, 1889, p. 337; *Ibid.*, May 10–17, 1890, pp. 512–542; Buffalo Medical and Surgical Journal, November, 1892, p. 197.

[2] Pittsburg Medical Review, 1889.

[3] The patient also had interstitial pyo-salpingitis of the tubes.

[1] Dr. B. Sheppard Dunn, vol. x., 1897, p. 195.

[2] Sappey.

says: "I believe the troubles observed following their ablation are due to the consequent loss of their secretion to the economy."

No anatomist in the past has told us of any secretory glands in the ovary. I have examined the intimate structure of many, under high and low powers of the microscope, and have never found in them any such anatomical formations; and, besides, it seems to me that these little organs have enough to do, in giving origin to the whole human race, without supplying "a secretion" or "juices" for other portions of the body. But even if the getting up of this beneficent fluid is one of the appointed duties of the ovaries, how can it be accomplished when the organs are diseased, so diseased that the whole normal structure is destroyed? There can then be no "juice," if such a thing is ever made; or are we to understand that an ovarian cyst is a superabundance of this benign fluid?

I rather believe "the troubles following their ablation" are, in many instances, because seriously and dangerously diseased ovaries have been allowed to remain so long in the system, doing constantly great and untold injury. I should be glad if more reason could be found why ovaries should not be removed. I said in 1886,[1] and again in 1888,[2] that they should not be removed for any nervous trouble or constitutional condition; that they should be removed only for incurable disease of the organs themselves, disease that is destructive to health, comfort, and usefulness, and is a threatened danger to life. Or, as I said in the *New York Medical Journal*, May, 1890: "I make the uncompromising sweep of excluding all cases from this operation, except where there is helpless disease of the organs themselves." If they are not hopelessly diseased, it is the saddest thing for them to be removed. No blessing can equal children given to the home. The greatest joy of the human heart is the love of the little ones.

INTUSSUCEPTION IN AN INFANT NINE MONTHS OLD; HIGH RECTAL INJECTION: RECOVERY.[1]

By W. P. NORTHRUP, M.D.,
NEW YORK.

The patient (Herbert S——), aged nine months, not well for two or three days, awakened at one o'clock from an afternoon nap crying. The parents summoned the doctor, not thinking of anything serious. At 2:30 Dr. Lewis K. Neff found the patient pale, apathetic, relaxed. On routine examination he found in the hypogastrium a sausage-shaped tumor. The baby vomited once (after ingestion of food). Temperature, 100.4° F. The doctor injected the bowel with warm water as well as he could at the time unassisted and without anæsthesia. A passage of fecal matter followed, then mucus and blood in considerable quantity, but the sausage-shaped tumor remained unchanged. After a second injection a little fecal matter came away, later more blood and mucus. The doctor ordered the withholding of food, telephoned for a skilled nurse, and disappeared. Four and a half hours from the time the doctor first saw the child, and seven hours from the time the baby awoke crying, there met at the house the family physician with a positive diagnosis, a consultant, and a trained nurse. A skilled surgeon was awaiting orders at his office. In contemplating the executive promptness the reader may be pleased to remember that the doctor is Major Neff of the Eighth New York Volunteers.

[1] The Medical Record.
[2] The American Journal of Obstetrics.
[3] Read before the Pædiatric Section, Academy of Medicine, April 13, 1899.

In a spacious warm bath-room was every arrangement for rectal injection. The patient's history was at this point, then: pain, vomiting, passing of mucus and blood, sausage-shaped tumor in hypogastrium; patient apathetic, relaxed, pale, temperature elevated (ranging in the next twelve hours from 100.4° to 101.5° F.); pulse, 120 to 110; respiration 40 to 38; all figures thereafter dropping to normal. The tumor could be picked up in the relaxed abdominal wall between the thumb and fingers; it could not, however, be felt by the little finger passed into the rectum.

The method of procedure was as usual: water 108° F.; elevation three feet; soft-rubber catheter; a roller bandage; chloroform (complete relaxation). As to the quantity of water: for some other purpose the doctor had hung up in the bath-room a three-gallon glass percolator from which led a large rubber tube, terminating at its lower end in a soft-rubber catheter. These appliances were for present needs perfect. It is desirable to have an unlimited supply of water, and preferably in a transparent glass vessel. There is always plenty of leakage about a catheter in the anus, and the tests of the proper amount of water are made by feeling the abdomen as the water distends it, and watching the effect of the pressure on the action of the heart as the diaphragm crowds up against that organ.

The roller was used in the ordinary way to prevent leakage about the catheter, *i.e.*, the pith of the roller was punched out, and the catheter pushed through so that four to five inches protruded on the distal side. The catheter having been inserted, this bandage when crowded well against the buttocks served its purpose.

The water entering the rectum did not advance in the direction of the spleen, but directly across the hypogastrium, or, to give our impressions more exactly, it seemed to dig its way about deep in the pelvis. As it advanced, too, the sausage seemed to be directly lifted up against the abdominal wall, forming a flattened bow, one end beginning in the left groin arching upward and across, below the level of the navel, and disappearing in the depths of the right groin. The water next seemed to find its way rather suddenly up from the right groin toward the liver. At one moment we had, then, the firm sausage tumor arching from groin to navel and opposite groin, with a fairly full distended feeling of all the region below the navel; the next moment in addition a column putting up to the liver. After this the abdomen took on a general rounded appearance; the heart becoming embarrassed from pressure, some water was allowed to escape. Just here we feared we had not accomplished anything, for the tumor seemed large and unchanged. After removing the chloroform and waiting a little, we injected more water. The same full rounded abdomen led to an embarrassment of the heart, and we again allowed some water to spurt from the anus. The child, not being well under the anæsthetic, ejected the water with force. During this effort something happened. In a few minutes it became certain that there was no longer any trace of the "sausage," and there has not been since.

During this injection blood escaped with the water. After all manipulation had ceased the child slept quietly, improved in color. During the night, it passed blood-tinged fluid with mucus. On the following day it expelled flatus; passed greenish fluid; nursed well; there was no vomiting; it slept well; there was no blood or mucus. On the second day it passed greenish-yellow fluid. After the injection it seemed to have occasionally pain, was restless at times, and cried. On the evening of the second day it became comfortable. On the third day it had a yellow fluid passage; it nursed well, and was comfortable all day.

On fourth day the report says: "Slept well all night; normal passage."

There was no subsequent return of symptoms—now three months.

In this connection I wish to cite a case published in the Medical and Surgical Report of the Presbyterian Hospital (volume 2, 1897), and in the *Medical News* of December 12, 1896. The similarity of symptoms, course, and result adds something to the value of the present recital.

Both cases occurred in the practice of Dr. Neff.

Infant Seven Months Old.	Infant Nine Months Old.
Awoke from early afternoon nap (3 P.M.) crying.	Awoke (1 P.M.) crying.
"Colic."	Fretful.
Diagnosis by physician four hours after crying.	Diagnosis one and one-half hours after crying.
Symptoms—Pallor, stupor, apathy, relaxed.	Pale, relaxed, apathetic.
Sausage-shaped tumor along lower margin of liver, easily felt.	Sausage-shaped tumor arching across hypogastrium, easily felt.
Vomited (several times).	Vomited (once).
After enema—free blood and mucus.	After enema—free blood and mucus.
Two high rectal injections caused:	One high rectal injection caused:
Reduction of intussception.	Reduction.
Recovery.	Recovery.
No return, now three years.	No return, now three months.

Some previous experience added to the two cases herewith presented strengthens my belief that in recent cases of intussusception, moderate pressure (three to five feet) of warm water (105° to 108°), prolonged to full distention, is justifiable and advisable.

APPENDICITIS OR SALPINGITIS WITH COMPLICATIONS, AND A REPORT OF SOME UNUSUAL CASES.

By THOMAS H. HAWKINS, A.M., M.D.,

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Appendicitis is the fad of the day. Not only does it seem fashionable for people to have appendicitis, but it is the topic of conversation in every hotel, in every boarding-house, in every hospital, perhaps in most private families. I hear the subject discussed on the street corners while I am waiting for a car. It is argued about in the daily press; it is the fashionable topic for physicians to write upon; it is the one theme, more than all others, that is debated in medical societies. Within the last two years not less than a dozen of the most prominent citizens of Denver have died of appendicitis, or, as the morning papers state it, "from a surgical operation." Unfortunately, the papers are not fair in their statements concerning appendicitis. Very few, if any, subjects of appendicitis die of the effects of a surgical operation; the fact is, they die of this disease in spite of the fact that a surgical operation was performed with the hope that the patient might possibly be saved. Whether appendicitis should, in every instance, be considered a surgical disease and be operated upon immediately the disease is diagnosed, is a question that cannot be settled in a day or a year, possibly in half a century. We know this much, however, that of the cases operated upon within twelve to twenty-four hours after the beginning of the attack, the majority recover. If the operation is performed before rupture of the appendix, nearly every patient is cured. Of persons operated on after rupture of the abscessed appendix into the abdominal cavity, and after there is more or less infection, a very large percentage die. All of this last class of patients succumb when not operated upon. When there is a distinct abscess formed and walled in and not infecting the general abdominal or pelvic cavity, there is nearly always recovery after operation and drainage. Those operated on in the interval of the attack also get well. It seems perfectly clear, therefore, to my mind, that if we can save a large proportion of the cases of appendicitis by operating before rupture and general infection, it is our duty to do so within twelve to twenty-four hours, or sooner if possible, from the onset of the attack.

Second. If it is true that all cases of the fulminating variety of rupture and general infection are fatal without an operation, and that occasionally a patient recovers with the operation, it is our duty to operate in all these cases. The only argument that can be brought to bear against this last statement is that it gives the newspapers an excuse to carp, and that it discourages and misleads the general public as to the value of appendicitic surgery.

Third. If we are called to see a case a week or ten days after the onset of the trouble, and the abscess is walled off, it is plainly our duty to operate.

The question of operating in the interval will depend upon many things which I shall not discuss at this time. A cry comes from the public that a larger percentage of the patients not operated upon recover than of those submitted to surgical operations. This statement is probably true, inasmuch as the majority of patients, in fact, so far as my observation goes, nearly every patient who dies of appendicitis submits sooner or later, generally too late, to an operation, many of them only after all hope of recovery is abandoned. Some cases of appendicitis (sometimes mistaken diagnosis) run a mild course and get well; yet, if these cases had been severe, or if severe complications had set in, the patient very likely, almost certainly as a last resort, would have submitted to an operation—so that it is hardly fair to make the aforesaid comparisons. Newspapers, or those who write for the newspapers, must surely know that they are misrepresenting facts. There are some cases not operated upon for the reason that the doctor considers them hopeless with an operation and hopeless without it; but even under these circumstances I believe it is the duty of the surgeon to operate. One of the cases to be reported in this paper was certainly, so far as the physicians could judge, as nearly hopeless as it was possible to conceive, yet the patient recovered, when without an operation she would have died within twenty-four hours. Whether the adhesions should be broken up, the appendix searched for and removed in every case, is not a question which I purpose to discuss at this time; but I do believe that if it was the rule to operate in every case diagnosed as appendicitis, and if surgeons were agreed that every case of appendicitis should be considered a surgical disease, and that it was the duty of the physician or surgeon seeing a case to urge an immediate operation, a much larger proportion of recoveries would be noted.

I have in my experience met with some unusual complications, though not more perhaps than have been experienced by other physicians. Something like seventeen years ago there was admitted to the Arapahoe County Hospital, in Denver, a man about thirty years of age, who was supposed to be suffering from chronic hip-joint disease. He had suffered severely and was very much emaciated. He had plaster straps on his leg, which had been used for the purpose of extension. The doctor who had been treating him sent him to the hospital to have a "psoas abscess" opened. There was some tenderness about the man's hip, and while the right limb was usually drawn up, there was no special rotation outward or twisting inward; in fact, there were no marked symptoms of hip-

joint disease. There was some tenderness in the right groin, but not any noticeable swelling over the region of the appendix. On his back was a very large abscess, covering nearly all the right side, that is, from the ribs down below the crest of the ilium and pushing out over the spine. I made quite a free incision and removed not less than one gallon of pus, and then introduced a rubber tube to wash out the cavity. While pushing the tube around in the abscess space I noticed that it seemed to pass over into the abdominal cavity; I enlarged the opening and inserted my finger in behind the crest of the ilium, down behind the cæcum, and pretty well into the pelvic cavity. The wound was drained, and within three weeks' time the man was up and about the hospital; all discharge of pus had ceased, and he remained perfectly well. Was this a case of appendicitis?

Eight years ago this winter I was called by Dr. J. L. Clark, of Denver, to see a woman who had been sick in bed for something like two months. Her suffering had been severe during all this time; she had had chills, rise of temperature every day, and other signs of general sepsis. Upon examining her abdomen I found it enormously distended, with an area of dulness including almost the entire abdominal parietes. I concluded that probably she had a suppurating ovarian cyst, and advised operation. She was placed under chloroform, and, assisted by Dr. J. L. Clark, I proceeded to open the abdominal cavity; an incision through the skin brought the pus, and I am sure that I do not exaggerate when I state that fully three gallons of pus discharged. I enlarged the incision and found, so far as I could ascertain, that the pus was extra-peritoneal. I passed my hand well over into the right side and behind the colon, and back of the cæcum and down into the right side of the pelvic cavity, but I could not feel the uterus or the tubes or the ovaries, nor could I find a sign of the intestines. I filled loosely this entire cavity with iodoform and plain sterilized gauze; this was removed at the end of twenty-four hours and the cavity was washed out with sterilized water. Some fresh gauze, sufficient to maintain the opening in the abdominal cavity and to keep up drainage, was inserted. Twenty-four hours later, upon removing the gauze, a large quantity of fecal matter was discharged. We satisfied ourselves that the fecal matter came from the right side, and that it was from sloughing of the cæcum. This cavity was washed out every day. Fecal matter continued to make its appearance for many months, but finally ceased and the opening closed. The woman has been in excellent health all these years. Was this a case of appendicitis?

Six years ago, at the Deaconess Hospital, in Denver, there was admitted a patient from Montrose, Colo., with the most distended abdomen that I have ever witnessed in my experience, although I saw and removed at one time, and in the city of Denver, an ovarian cyst that weighed one hundred and sixteen pounds; yet the distention of the abdomen in the latter patient was not nearly so great as the former. This patient gave a history of having had typhoid fever one year before; she had not been well since that time, and said that she had been gradually getting larger. She was the most emaciated woman, except for the distention of the abdomen, I had ever seen. Her temperature was only 99° F. and a fraction, pulse ranging from 130 to 140. I gave her chloroform and made an incision in the median line, which was just barely sufficient to have cut through the skin, when pus gushed out and shot up into the air fully two feet. I cannot state now the amount of pus removed. I enlarged the opening, and put my hand inside, but there were no intestines in sight. I could push my hand completely up, in front of the liver, then down before and behind the kidneys, and into the pelvic cavity, but could nowhere feel the uterus or its appendages or the intestines. The entire collection was evidently an extra-peritoneal abscess, and the pocket at the right side was deeper, especially in the region of the cæcum and appendix. I placed drainage tubes in both flanks and one in the centre of the abdomen, and by frequent irrigation washed out the abscess cavity. The patient's condition rapidly improved, and she recovered in an astonishingly short period of time. The patient informed me that all of her pain had been in the right side, "in her groin," as she explained it; that she was at first taken sick with vomiting and great pain in the region of the appendix, and later she had chills and fever, and her doctor had treated her for typhoid. I saw this woman only recently, and she tells me that she has been in perfect health ever since she left the hospital. Was this a case of appendicitis?

I shall now report four cases of special interest, not only in the matter of diagnosis, but as showing the possible origin sometimes of appendicitis, or it may be sometimes of salpingitis. Is it possible for the appendix to complicate and infect the tube and produce a septic salpingitis, or may the infected tube complicate and produce an infection of the appendix? I have within the last three years found the appendix apparently healthy, but firmly attached by adhesions to the side of the uterus or to the Fallopian tube or to the ovary, in no less than seventeen instances. In two of the cases to be reported I found the appendix caught up by the fimbriated end of the Fallopian tube. Both of these cases were in young girls, and there was no history of any uterine or tubal infection, or of pelvic inflammation. The appendix in both cases was not specially diseased, but the Fallopian tubes were filled with pus—typical pus tubes. In another of the patients there was an apparent rupture of the appendix; though it was not specially diseased, yet there were bands of adhesion about it. She gave a history of having had appendicitis when a girl. She was unmarried, and there was no reason to believe that she had ever had any special uterine or tubal disease. There had evidently, in this case, been at one time a large blood clot, and one of the physicians who were present remarked that this was unquestionably a case of pelvic hæmatocele from a ruptured appendix.

Case I.—December 26, 1898, I was called to see Miss M——, a native of the United States, single, aged twenty-seven years. While riding her bicycle some two weeks prior to the date of my visit she experienced a severe pain in the right iliac region, particularly in the region of the appendix. For several days the pain was very severe, and she was obliged to keep the right leg drawn up and to remain quiet on her back; there were vomiting and constipation. At the end of three or four days she was out and able to be around, though the pain in the region of the appendix continued in a modified degree. Just three days before I saw her she had a second attack of pain and vomiting, and on the day of my first visit she had a severe chill. The pain, instead of being confined to the region of the appendix, was now more generally distributed throughout the abdomen and extended into the region of the right ovary and tube. There were marked tenderness and more or less rigidity of the muscles in the region of the appendix and downward to the pubic bone. I advised the patient to go to the hospital, but she positively refused. I ordered her to remain quiet, prescribed some mild chloride of mercury and a rectal enema of Epsom salts and glycerin. The next day I received word that the patient was feeling better and was sitting up. Two days after this I was again called, and found that the pain and tenderness in the right iliac region had increased. By this time I could feel a swelling or mass of some

kind reaching from about the head of the cæcum pretty well down to the right side of the uterus. The next day, January 1, 1899, the patient was admitted to St. Anthony's Hospital. Operation was advised but declined. The 2d, 3d, and 4th of January the patient was in most excruciating pain, vomiting occasionally; the pain was located principally in the region of the cæcum. The temperature ranged from 100° to 103° F.; pulse, about 130. On the morning of January 5th, her temperature was 104° F.; pulse, 140; pain intense, vomiting persistent, dark greenish-brown in character; the patient consented to an operation. Her friends were advised that, although I was willing to do the operation, the case was probably hopeless. The patient being under the influence of an anæsthetic, I could distinctly outline a mass extending well up into the right iliac region. On vaginal examination with firm pressure high up I could very indistinctly feel a fluctuating mass. I decided to make my incision in the median line. Upon opening into the abdominal cavity I found adhesions between the intestines and omentum, uterus, bladder, etc. Carefully separating the adhesions and working over to the right side of the uterus, I entered a cavity filled with pus, decomposed blood, and partially broken-down blood clots. On separating the adhesions, I found dipping down into this cavity some looped portions of intestines that were black and covered with a grayish-white exudate—in short, apparently gangrenous. Gradually separating adhesions and pulling up the intestines, I worked my way up to the head of the cæcum. I palpated a mass here which, upon careful investigation, contained the appendix; it was less diseased and less involved than were the intestines or omentum. I removed the appendix and found it to be apparently healthy, but with a hole in one side, presenting much the appearance of a ruptured Fallopian tube. The ovary, tube, and uterus I was unable to find, as they were walled off by adhesions and exudate. The cavity was cleansed as thoroughly as possible; the intestines required resection, but the patient's condition was such that I dared not do further operating, so I rolled the dark portions of the intestines in plain sterilized gauze. The patient died nine hours later.

Case II.—Miss A. S——, aged nineteen years, single, native of the United States, of German parentage; occupation, a domestic. She was admitted to St. Anthony's Hospital, March 3, 1898. I was called to see this patient March 2d, and learned that she had been sick three weeks with typhoid fever; she was supposed to be convalescent. On the day before I saw her she had a chill brought on from over-eating, as she thought, causing a relapse. I sent her to the hospital, and on the next day, March 3d, made a careful examination in consultation with Dr. Leonard Freeman, of Denver. We were both very sure that hers was a case of appendicitis. She had the characteristic tenderness and board-like resistance in the right side; she had very severe pain; her temperature was 103° F., and pulse, 110. I made an examination per vaginam, but could not ascertain that the uterus was in any way limited in its movements. There was no tenderness upon vaginal examination; lifting or forcing the uterus into different positions did not cause any special pain. Firm pressure, however, with the index finger high up in the right side caused moderately severe pain, which was referred to the region of the appendix. Operation was advised, but the patient objected, and her sister, who was present, even more bitterly opposed operative measures. On March 5th, her temperature was 103° F.; pulse, 110. March 6th and 7th, temperature and pulse were about the same. On the evening of March 7th, the patient had quite a severe chill, followed by profuse sweating. Her pulse was very weak, and general condition bad. Her pain was so intense that it was absolutely necessary to give morphine. March 8th, the patient consented to an operation; an anæsthetic was given, and I made my incision in the usual way for removal of the appendix. I experienced considerable difficulty in penetrating the abdominal cavity. I found some adhesions about the cæcum, but no abscess. After spending twenty or thirty minutes in hunting for the appendix, and failing to find it, I concluded to enlarge the incision slightly and then push my finger down into the region of the right Fallopian tube. Here I encountered a distinct mass; passing my finger around it and freeing the adhesions, I discovered that I had the right Fallopian tube, which was unusually long, the fimbriated end being high up in the right side. Freeing adhesions from about it, I brought the end of this tube into the incision, and along with it the appendix, which was grasped by the fimbriated end of the tube. The appendix was covered, except at the point at which it was inserted into the tube, by adhesions all the way up to its attachment to the cæcum. I stripped the appendix out of its covering of adhesions, then drew the pus tube well up into the incision, and, slipping a ligature around, tied it by means of a slip-knot close to the uterus, cut off the tube with a pair of curved scissors, and left the ligature long and hanging out at the lower end of the wound. I placed a small piece of gauze drainage well down into the cavity, for there was already present a small collection of pus in the right side of the pelvic cavity, the result of a leakage that had doubtless taken place the night before the operation, giving rise to the chill.

The patient's temperature on the morning of the 8th was 100° F.; pulse, 90. On the morning of the 9th her temperature was 98.5° F.; pulse, 80; on the morning of the 10th, temperature, 99° F. and pulse, 90; on the morning and evening of the 11th, 12th, and 13th, temperature was about 99° F. On the 14th the patient had a chill and a severe acute pain in the right side of the chest, and was unable to take a full breath because of pain; her temperature went up to 104.25° F.; pulse, to 120. Dr. C. P. Conroy made an examination and diagnosed pleurisy. On the 15th, 16th, 17th, and 18th her temperature ranged from 101° to 103° F.; for the next ten days it ranged from normal to 102° F., and then there was a gradual decline during the next ten days to normal. On April 7th I gave the patient chloroform, and with gentle traction of the ligature, which had been tied around the tube, it came away, and a few days later she left the hospital in good condition. I saw and examined this patient December 15, 1898, eight months after she left the hospital, and she was in perfect health.

Case III.—Miss A. B——, aged sixteen years, native of the United States, single, admitted to St. Anthony's Hospital March 21, 1898. I was called in consultation March 20th, about eleven o'clock at night, by Dr. Kleiner, of this city. Dr. Kleiner had made a diagnosis of appendicitis before my arrival, and I agreed with him. The patient had been taken sick, three days prior to my visit, with a chill, vomiting, and severe pain in the region of the appendix, extending up the right side and across to the umbilicus. There was no pain in the opposite side or the lower pelvis. Examination revealed tenderness, with slight muscular rigidity in the region of the appendix, particularly marked at the McBurney point. An examination per vaginam showed the uterus movable. High up in the right side, as far as I could make pressure with the index finger inside the vagina, there was much tenderness, and the pain was referred to the region of the appendix. The patient was removed to the hospital on the morning of the 21st, and at eleven o'clock of this same day an anæsthetic was given. After making a careful examina-

tion I thought that I detected an enlargement of the right Fallopian tube, and, in the light of my experience with Case II., I decided to make the incision in the median line. Opening into the abdomino-pelvic cavity I found the left ovary and tube perfectly healthy, the uterus slightly enlarged. The right tube was filled with pus; the right ovary was normal except for adhesions. Following along the tube and separating the adhesions, I found that the fimbriated extremity was high up in the appendical region. With careful manipulation I separated the adhesions and located the appendix, and discovered that the tail of this organ was caught in the fimbriated end of the Fallopian tube—in fact, the end of the appendix was pushed into the tube just as a cork is into a bottle. The appendix was slightly thickened but practically in a normal condition. I ligated and tied off the appendix close up to the head of the cæcum, and removed the right Fallopian tube and ovary, leaving the appendix inserted in the end of the tube just as I had found it, making a very rare or unique specimen. The patient's temperature on the morning of the operation was 101° F.; pulse, 120. Twenty-four hours after the operation the temperature was normal, and never during her stay in the hospital became abnormal again. The patient left the hospital April 10th; she was, therefore, in the hospital twenty days, although she was out of bed and around in her room eight days after the operation.

Case IV.—Mrs. A. J—— was admitted to St. Anthony's Hospital May 21, 1898. She was aged thirty-seven years, married, a native of Sweden; occupation, tailoress; mother of several children. On May 15th I was called in consultation by Dr. C. B. Richmond to see this patient. She had been sick some ten days or two weeks with pain in the abdomen, mostly in the region of the umbilicus, extending over into the right side, and especially to the region of the appendix. No particular pain was referred to the lower pelvis. Her abdomen was considerably distended and tympanitic, with more or less general tenderness on pressure, especially marked over the appendix and at the McBurney point. She had been having chills at different times, and her temperature fluctuated from 100° to 105° F. At the time I saw her the temperature was 103° F.; pulse, 130, small and weak; the patient was vomiting almost incessantly; the vomit was blackish-brown in color; diagnosis, appendicitis. She gave no history of any previous attacks. She was advised to go to the hospital. The ambulance was sent for, but when it arrived the patient's pulse was so rapid and so very weak, and the general condition so unfavorable, that it was decided not to take her. As the case was probably hopeless I thought it would not be advisable to operate. From this time on during the next three days she was apparently in collapse with complete suppression of the urine and obstinate constipation. Rectal enemas of hot water persisted in for forty-eight hours succeeded in moving the bowels to a moderately copious degree. The patient vomited every few minutes. At the end of three days a small amount of urine was obtained, but the patient was in a comatose condition. During the next twenty-four hours there was quite a free discharge of urine and the bowels moved freely. The patient's condition slightly improved; pulse, 140, weak and thready; temperature, 103° F. The vomiting was less frequent, allowing some nourishment to be retained. On May 21st and 22d the patient seemed slightly improved. Saturday night, May 22d, about eleven o'clock, she had severe pain and sweating. One hour later, with patient under the influence of an anæsthetic, I made an incision over the appendix; I opened into a pocket filled with the most foul, vile-smelling pus that it was ever my privilege to encounter. With my finger in the first pus cavity exploring around the head of the cæcum, I opened into another large abscess extending down to the right side of the uterus and involving the right tube and ovary; fully two pints of pus were removed. These pus cavities were very gently flushed out with sterilized salt solution; the cavity was loosely packed with iodoform gauze, folded into plain sterilized gauze.

The temperature on the night of the operation was 103.5° F. The next day, May 23d, temperature was 100° F.; on the 24th, 100° F.; 25th, 98.5° F.; pulse, 100. For the next fifteen days the temperature was about normal; pulse, 85 to 95. The pus cavity was carefully washed out every day with a warm sterilized salt solution, with drainage tube inserted. On the 12th of June the patient was practically convalescent, but on the next day she had a severe chill, intense pain in right side of chest, causing dyspnœa; the temperature rose to 100° F.; pulse, to 130; examination revealed pleurisy. During the next five days the temperature remained about the same, and the pulse ranged from 95 to 100. On June 25th she was discharged cured.

Progress of Medical Science.

A New and Simple Clinical Method of Staining Malarial Parasites.—Dr. Fuchten has recently presented to the Johns Hopkins Hospital Medical Society a rapid and very convenient method of staining the plasmodium malariæ. The dry blood specimen, spread in a thin film on a slide, as described by Ehrlich, is fixed by immersion for one minute in a one-per-cent. solution of formalin in ninety-per-cent. alcohol. Thyonin is the staining agent. A stock solution is made by adding 20 c.c. of a fifty-per-cent. alcoholic solution of thyonin to 100 c.c. of a two-per-cent. solution of carbolic acid. This stock solution improves with age, and can therefore be kept on hand. The fixed slide is dipped in the staining fluid, without previously washing off the excess of formalin solution, and left there for from ten to fifteen seconds. Ten seconds generally gives the most satisfactory results. The excess stain is washed off, and the specimen, mounted in balsam, is ready to be examined. The malarial parasites come out distinctly with this stain, and retain the color much better than when stained with methylene blue. The thyonin stain has also been used to bring out the flagellated processes in the æstivo-autumnal infections, and some good specimens have been obtained.

A Test for the Differentiation of the Bacillus Coli Communis and the Bacillus Typhosus.—In an interesting paper, read before the Sydney and New South Wales Branch of the British Medical Association, setting forth his experience with the Widal reaction in typhoid fever, in the pathological department of the Sydney Hospital, Dr. Sydney Jamieson makes reference to a simple differential test of the bacillus coli communis and the bacillus typhosus. He observed that in most cases of cystitis accompanied by fetid urine, the prevailing organism was the bacillus coli communis, and concluded that probably the growth of this organism was the cause of the ammoniacal decomposition of the urine. He then inoculated several tubes containing sterilized healthy urine with cultures of the bacillus coli communis, and a similar number with the bacillus typhosus, and incubated them at 37° C. In the course of a few days it was found that the urine in the tubes which had been inoculated with the former had undergone ammoniacal decomposition, while the urine in the tubes inoculated with the latter

remained unchanged even for several weeks. If these results of this observation are confirmed we shall be in possession of a valuable negative test for the bacillus typhosus.

The Treatment of Hypopyon Keratitis.—Dr. Eduard Zinn finds that Saemisch's method of emptying the anterior chamber in hypopyon is almost always followed by more or less harmful sequelæ, such as adhesions of the iris with the operation wound, secondary glaucoma, etc., and has for the past few years (*Wiener klinische Wochenschrift*, No. 9, 1899) resorted to the following procedures: (1) Small ulcers not yet complicated by hypopyon are always cauterized, as far as the yellow infiltration extends, with a fine-pointed galvano-cautery attachment. If the hypopyon is small, not more than 2.2 mm. high, nothing further is done. According to experience resorption of this small exudate takes place during the further treatment of the ulcer. If the ulcer is broad and the hypopyon large, extending to the middle of the chamber or farther, the ulcer is freely cauterized and its lowest portion burned until the base is perforated. By rubbing or stroking with a Daviel spoon, the pus is usually evacuated from the chamber. The small quantity of pus remaining behind will be absorbed. Only in exceptional cases is a wound otherwise made, and then only with a curved lance, and at the lower sclero-corneal margin. (2) Instillation of atropine or scopolamine two to four times daily. (3) The eye is immediately covered with a Fuchs protecting shield. The patients may walk about. They should have nutritious diet. (4) Every two hours, by night also, the shield is removed, and sublimate vaseline (1 : 5,000) is rubbed into the conjunctival sac with a cotton tampon, and the shield immediately replaced. (5) The cornea is dusted lightly with xeroform three to six times a day. (6) When blennorrhœa of the lacrymal sac coexists, the sac is emptied by compression, and the pus removed with a tampon dipped in sublimate before the salve is applied. Xeroform emulsion (xeroform 10; glycerin, distilled water, āā 50) may be injected into the lacrymal duct two to four times a day. (7) Should the ulcer show a tendency to progress, which is seldom the case, the affected area is cauterized.

Successful Transpleural Hepatotomy for Abscess of the Liver Complicating Ruptured Tubal Pregnancy.—Matas (*Journal of the American Medical Association*, April 15, 1899, p. 806) reports the case of a married woman, thirty years old, who had been pregnant thrice previously and believed herself to be again so. Menstruation had not appeared for twelve weeks, when the patient was suddenly seized with acute pain in the hypogastrium, together with prostration, dizziness, a sinking feeling, faintness, cold sweating, and extreme pallor. Improvement followed under treatment, but recurrence of the symptoms took place in about two weeks. A semi-fluctuating mass was, on vaginal examination, found behind the uterus, and a diagnosis of ectopic pregnancy was made. The condition of the patient seemed to forbid immediate operation, and supporting and preparatory treatment was instituted. During this period, while a hot douche was being given, a complete cast of the uterine cavity, evidently decidual membrane, was passed. Several days later symptoms of hemorrhage reappeared and operation was undertaken. When the abdomen was opened an enormous pelvic hematocele was found, in the centre of which were the uterus and the remains of the left oviduct. No embryo, but only a mass resembling placenta, could be detected. The right oviduct was cystic. The blood was removed and both tubes were resected. Intravenous infusion was practised, the peritoneal cavity was generously irrigated with hot saline solution and tamponed, and the wound was closed by suture. In the further course of the case, symptoms of hepatic abscess appeared, and two pints of thin pus were evacuated from the liver by aspiration; two weeks later a pint more of creamy yellow pus was aspirated. The condition not improving, the liver was attacked from the right pleural cavity, three and one-half inches of the ninth right rib being excised. More than a pint of thick pus and flakes of slough was removed, the abscess cavity being then swabbed and packed. The tampon was removed on the thirteenth day and replaced by a small drain. The patient was finally dismissed well sixty-six days after the cœliotomy and twenty-eight days after hepatotomy.

On Typhoid Paralysis.—Dr. N. Ritscher (*Bolnitschnaja Gaseta Botkina*, Nos. 45, 46, 1899), after reviewing the literature on the subject of paralysis occurring in the course of typhoid fever, described three cases that had come under his own observation. One of the cases presented a right-sided hemiplegia that developed on the thirty-fifth day of the disease; in the other two the left facial nerve was affected; in both instances the paralysis developed on the ninth day. As a result of his own observations and a careful research of the literature, he arrives at the following conclusions: In typhoid fever paralysis of individual nerves, of entire nerve groups, paraplegias, hemiplegias, and finally general paralyses (ascending paralysis and progressive muscular atrophy) may occur. They develop either suddenly or gradually, almost always in the period of declining temperature. In the majority of cases the paralyses disappear after weeks or months, seldom remaining stationary (peripheral paralysis) or have a lethal termination (hemiplegia and ascending paralysis). They may be of functional or inflammatory origin (myositis, neuritis, myelitis, encephalitis) or result from emboli or thrombi. With the exception of emboli of the cerebral arteries which originate from marantic cardiac thrombi, the paralyses owe their origin to the action of the typhoid toxins.

Successful Operation for Perforating Wounds of the Liver, Kidney, Pleura, and Diaphragm.—A case reported by Abbe (*Annals of Surgery*, April, 1899, p. 492) before a recent meeting of the New York Surgical Society is a forcible illustration of the possibility of recovery from grave traumatic conditions upon the prompt institution of radical surgical measures. A man weighing about one hundred and eighty pounds, while riding a bicycle at moderate speed, came into violent collision with a wagon moving in an opposite direction, and was impaled by one of the shafts, which first penetrated the right arm, separating the biceps and the vessels from the humerus and, pinioning the arm to the side, crushed into the chest, breaking in the tenth rib just behind the mid-axillary line, tearing through the diaphragm and the liver, and detaching the latter somewhat from its posterior support. The pointed and worn shaft was now swept backward and, making a ragged laceration through the liver, caught the kidney against the spine and cut its upper third almost completely from the lower two-thirds. At this stage the shaft was broken at the outer side of the arm by the weight of the body, and, as the patient fell from his wheel, the broken portion was drawn out and fell in the roadway. Some little time afterward the man was found faint and bleeding, and, on account of shock, only temporary surgical dressings were applied and restoratives were used. A large splinter of wood was removed from the transfixed arm. The contents of the bladder, withdrawn by catheter, were found to consist of almost pure blood. Seven hours elapsed before the condition of the patient was considered sufficiently good to permit of operative interference. A six-inch incision was made along the tenth rib,

which was resected at the site of comminution, so as to allow of free access to the pleura, from which was sponged out clotted blood mixed with bile and perhaps urine, estimated to be about a quart in all. The lacerated wound of the diaphragm was now enlarged so as readily to admit the hand. As blood flowed freely from the torn liver on being disturbed, a temporary tampon of gauze was thrust into the rent, while an incision was made below the ribs, as, to resect the kidney, a satisfactory access to that wounded organ could be secured only from below. Through the two lesions, the upper third of the liver was found on bimaual palpation to be torn from the lower two-thirds, so that it could be moved as on a hinge. The rent in the liver was not a hole, but a plane section, and admitted the hand with four fingers side by side. The patient's condition did not warrant resection of the kidney or further operation. Extravasated blood in the peritoneal cavity surrounding the kidney was quickly sponged away with hot saline solution. A light iodoform gauze packing was then begun through the pleural wound, beginning at the kidney and continuing up through the liver and between the liver and the chest-wall, where the former was torn away. This was brought up through the diaphragm and out of the chest. A lighter tamponade, largely of plain sterile gauze, was placed in the pleura up to the retracted lung. The lower wound was partly sutured in haste. It seemed now as if the patient could with difficulty be removed from the operating-table alive, but by elevation of the lower extremities and injection of a quart of hot saline solution into the veins, the man rallied and he passed a fairly good night. The subsequent course of the case was attended with much anxiety, and it was a month before the patient was considered beyond danger. During that time the temperature varied between 102° and 104°, and the liver seemed to discharge through the wound almost all of its bile, mixed with the urine from the kidney; then the flow of bile lessened and finally ceased, although the urine continued to discharge through the narrowed sinus for two and a half months. The lung healed progressively, as in an ordinary empyema. After six months the patient had made an excellent convalescence, and had almost regained his normal health.

Two New Modifications of Enterorrhaphy.—After discussing the various forms of intestinal anastomosis and enterorrhaphy hitherto proposed, MacLennan (*Lancet*, February 25, 1899, p. 501) describes the following mode of procedure: Into the proximal end of the gut is inserted a short, light, decalcified-bone tube, of a diameter somewhat less than that of the intestine in its normal condition. It is essential to differentiate between the proximal and distal extremities of the gut, as an unfavorable result may arise from mistake. The use of too large a tube adds difficulty to the technic and perpetuates a distention of the gut that is detrimental. In the case of rabbits the length of the tube may be twice its diameter, but for operations on a larger gut the tube can be greatly shortened, so that its length does not exceed its diameter. The thickness of the tube may be only sufficient to give it stability and allow of two circular grooves. Rubber, potato, or turnip tubing might answer the purpose equally well as decalcified bone. The tube is introduced into the bowel and fixed in position by surrounding the bowel with a ligature that fits into the distal and more shallow of the two grooves in the bone tube. At a distance of from one-third to one-half inch from the edge of the distal end of the bowel, at a point opposite the mesenteric attachment, the two ends of a loop of silkworm gut (threaded on a needle) or of silver wire are passed through the entire thickness of the bowel. The loop is then drawn within the lumen of the gut, and, while its extremities are outside, by a backward push it is made to distend the wall of the intestine. When so distended, the part of the intestine outside the loop allows itself to be easily involuted into the intestine through the distending ring. Into this gut-lined ring is next inserted the proximal end of the bowel with its contained tube until the wire or silkworm gut comes to lie around the second groove in the bone tube. The ligature is now firmly tied. By this means the invaginated layer of the distal end, together with the layer covering the bone tube, is firmly compressed into the groove. The ligature is then cut short and the small opening through which it is passed is closed by a purse-string suture. The mesentery is then united and the loop is returned to the abdomen. A modification of this method consists, after treatment of the proximal extremity in the manner described, in the employment, instead of wire or gut, of a round rubber ring, which is inserted into the distal end from one-quarter to one-half inch from its free margin. The ring should be of such a diameter as to fit closely into the second of the grooves of the naked bone tube and of sufficient strength to grasp it firmly when there are two layers of intestine interposed. The free end of intestine (from one-quarter to one-half inch in length) is then invaginated into the ring, and is kept in position by means of three or four hooks. These are also used to keep the gut-lined ring sufficiently distended while the proximal end, with its tube, is being inserted. The hooks are removed when the insertion has proceeded far enough to allow the contracting ring to press the intestine into the second groove in the bone tube. The mesentery is then united and the loop of intestine is returned to the abdomen. To avoid injury of the intestine the hooks, though sharply pointed, must curve only sufficiently to surround the ring and perforate alone the inner layer of the bowel. In dealing with a bowel larger than a rabbit's, blunt hooks would answer the purpose.

Primary Malignant Disease of the Suprarenal Glands.—Ramsay (*Bulletin of the Johns Hopkins Hospital*, January to March, 1899, p. 20) summarizes as follows the results of an admirable study of sixty-seven cases of primary malignant tumors of the suprarenal gland: While malignant tumors of the suprarenal gland are rare, they should be considered as one of the factors to be eliminated in the presence of an abdominal tumor. They are somewhat more common in males than in females. While in a certain proportion of cases the symptoms are fairly well marked, there are many in which no symptom points to the suprarenal origin. Rapid loss of strength, debility, emaciation, digestive disturbances, and abdominal pain are the most prominent symptoms. Changes in the skin are rather the exception than the rule. Malignant disease of the suprarenal capsule pursues a rapid course, the duration being shorter than usual with neoplasm in other organs. The diagnosis is impossible in many cases and difficult in all. The differentiation must be made from other forms of suprarenal disease, from renal tumors, from hepatic tumors, from disease of the retroperitoneal glands, and from cysts and new growths of the pancreas. The prognosis is always serious, even following a successful operation, on account of the great frequency with which both glands are involved and the tendency to early metastases. Operation affords the only hope of relief, and has proved successful in two cases. The principal difficulties attending operation are the friability of the tumor, the great tendency to hemorrhage, and the frequency of adhesions.

MEDICAL RECORD:

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THE NEW ACT TO REGULATE THE CONDUCT OF DISPENSARIES.

TIME brings many changes, and it is to be hoped that the act framed with the object of abolishing or at least of checking the abuse of dispensaries, which has now become law, will have the effect of bringing about a radical alteration in the management of these institutions. For a period of something like ten years, the fight against the present methods of conducting the free medical charities has been hotly and even bitterly waged. The bill recently passed has had numerous setbacks, either failing to receive the approbation of the legislature or being rendered nugatory by the veto of the governor. But its advocates never lost heart, and, undaunted by reverses, continued to struggle for reform, until at last their efforts have been crowned by success. Doubtless to these men the satisfaction of gaining their end and of doing a great public service will be a sufficient reward.

To say that the manner in which dispensaries have been carried on has long been a glaring scandal, would be to repeat an oft-told tale. New York City, though by no means the only sinner in this respect in America, has been the most prominent and unblushing. Therefore it would appear to be eminently fitting that she should be the first to acknowledge her faults and endeavor by example to lead others into the right way. All dispensaries, whether public or private, are by the reading of the new law placed under the control of the State board of charities. It also gives to the same body power of licensing or revoking licenses of dispensaries, but this does not apply to those already incorporated; in their case a license is conferred without examination, and in order to revoke it the State board must apply to the Supreme Court. To the State board also falls the duty of drawing up regulations for the conduct of the dispensaries, and to which the latter are required strictly to adhere. The law further enacts that any person obtaining medical relief on false representations shall be guilty of a misdemeanor, punishable by a fine of not less than $10 and not more than $250. Another provision proscribes the use of drug stores or tenement houses as dispensaries.

There can be no doubt that the bill is an excellent one and meets all the exigencies of the situation, and the plan of placing in the hands of the State board of charities the control of dispensaries is to be commended. The successful passage of the bill, however, does not end the dispensary-abuse question; it is, so to speak, the first victory of the campaign—a great victory, indeed, but one which, after all, only opens up the enemy's country. There are still many walls to be scaled and many fortifications to be taken by storm ere the foe will be finally subdued.

It will be thus interesting to watch the measures taken by the State board to cope with this difficult problem. To discriminate between those deserving of free medical charity and those who are not is in itself a task sufficiently arduous; but, if this was all, the matter would be immensely simplified. Unfortunately this is merely one phase of the situation, and not the root of the evil. Much of the fault for the present condition of affairs rests with the managers of the dispensaries. Eager to boom up their own particular institutions by showing that a larger number of patients received treatment within a certain period than at some rival establishment, they have been unwilling that any applicant for medical relief, deserving or otherwise, should be turned away. It need hardly be said that no benefit to the cause of charity is derived from statistics proving that so many thousand patients have been treated weekly or yearly. Such a course is not even induced by healthy emulation, but is simply a bid for subscriptions. Again, medical men themselves are greatly to blame, both for the inception and continuance of the free-charity abuses; in the first place, because they have allowed —certainly without active opposition, and almost without protest—the hospitals and dispensaries to come under the control of laymen, who, as we have said before, are guided by the predominating idea of advertising those institutions over which they hold sway. Another feature of the case, in which some members of the medical profession are not free from reproach, is the willingness, nay, eagerness of young physicians to attach themselves to dispensaries for the sake of the experience thereby gained, doubtless also animated by the hope that in this manner they will bring their names before the public. It may well be believed that, with these objects in view, the question as to whether the patient is well endowed with worldly goods or is a dweller in the slums is too often a matter of secondary consideration. That the young physician must have clinical experience cannot be denied, but we take it that the deserving poor will easily supply this actual need. These things being so, it can scarcely be a matter for surprise that many persons should regard the charitable dispensaries as free for all, and not solely for the benefit of paupers. Consequently it would seem that the first move made in the direction of reform should be to introduce changes into the methods of management. Another step that might with advantage be taken is to abolish the practice of charging small fees and the selling of drugs at dispensaries. Nothing has tended in London and in other large towns of Great Britain to bring the medical profession into greater disrepute than the custom in those places of having what are termed cash dispensa-

ries, where the patients are charged absurdly small sums for treatment and where medicine is sold over the counter. The physician comes to be looked upon as almost on the same social plane as the butcher or baker.

Various have been the schemes suggested and attempted to prevent the undeserving from preying upon charity, none of which, however, have met with more than partial success. What is required—as has always been urged by the MEDICAL RECORD—is an efficient registration system. If the State board of charities was to establish a central bureau of registration for the dispensaries, similar to that of the Charity Organization Society for the other charitable institutions, there is reason to think that the abuses might be at any rate greatly lessened. On this bureau would devolve the duty of making a thorough investigation into the case of any applicant for medical relief whose name had been forwarded by the dispensaries. The difficulties in the way of such a project are numerous, the cost of which is not the least; still we venture to predict that the State board of charities will make good use of the powers granted it, and so reform the dispensary system of New York that it will become a model for, rather than a byword with, other cities.

ERROR IN THE DIAGNOSIS OF APPENDICITIS.

IT is well for the medical man to realize that judgment is not infallible, and occasional retrospect and confession of error will increase not only self-respect but the confidence of others. The man who has never made a mistake is yet to be discovered. Though it is said that we learn most from our failures, they are not to be courted, but should rather serve as danger signals. In a recent communication Dr. Robert T. Morris (*New York Medical Journal*, April 8, 1899, p. 469) recites a number of errors—comparatively few fortunately—that he confesses to have committed in a series of two hundred and twenty-eight consecutive cases operated on, in which a diagnosis of appendicitis was made. In one case there were found localized peritonitic adhesions about the cæcum and ascending colon following an attack of typhoid fever a year previously; in another there was general peritoneal tuberculosis, and the patient recovered as a result of the operation; in a third case the cæcum and appendix were carcinomatous, and life was prolonged by excision; in a fourth the appendix was adherent to the right oviduct; a fifth patient was merely hysterical; in a case of pneumonia the appendix and the right oviduct were bound together by adhesions; in a seventh case peritonitis was found in the sequence of measles. In only one case was appendicitis found when something else was looked for—namely, in an elderly woman who was thought to be suffering from carcinoma of the cæcum. In one case in which there was a clear history of repeated attacks of appendicitis the ileum was found strangulated by a band of adhesion at the site of an infected appendix. This record is a most excellent one from both an ethical and a practical point of view. In no instance, even in the single case in which operation was unnecessary, was any harm done, and without doubt much suffering was prevented and many lives were saved, the benefits extending also to the cases in which error in diagnosis is admitted.

SURGICAL TREATMENT FOR CEREBRO-SPINAL MENINGITIS.

THE prognosis in cases of meningitis is always uncertain and often grave, and it is doubtful if any of the therapeutic measures in current employ is capable of doing more than helping toward a favorable termination, so that any agency that offers hope of more specific or more direct utility will be most cordially welcomed and fairly tried. What serum therapy is capable of accomplishing in this direction is yet undetermined, and uncertainty here will be enhanced by the fact that the inflammatory condition is variously dependent upon different causes—among others, the diplococcus meningitidis, the diplococcus lanceolatus, the streptococcus, the tubercle bacillus, the typhoid bacillus, the influenza bacillus, etc.

Although the demarcation between surgical and medical practice has grown and continues to grow more and more sharp, there are many points at which the surgeon and the physician must meet in conference and act in co-operation. Of this fact concrete illustration is afforded by the existence already of a publication devoted to subjects on the boundary line between medicine and surgery; and if the tendency in this direction continues, the duties of the physician will in increasing degree become those of prophylaxis and diagnosis, and the duties of the surgeon more largely those of therapeusis solely. Thus, when the physician recognizes the existence of appendicitis, of threatened or actual typhoid perforation of the bowel, of perforating gastric ulceration, of brain tumor, of biliary or urinary calculi, of hemorrhagic pancreatitis, of tuberculous peritonitis, etc., he will, if he be wise, call to his aid the services of a surgeon, to operate or to refrain from mechanical intervention, as they may mutually decide.

What has been done successfully for other intracerebral and intraspinal conditions—such as hemorrhage, effusion, cysts, tumor, etc.—it is now proposed to do in suitable cases of cerebro-spinal meningitis, of which Rolleston and Allingham (*Lancet*, April 1, 1899, p. 889) report a case treated by laminectomy, incision of the dura mater in the dorsal region, and drainage, with recovery. The patient was a man, twenty-four years old, who was seized with pains that became diffuse, who experienced a dull, singing sensation in his ears, with deafness, and who presented mental wandering, with an inability to reply pertinently to questions. The knee jerks were normal; vomiting occurred, and delirium was present at night. The patient lay on his right side, with the thighs and knees flexed. The head was retracted, the muscles of the neck were rigid. There were, further, headache, tache cérébrale, occasional convergent strabismus, variation and inequality of the pupils, and horizontal nystag-

mus. The patient grew worse, the temperature rose, the skin became red and swollen, and coma and delirium alternated.

As it appeared that the man would die if left alone, other treatment having failed, surgical intervention was undertaken, an incision six inches long being made over the spines of the lower dorsal vertebræ, of which the laminæ of the seventh and eighth were excised. The exposed dura bulged and was incised for about an inch in the long axis of the cord, with the escape of coagulated lymph and cerebro-spinal fluid, to the amount of about three ounces. A drainage-tube was inserted, and no attempt was made to unite the incised margins of the dura mater. The skin was loosely approximated by nine sutures, and the usual antiseptic dressings were applied. Decided improvement at once ensued. There was a free discharge of clear fluid from the wound, necessitating a change of dressing twice daily. For three and a half weeks the discharge continued, being impeded from time to time as the wound healed, when the temperature would rise and the symptoms be aggravated. By the thirty-fourth day the temperature remained normal, the discharge diminishing and finally disappearing. The tube was removed on the fortieth day, and the wound was completely healed eleven days later.

While it cannot be said with positiveness that death would have resulted in this case had operative intervention not been undertaken, it will be admitted that the result has confirmed the wisdom of the treatment and that a desirable certainty was exchanged for a dubious uncertainty. It is not to be expected that a like procedure will be considered necessary in any large number of cases of meningitis; but the experience in that reported demonstrates the justifiability of the operation and increases the hopefulness of the prognosis, particularly in grave cases.

"THE PRACTITIONER" ON CANCER.

The Practitioner for April is wholly devoted to a consideration of cancer. Among the many excellent articles contributed and which virtually embrace the whole subject, none is of greater practical interest than one by Dr. William B. Coley, surgeon to the New York Cancer Hospital, on inoperable cancer. His conclusions are as follows:

(1) The mixed toxins of erysipelas and bacillus prodigiosus have an inhibitory action upon the growth of malignant tumors of whatever variety.

(2) This influence is far more marked in sarcoma than in carcinoma, and differs very markedly in the different varieties of sarcoma, being most pronounced in the spindle-celled variety and least in the melanotic.

(3) A considerable number of inoperable sarcomata, the correctness of the diagnosis of which is beyond question, have entirely disappeared under this method of treatment.

(4) A large proportion of these cases have remained free from recurrence more than three years after treatment, a period which has generally been accepted as of sufficient length to justify their being regarded as permanent cures.

(5) The action of the toxins upon sarcoma must be regarded as a rapidly progressing necrobiosis with fatty degeneration. This action in no way resembles that of a local escharotic, but is rather specific in character, exerting its destructive influence upon the tumor tissue when injected subcutaneously at a distance as well as when introduced locally.

(6) This method of treatment is attended with some risk, unless certain precautions are taken. These risks are: (*a*) Collapse from too large a dose, especially when injected into a very vascular tumor; (*b*) pyæmia from insufficient care as regards asepsis, especially in the presence of a granulating or sloughing surface. That these risks are slight is shown by the fact that in upward of two hundred cases of malignant tumor treated personally, death occurred in but two as a result of the treatment.

(7) The use of small doses of the toxins for a short time after primary operation as a prophylactic measure theoretically has much to recommend it.

(8) The action of the toxins upon sarcoma, as shown by clinical results, is in strict accord with the known action of the living streptococcus of erysipelas. Hence the method rests on a perfectly logical and scientific basis.

(9) The toxins, to be of value, must be prepared from highly virulent cultures of the streptococcus of erysipelas.

GENERAL PARALYSIS OF THE INSANE IN A CHILD.

THE morbid state manifested pathologically as a chronic diffuse meningo-myelitis, and designated clinically general paresis or paralysis of the insane, is most common in mature life and rare at an earlier period. The large preponderance of cases occur in males. The condition is not infrequently observed in connection with posterior spinal sclerosis, of which it is considered by some to be a spinal form, and hence its most common cause is thought to be syphilis. A case reported recently by Thomson and Welch (*British Medical Journal*, April 1, 1899) is interesting because of the early period of life at which it occurred, the sex of the patient, and the etiology. A girl in a family of seven children, of whom four, exclusive of the patient, exhibited distinct signs of congenital syphilis, developed at the age of four and one-half years a squint, which was operated on nine months later. At about the same time she began to suffer from severe and frequent headache. At the age of nine and one-half years extensive patches of choroidal atrophy were detected in each eye. The headache was greatly relieved by potassium iodide. Jaundice had never been observed. When the girl was between ten and one-half and eleven years of age it was found that she was not improving in her school-work, and she seemed to be growing stupid and irritable. At the age of twelve years she began to have convulsive attacks, which continued at varying intervals throughout life; and she became steadily less intelligent.

Speech was characteristically affected by the time the patient was twelve and one-half years old, and her knee jerks were greatly exaggerated when she was thirteen years of age. Several distinct hallucinations appeared at about the age of fourteen years. Between eleven and fourteen years of age the girl became unnaturally fat, but afterward she steadily emaciated. Six months before death an attack of subacute periostitis developed over the left tibia, which was greatly relieved by potassium iodide. Death occurred amid signs of extreme debility of body and mind at the age of sixteen years and eleven months. Upon post-mortem examination the calvarium and the dura were found thickened, and the latter was in places adherent to the brain. There was an excess of cerebro-spinal fluid at the base of the brain and in the widened sulci of the vertex. The pia-arachnoid was opaque, thickened, and adherent. The cerebral convolutions generally were atrophied, but in most marked degree in the frontal and parietal regions. The ventricles were dilated and their ependyma was granular. Microscopic examination of sections of the cortex disclosed diminution in number of the ganglion cells and atrophy of those remaining, with hyperplasia of the neuroglia, perivascular infiltration, and hyaline degeneration of the smaller vessels and capillaries. The gall bladder was greatly distended and the cystic duct dilated and tortuous, and containing toward its hepatic extremity an impacted gall-stone, one-half by three-eighths by five-sixteenth inch in size, of oval outline and with a smooth surface.

News of the Week.

The New Dispensary Law.—President William R. Stewart, of the State board of charities, has appointed Drs. Stephen Smith, of New York City, and Enoch V. Stoddard, of Rochester, and Mr. Simon W. Rosendale, of Albany, a special committee on dispensaries, in order that early consideration may be given to the provisions of the recently enacted bill authorizing the State board of charities to license dispensaries and regulate their work. This act is one of the most important of the charity bills that passed the present legislature, and it is hoped will go far toward lessening the evils of dispensary abuse. The committee will soon give hearings in New York City and elsewhere, so that those interested in the management of dispensaries may be heard, and later will formulate for the board's consideration rules covering the granting of licenses to dispensaries and other institutions in which medical and surgical assistance is given gratuitously or for a merely nominal fee.

Prof. Charles F. Chandler, of the School of Mines of Columbia College, and formerly professor of chemistry in the medical department as well, was nominated for president of the Society of Chemical Industry, in session at Glasgow, last week. Professor Chandler enjoys the distinction of being the first American to be nominated for the presidency of an English scientific society, and he will succeed such men as Sir Henry Roscoe, R.A.; Sir Frederick Abel, R.A.; Sir John Evans, Dr. Schunk, Sir Lowthian Bell, and E. Rider Cook.

An Unusual Honor to an American Surgeon.—Dr. Frederic S. Dennis, of this city, is the worthy recipient of the honorary degree of fellow of the Royal College of Surgeons, England. This degree of F.R.C.S. Eng. has never been conferred before on an American, as a candidate in course must have been a member for twenty years, and only two are conferred on the members each year. There are two or three men in this country who have the degree by examination, one of whom is connected with the Johns Hopkins University in Baltimore. The many friends of Professor Dennis will join with us in our congratulations for this well-deserved distinction.

A Nursing Exhibition will be held in Berlin from May 20th to June 18th. The following are the sections into which the exhibition will be divided: (*a*) General; (*b*) special nursing. (*a*)—(1) The sick-room: Lighting, ventilation, heating, disinfection, etc.; (2) Sick-beds: Bedsteads, bedding, etc.; (3) Patient: Foods, medicines and applications, clothing, etc.; (4) Literature of nursing. (*b*) Nursing of: (1) Lung diseases; (2) Children; (3) Obstetric cases; (4) Surgical cases; (5) Insane cases; (6) The sick in war; (7) The sick in the colonies. It is proposed to form a permanent collection, in the university, of such exhibits as are suitable for teaching purposes.

A Hospital Building Burned.—The hospital building of the Iowa State asylum for the feeble-minded at Glenwood was burned on April 28th. The origin of the fire is unknown. No lives were lost, the inmates being led from the buildings by the attendants, who prevented a panic by their coolness.

Damages for X-Ray Injuries.—Suit was brought recently against an electrician in Chicago to recover for injuries following an *x*-ray examination. The plaintiff alleged that, to ascertain the cause of the stiffening of his ankle-joint, he went to defendant, who exposed the ankle three times to the *x*-ray, the result being a most extensive burn, followed by gangrene, and to save life three amputations of the leg were necessary. The jury awarded the plaintiff $10,000 damages.

Alumni of Sloane Maternity Hospital.—At the annual dinner of the Society of the Alumni of the Sloane Maternity Hospital, held in the New York Athletic Club rooms, April 28, 1899, the following officers were elected: *President*, George L. Brodhead; *First Vice-President*, A. Ernest Gallant; *Second Vice-President*, Eugene Coleman Savidge; *Recording Secretary*, James D. Voorhees; *Corresponding Secretary*, Frank R. Oastler; *Treasurer*, Edwin Sternberger; *Pathologist*, James Ewing.

The Health of the Troops at Santa Clara.—The health of the troops who have been doing garrison duty in Cuba has been excellent, and Surgeon-General

Sternberg has received gratifying reports from most of the surgeons in charge of the several departments. The last of the volunteers who have been on duty in the department of Santa Clara, to the number of forty-five hundred, sailed for Savannah on April 23d, and but one soldier, who is convalescent at Trinidad, had to be left behind. Since early in December there have been three regiments of infantry and a battalion of volunteer engineers in the province, and out of this considerable number there have been but twelve deaths. The health of the troops has been notably better than while in camp in the States. Maj. J. H. Hysell is the surgeon-in-chief of the United States troops in this department.

Dr. Charles Jewett, professor of obstetrics and pædiatrics at the Long Island College Hospital, Brooklyn, has been appointed by the trustees of that institution to be president of the faculty, which place was made vacant by the resignation of Dr. Alexander J. C. Skene, who is to take charge of the new hospital for working-women. Dr. Jewett is a graduate of the College of Physicians and Surgeons in this city in the class of 1871. He has held a chair in the faculty of the Long Island College Hospital Medical School since 1882.

Quarantine against Cuba.—On May 1st the new quarantine regulations at the port of New York went into effect, according to which Health Officer Doty, by arrangement with the quartermaster's department of the United States army, will disinfect all baggage brought by returning soldiers from Cuba on government transports; all passenger steamers from Cuba will be disinfected also, and passengers not immunes will be held at quarantine until the completion of the period of five days after leaving the port of departure.

Filthy Coney Island.—Inspectors of the board of health recently visited Coney Island, and found it in a condition of filthiness almost worthy of a Cuban town under the control of Spanish hygienists. In the majority of the houses examined there were no sewer connections. The board walk on the Bowery was torn up in a number of places, and in each case there was found beneath either a pile of decaying garbage or a pool of stagnant water. The concert halls and the dancing pavilions were also found to be in bad condition. In one inclosure the inspectors found a big pool of stagnant water. Ten days ago the proprietor was ordered to fill up the pool with earth, and he seemingly had done so, but the inspectors found that he had merely boarded it over and then put a thin layer of sand over the boards.

Oxygen at Fires.—A suggestion has been made that all hook-and-ladder trucks of the city fire department be supplied with small tanks of pure oxygen, to be taken to fires for use in resuscitating people who have been partly suffocated by smoke or escaping gas.

An Army Cooking-School.—A class for the instruction of hospital corps men in preparing food for the sick has been organized at the Washington arsenal. The work is to be carried on under military regulations, and the aim is to provide eventually a corps of men who can prepare for the sick such food as is available. The plan involves also the establishment of a school or schools for army cooks, to be conducted by regular officers at some convenient recruiting-station.

The Successor of the Late Professor Coats in the chair of pathology in Glasgow University is Professor Muir, of the University of St. Andrew.

The Pasteur Monument at Lille.—Many well-known bacteriologists, including Prof. Ray Lankester, Professor Delbrück, of Berlin, and Prince Oldenburg, of St. Petersburg, took part recently in the ceremony of unveiling a monument to Pasteur at Lille. The monument represents a woman holding up her child, who has just been bitten by a mad dog, to Pasteur, that he may inoculate it and save its life.

Smallpox in Germany.—Several cases of virulent smallpox have appeared simultaneously in various parts of Germany. The Prussian authorities are taking prompt steps to investigate the origin of the outbreak and to prevent its spread.

The Ohio State Medical Society will hold its fifty-fourth annual meeting at Springfield, on May 10th, 11th, and 12th. An attractive programme is announced. The president of the society is Dr. N. R. Coleman, of Columbus, and the secretary Dr. John A. Thompson, of Cincinnati.

American Climatological Association.—The sixteenth annual meeting of this association will be held in the hall of the New York Academy of Medicine, on May 9, 10, and 11, 1899. The sessions each day will be from 10:30 A.M. until 1:30 P.M., and from 3 until 6 P.M. Members of the association are invited to luncheon daily at the close of the morning session at the Academy of Medicine. Mrs. Beverley Robinson will receive wives of the members of the association on May 9th, from four to six o'clock, at No. 42 West Thirty-seventh Street. A smoker, at Delmonico's, northeast corner of Forty-fourth Street and Fifth Avenue, will be tendered to the association on the evening of the first day, May 9th, 9 P.M. to 12, and the annual dinner will take place on the evening of the second day, May 10th, at seven o'clock, at the Hotel Manhattan, northwest corner of Forty-second Street and Madison Avenue. A trip to the Loomis Sanatorium, at Liberty, N. Y., has been arranged for the third day of the meeting, May 11th, and for this a special train on the New York, Ontario, and Western Railroad will be provided by the courtesy of the railroad. The train will leave the ferry at the foot of West Forty-second Street at 9 A.M., returning so as to arrive in New York about 9 P.M. Members who prefer to do so, can make direct connections at Liberty for central New York and the West, without returning to this city. The president of the association is Dr. Beverley Robinson, of New York; the secretary, Dr. Guy Hinsdale, of Philadelphia. The not too long list of titles in the

of the "diploma mills" which have thrived in the State for many years.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending April 29, 1899. April 22d.—Passed Assistant Surgeon G. H. Barber, Assistant Surgeon R. C. Holcomb, detached from the Naval Academy, May 1st, and ordered to the *Monongahela.*

Hot-Water-Bag Burns.—The dangers of applying hot bottles to the extremities after anæsthesia have been referred to upon several occasions in these columns. The question is again brought up by a new trial being ordered by the court in the suit brought by a Miss Ward against St. Vincent's Hospital for $30,000 damages. The suit has once been dismissed, it being held that the hospital could not be held responsible for the negligence of the nurse.

The Mississippi Valley Medical Association.—The date of the next meeting of this association in Chicago has been changed from September 12–15 to October 3–6, 1899. The "American Festival" will be held in Chicago, beginning September 25th and ending October 9th with the laying of the corner-stone of the Federal Building, when the President and his Cabinet will be in the city. During this time the railroad fare to Chicago from all points will be a flat one-fare rate for the round trip, without the necessity of certificates or signatures. The limit of the tickets is so long that a protracted stay can be made in Chicago in order to take advantage of the clinical facilities of the meeting as well as to enjoy the added attractions of the Festival.

The Society for the Prevention of Cruelty to Children.—Governor Roosevelt has signed the bill providing that corporations for the prevention of cruelty to children or animals, with their books and vouchers, shall be subject to the visitation and inspection of a judge of the supreme court, or of any person appointed by the court for that purpose. The society has long resisted, thus far successfully, the claim made by the State board of charities of the right of supervision of this and other similar corporations. Opinion is divided as to whether the passage of this bill is a victory for the society or for the board. The friends of the society claim that the authority of the supreme court shuts out any chance of interference by the State board of charities, but others say that the court may delegate its authority to a member of the board.

Dr. Jabez Hogg, a well-known ophthalmic surgeon of London, died, April 23d, at his residence in Kensington. He was born in 1817, and was admitted to membership in the Royal College of Surgeons in 1850.

The Richard Milliken Memorial Hospital for Children, in New Orleans, is now completed, and was made ready for occupancy May 1st. This very handsome structure is an annex to the Charity Hospital, and was erected through the munificence of Mrs. Deborah A. Milliken, as a memorial to her husband. The building furnished cost $100,000. It contains one hundred and sixty beds, and is a model of convenience and comfort.

Burial of Dr. Gibbs.—The body of Assistant Surgeon John Blair Gibbs, United States navy, the first American officer killed on the island of Cuba in the war with Spain, was interred in St. Mary's Cemetery, near Newport, R. I., beside the grave of his father, on April 29th. Dr. Gibbs, who was a practising physician in this city, enlisted in the navy upon the breaking out of the war a year ago. He was assigned to the marine battalion landed at Guantanamo, and was killed while standing in front of his tent during a night attack by Spaniards. He was buried there with military honors, Chaplain Jones, of the *Texas,* performing the burial services.

Death of Professor Buechner.—Prof. Frederick Karl Christian Ludwig Buechner, the author of "Force and Matter," died at Darmstadt on May 1st. He was born March 29, 1824, at Darmstadt, being the son of a physician. In 1843 he went to the University of Giessen to study philosophy, but afterward went to Strasburg and took up the study of medicine, returning to Giessen in 1848 to take his degree of doctor. He then continued his studies at the Universities of Würzburg and Vienna. He began practice at Darmstadt, but soon went to Tübingen, where he became a privatdocent. He was deprived of this position, however, by the authorities, in consequence of the philosophical doctrines propounded in "Force and Matter." He thereupon returned to Darmstadt, and resumed practice as a physician. In the work referred to, Dr. Buechner insists on the eternity of matter, the immortality of force, the universal simultaneousness of light and life, and the infinity of forms of being in time and space. His intellectual activity was not repressed by his discipline by the government and he continued to expound his materialistic views in numerous journal articles and independent treatises.

Obituary Notes.—Dr. B. M. Rakestraw, of Hicksville, Ohio, died at his home in that place on April 25th. He was one of the most prominent among the opponents of slavery in the antebellum struggle, and was associated in the contest with Salmon P. Chase, J. R. Giddings, Benjamin F. Wade, E. M. Stanton, and others.—Dr. William E. Kissane, of Brooklyn, died at his home in Greenpoint on April 26th. He was born in Greenpoint about forty years ago, and was graduated in medicine from the University Medical School in this city in 1885. He was for several years on the staff of the New York Eye and Ear Infirmary.—Dr. William A. A. Gorton, superintendent of the Butler Hospital for the Insane at Providence, R. I., died in the Boston City Hospital on May 1st. He was a graduate of the medical department of the University of the City of New York in the class of 1876. At one time he was superintendent of the Danvers Hospital for the Insane.

Therapeutic Hints.

Neurasthenic Headache Associated with Low Vascular Tension.—

℞ Caffeinæ citratis ..... gr. v.
Sodii bromidi ..... gr. x.
Sodii bicarb ..... gr. x.
Pulv. acid. tart ..... gr. x.
M. ft. pulv. No. i. S. Take in water while effervescing.

Or:

℞ Caffeinæ salicylatis ..... gr. i.
Ammonii salicylatis,
Phenol salicylatis ..... āā gr. v.
M. ft. cap. No. i. S. One every three to four hours.

Or:

℞ Caffeinæ pur ..... gr. ss.-iss.
Phenacetin ..... gr. v.
M. ft. cap. No. i. S. Take in hot water; repeat in one hour if necessary.

As a Diffusible Stimulant for Neurasthenic Headache, Especially in Women.—

℞ Ammonii carb ..... ʒ iij.
Tinct. sumbul ..... ʒ vi.
Spts. lavandulæ ..... ʒ i.
Elix. ammonii valerian ..... ad ʒ viij.
M. S. Two teaspoonfuls every three hours in water.

—Joseph Collins.

Diphtheria.—Paint the throat five or six times daily with tincture of myrrh, use a one-per-cent. solution as a gargle, and give according to the age:

℞ Tinct. myrrhæ ..... ♏ xl.
Glycerini ..... ♏ lxxx.
Aquæ ..... ʒ iv.
M. S. One to four teaspoonfuls every two hours.

—Miloslawsky.

For Rigidity of the Perineum.—

℞ Chloroformi ..... 2 parts.
Etheris ..... 1 part.
Eau de cologne ..... 1 "
M. S. For external use.

—Southworth.

Chronic Colitis in Children.—

℞ Acid. hydrochlorici ..... gtt. v.
Aquæ destil ..... ʒ iij.
Syr. gum. arabici ..... ʒ vi.
Tinct. opii ..... gtt. ij.
M. S. One or two teaspoonfuls twice a day.

If it is evident that putrefaction is going on in the intestines:

℞ Benzo-naphthol,
Beta-naphthoi ..... āā gr. ij.
Bismuth. salicylat ..... gr. i.
Pulv. gum. arabici ..... gr. v.
M. ft. pulv. No. i. S. One three times a day to a child of four years. Continue this for four or five days.

—Romme, *La Presse Médicale.*

Gout.—

℞ Quin. sulph ..... ʒ i.
Acid. citric ..... ʒ ij.
Syrup. simplicis,
Syr. aurantii flor ..... āā ʒ ij.
Aquæ destil ..... ʒ vi.
M. S. Ten drops in an ounce of water, to which is added twenty grains of bicarbonate of sodium, to be taken while effervescing.

—*Klinisch-therapeutische Wochenschrift.*

Senile Pruritus.—

℞ Potassii bromidi ..... ʒ ij.
Sodii iodidi ..... ʒ i.
Sodii salicylat ..... ʒ ij.
Sodii acetatis ..... ʒ i.
Inf. gentianæ ..... ʒ iv.
M. S. Two teaspoonfuls in water after each meal.

—Lavellée, *Revue de Thérap. Médico-Chirurg.*

Rachitis.—

℞ Spirit of phosphorus ..... ʒ iij. + 3 vi.
Oil of star anise ..... ♏ xvi.
Glycerin ..... ʒ ix.
Aromatic elixir ..... q.s. ad ʒ xvi.

Each fluid drachm contains $\frac{1}{60}$ of a grain of phosphorus. This is the elixir of phosphorus, devised by Dr. Charles Rice, head of the drug department of Bellevue Hospital, New York City. Children one year old can take $\frac{1}{100}$ of a grain of phosphorus three times a day with no bad results, and in older children $\frac{1}{60}$ of a grain can be given with great benefit.—Reginald H. Sayre.

Rubber Plaster or Paste is not made sterile by heat, and hence should not be used to cover denuded surfaces.—*Manitoba and West Canada Lancet.*

Benign Growths of the Tonsil.—True papilloma of the tonsil is uncommon. Other benign growths are comparatively frequent. The latter are often of inflammatory origin and connected with enlarged tonsil. —Yearsley.

Epidemic Cerebro-Spinal Meningitis. — Persons afflicted with this disease should, whenever possible, be isolated, and all evacuations should be rendered sterile by the use of antiseptics.—William J. Class.

Treatment of Carbolic-Acid Poisoning. — Once a poison like carbolic acid has got into the blood, washing out the stomach is not enough. The rational treatment is, in addition, to transfuse, or to bleed and transfuse.—Oliver.

Resorcin for internal administration should be diluted with some inert powder or given in some vehicle. Upon an infant's tongue the powder itself would form a concentrated active and even caustic solution, since it is an escharotic of considerable power acting chiefly on epithelium.—Pharmacologist, *Lancet*, September 24, 1898.

Dietetic Treatment of Gout.—The great principles to be considered are: (1) Abstemiousness in all things; (2) non-restriction of the animal albuminates which are so essential to the nutrition of the body and so comparatively easy of digestion; (3) withdrawing from the dietary of the saccharine, starchy, and fatty foods, which check metabolism and diminish oxidation.—Daniel R. Brower.

German Specific against Sea-Sickness.—Bright-red spectacles, accompanied by the internal use of calomel, furnish a new German specific against seasickness. Seasickness is due to a lack of blood in the brain, while (according to Epstein's investigations) the effect of red is to send blood to this organ. By looking at one point for some time through red glasses the patient is cured.

Blood-Letting in Italy.—In some parts of Italy blood-letting is still held to be a cure-all. Some time ago a sick child was bled until the mother timidly protested. The doctor assured her that one more application of the cups would insure recovery. In spite of this, the next morning, when the doctor came, the mother sobbed out that her baby was dead. "Madam," said the doctor, "be comforted by knowing that your child died cured."—*The Medical Age.*

Alopecia Areata.—

℞ Hydrargyri chlor. corrosiv 1
Glycerini 15
Aquæ coloniens 500
M. S. Apply twice daily.

—Sprangenthal.

Society Reports.

MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND.

Centennial Meeting, Held at Baltimore, April 25, 26, 27 and 28, 1899.

First Day—Tuesday, April 25th.

THE one hundred and first annual session of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 8 P.M., with the president, Dr. Samuel C. Chew, in the chair. The invocation was made by his eminence the cardinal archbishop of Baltimore. The Hon. Lloyd Lowndes, the governor of the State, then spoke of the age of this society and what it had done for the State, and then declared the meeting open.

The President's Address.—This was delivered by DR. SAMUEL C. CHEW, in which he spoke of the comparative antiquity of the society being great enough to give to it the grace and dignity of age. After referring to the striking historical changes which marked the close of previous centuries, he reviewed some of the remarkable discoveries and achievements in the medical world since the beginning of the present century. He said that Jenner's wonderful discovery, deduced from previous observations and experiments, was in itself an epoch-making event, and had so reduced the mortality from smallpox that this formerly frequent and dreaded scourge was now hardly feared. Boston and Baltimore were rivals for the honor of establishing vaccination in America. In the summer of 1800 Dr. Benjamin Waterhouse, of Harvard University, vaccinated his own family, and in the same summer Dr. John Crawford, of Baltimore, successfully used the virus in that city. A most remarkable illustration of human profundity of thought, of human power of deducing the deep unknown from the superficial known, was that afforded by the science of auscultation, which sprang from the brilliant genius of Réné Théodore Laënnec. The pathological researches of Richard Bright have also been of inestimable benefit to humanity. Between 1840 and 1850 was the splendid era of the discovery of anæsthesia, to which the rapid advancement and wondrous achievements of modern surgery were due, and both medicine and surgery owed an incalculable debt to the earnest workers in the field of bacterial pathology. To the discoveries of anæsthetics and antiseptics might be added the numerous therapeutic resources wholly unknown in the last century and many only recently known. Other sciences had in the same time made brilliant advances, but while they either had no moral bearing toward good or evil, or else were capable of perverted use, the objects and results of medical science were wholly good, and good alike to all. Dr. Chew closed by stating that all these gains had been made by workers in medical or allied sciences, none by any systems of charlatanry or by any opposers of legitimate medicine. He then urged his fellow-members of the Faculty to more and more strenuous and faithful work in their calling.

After this oration, which was received with great applause, a collation was served, and a reception was held by the Faculty, to which many ladies were invited.

Second Day—Wednesday, April 26th.

Public Clinics.—On this day the colleges, hospitals, and all medical institutions on the east side of the city were open for demonstrations, clinics, and inspection. The College of Physicians and Surgeons gave, under the supervision of Dr. N. G. Keirle, the director of the Pasteur Institute, a demonstration of the methods employed there. Since the foundation of this institute about two years ago, about eighty persons known to have been bitten by rabid animals have been treated there, and not one has died. At the Baltimore University clinics were held by Drs. C. Urban Smith, H. H. Biedler, W. A. B. Sellman, and T. Cooke, Jr. At the Johns Hopkins Hospital clinics were held by Drs. Osler, Thayer, Kelly, and Halsted.

Cerebro-Spinal Fever.—This was the subject of Dr. Osler's clinic. He showed three cases, and spoke of the good descriptions of this disease which were given by the country physician. He spoke of the discovery of the disease itself and its lesions, and then of lumbar puncture as instituted by Quincke, and the discovery of the specific organism. The disease may last from six hours to six months. The diagnosis was not difficult if lumbar puncture was done and the fluid examined. The onset of the attack was very abrupt. In some respects this disease was like typhoid fever.

The Causation of Malaria.—This was the subject of a short talk by DR. WILLIAM S. THAYER. He spoke of the three avenues by which the malarial organism was supposed to enter the body—namely, by the inhaled air, by the stomach, and through inoculation. He said that since the studies of Surgeon-Major Ross in England and Grassi in Italy, and also the work of Manson, the importance of the mosquito as an inoculating agent had been strongly emphasized. These investigators had examined the mosquito, and had found the malarial parasite in it, and had seen it infect healthy persons. Some observers even went so far as to say that the only way the malarial organism gained access to the body was by the bite of some insect.

Hernia and Cancer.—DR. WILLIAM S. HALSTED exhibited some cases of hernia on which he had operated, and spoke of his method. He also showed some cases of mammary cancer in which the breast had been removed, and explained his method of cleaning out the axilla and removing much of the pectoral muscle.

Cystoscope Examinations.—DR. HOWARD A. KELLY gave a very skilful demonstration of the examination of the rectal mucous membrane and of a large part of the lower intestinal tract by the use of the light and a rectoscope. He also demonstrated very beautifully the ease with which he examined the female bladder and catheterized the ureters. He put the woman in the extreme knee-elbow position. Air was let into the vagina, as otherwise the bladder would be ballooned. A little cocaine was then put into the urethra, which was gently dilated with a bulb passed inside of a cystoscope. After the entrance into the urethra had been made the bulb was withdrawn and the cystoscope passed in, and the bladder was at once plainly seen. The interior could be studied on all sides, and the residual urine seen and withdrawn. By turning the cystoscope to one side or the other the orifices of the ureters could be seen, and either one could be catheterized at will.

In the other laboratories of this hospital demonstrations were held. After luncheon in the hall of the Faculty, the afternoon session began with reading of the scientific papers. Dr. E. G. Janeway, who had promised to read a paper, was prevented at the last moment from coming.

Some Landmarks in the History of Ophthalmology.—This was the subject of a paper by DR. HERMAN KNAPP, of New York. He spoke first of the discovery of accommodation by Young in the first year of this century, and demonstrated by other workers. Later Helmholtz had invented the ophthalmometer, with which he could calculate with perfect exactness the curvature and irregularities of the refracting media.

The ophthalmoscope was another instrument which had caused great advances in this branch of medicine. He spoke also of local anæsthesia by Koller's cocaine, and also by holocaine. The application of the magnet for the removal of foreign bodies in the eye was a wonderful advance.

The Limitations of Conservative Surgery on the Female Generative Organs.—This was the subject of a very practical paper by DR. GEORGE BEN JOHNSON, of Richmond, Va. He said that every organ had a right to exist until it was so far diseased as to be beyond repair or to endanger other parts of the body. The points to be considered in this work were: the age of the woman, the nature of the malady, the extent of the lesion and the existence of complex pathological states, the patient's physical condition, and the probable necessity of a second grave operation. The organs to be considered were the ovaries, tubes, and uterus. In the application of conservatism the soundest judgment, the ripest experience, and the most consummate skill must be exercised. The difficulties which encompassed such work were very grave, for often prolonged effort increased the liability to shock. Many complications might occur which might affect the results of the operation, and might render a second operation necessary.

J. Hughes Bennett: His Services to Medicine.—This was the title of the paper read by DR. W. W. JOHNSTON, of Washington. Dr. Johnston said that the life and work of Bennett marked the beginning of a revolt, the dawn of a new era. It was an age when the advances in physiology, in chemistry, and above all in pathology, placed medical science in an attitude of opposition to much of its past. Bennett was a revolutionist, but he was also a reformer; he destroyed only to build better. He was born in England in 1812, graduated from the University of Edinburgh in 1837, and spent two years in Paris and two in Germany. Returning to Edinburgh, he began a course of practical instruction in histology for the students of the university. In this course he was advertised to lecture on the minute structure of organized tissues, with reference to anatomy, physiology, pathology, and the diagnosis of disease, illustrated with numerous preparations, diagrams, and demonstrations under the microscope. The importance of this historical reference lies in the fact that up to this date there had been no systematic instruction in histology in England or in this country. Bennett was the first to begin a course of practical instruction in microscopical technology, and was the first in England to apply the microscope to clinical diagnosis. He was a pathologist as well as a clinician and histologist, and early insisted upon the microscopical examination of diseased organs. To Bennett we owed the extended and firm faith in the curative virtues of cod-liver oil in phthisis pulmonalis. While pathologist to the Royal Infirmary he formed a museum of eleven hundred specimens, and gave courses of lectures each winter on morbid and pathological anatomy, the special and novel feature of which was the demonstration under the microscope of morbid tissues, each student studying for himself each separate specimen. Among his many contributions to medical literature was the celebrated paper containing the first recorded case of leucocythæmia, about which there was so much controversy. Both Virchow and Bennett claimed the priority of discovery of the blood changes in diseases of the lymphatic system. In teaching histology he drilled his classes in the use of the microscope until every man knew his instrument as a trained soldier knows his rifle. Each student made his own preparation and described it in his own words, but the most perfect accuracy was exactingly insisted upon. Bennett revolutionized the treatment of pneumonia, and in a published table of one hundred and twenty-five cases which he had carefully and publicly examined personally, he showed that under his "restorative plan" nearly three times as many patients recovered as under the old treatment by bleeding and antimony. Such a result startled the world, but it soon came to be an admitted fact. He also had some vague foreshadowings of our present belief in the infectious nature of pneumonia. Bennett was a pioneer in the recognition of disease by blood examination, and his influence both in England and in this country was profound and far-reaching.

Dr. Samuel Alexander, of New York, who was to have read a paper on "The Management of Vesical Calculus in Prostatics," was unable to be present.

The Debt of the Public to the Profession was the subject of the annual oration, delivered by PROF. W. W. KEEN, of Philadelphia, on Wednesday evening, in McCoy Hall. Dr. Keen stated that it was an easy task to show how much the profession had done for the community, aided by sanitary engineers and also by the legislators. He then enlarged in succession on some of the most terrible and fatal diseases that formerly were constantly dreaded, and the discoveries made by which these diseases had been either stamped out of the civilized world or had been shorn of their terrors. The plague, cholera, and typhus fever, all of them diseases of filth and overcrowding, were in past times frequent and deadly visitors to European countries, but in this century sanitation and quarantine had been so effectual that in civilized countries the plague is unknown, typhus fever is almost unknown, and since the deadly epidemic of cholera in Hamburg in 1892 it has been practically proved that a proper system of filtration would render such another visitation impossible. The same precaution would also place typhoid fever among the infrequent diseases, but unfortunately the public has not yet listened to the voice of sanitary physicians. During the last century no disease was more dreaded than smallpox. It invaded the homes of the high and the low, and left either death or marred countenances in its path; but vaccination, one of the greatest gifts to mankind, had rendered that pestilence harmless. Yellow fever had been driven from the northern cities of this country, and, with Cuba under our control, the disease may be attacked at its source. Scurvy, the pest of armies and jails and hospitals, had long since been conquered. The most noteworthy feature of modern medicine was the introduction of laboratory methods in the study of diseases; and although, so far, the hoped-for results in the cure of disease had not been accomplished in the case of tuberculosis, yet it had permitted the disease to be positively determined at a much earlier stage than formerly, thus leading to a cure before it was too late. The pathological study of diphtheria, hydrophobia, trichinosis, and many animal diseases had also yielded great and important results. The two epoch-making discoveries in the history of medicine, however, were those of anæsthesia and antiseptics. Without the first, surgical operations were always horrible and frequenly impossible, while the second has prevented the often terrible after-effects, such as erysipelas, tetanus, gangrene, and blood-poisoning. Dr. Keen then warmly commended the bravery of the profession as shown in times of war and epidemic disease, and the generosity which constantly gave time and skill to the sick poor for little or no remuneration. In closing, Dr. Keen asked if the public might not repay this great debt by a scriptural tenth, not for the pockets of the physicians, but for the hospitals and colleges, and to equip libraries and laboratories; not for the physicians, but for humanity.

Immediately after this oration several receptions were held. Drs. Osler and Kelly gave receptions, and there was also a "smoker" in the Faculty Building.

That same afternoon all the institutions on the east side of the city were open for inspection.

Third Day—Thursday, April 27th.

This day was given up to clinics and demonstrations at the University of Maryland, the Baltimore Medical College, the Woman's Medical College, and the Maryland Medical College. In the afternoon all the institutions on the west side of the city were open for inspection, and at Mount Hope Retreat for the Insane a most sumptuous luncheon was offered. The clinical lectures at the University of Maryland were delivered by Drs. Tiffany, Atkinson, Ashby, and Hemmeter, and a demonstration was made by Dr. W. R. Stokes.

Electrical Illumination of the Stomach.—This was a demonstration by DR. J. C. HEMMETER, who also explained his method of intubating the duodenum. The tiny electric light, around which cold water was kept flowing to make it cool, was swallowed by the patient under examination, some ice-water having first been taken so as to cool the stomach still further. Through the abdominal walls the tiny light could be seen, and the size and position of the stomach could be mapped out. While this was of no great practical use as yet, still it was of some assistance in diagnosing certain cancerous growths and other abnormalities of the stomach.

Municipal Bacteriology.—DR. W. R. STOKES explained in a short demonstration the workings of the municipal laboratory, and spoke especially of diphtheria antitoxin. Room disinfection with formaldehyde gas was also described by Dr. Stokes.

At the Baltimore Medical College there were clinical lectures and demonstrations by Drs. Potter, Whitney, Hill, Merrick, Moseley, Earle, Blake, and R. W. Johnson.

Turning Off the Carotids.—Probably the most original work in this school was the explanation by DR. R. W. JOHNSON of his proposed turning off the carotids in operations on the head and neck. This he had never yet tried on a human being, but he felt satisfied from his work on dogs that it was practicable and easy. In operations such as the removing of vascular tumors of the scalp, or in any case in which it is desirable to shut off the blood supply, he exposed the carotid of the side desired, passing a ligature loosely around it without tying it tight, and put the two ends knotted through a slit in a short stick which the assistant held. By raising up this stick the carotid could be compressed and the blood supply shut off. Dr. Johnson was very sanguine about the success of this method when used in human beings, and said that he could compress the carotids for ten minutes and even longer in the dog, and felt sure that the same pressure could be kept up for the same time in man without harm.

Besides the Woman's Medical College, which was open, clinical lectures and demonstrations were given in the Maryland Medical College by Drs. Hodgdon, Kintzing, and Branham. After luncheon, which was served at the hall of the Faculty, the afternoon scientific session began at three o'clock.

A Study of the Human Gait.—This was the subject of some remarks by DR. E. H. BRADFORD, of Boston. He divided human gait into two parts, the walk and the run. In the former one foot is always on the ground; in the latter both feet are often off the ground at the same time. The Muybridge instantaneous photographs showed that the old conception of the running figure was wrong. Some old pictures were shown to demonstrate the way in which running was formerly depicted. The two forms of gait mentioned were the upright and the falling-forward gait. He showed many lantern slides illustrating the various kinds of gaits in running and walking. He showed also how the position of the foot varied in the slow walker and the sprinter. The heel usually struck the ground first in the fast walker. The talk was profusely illustrated, and every characteristic walk, that of the savage, the civilized, and of both trained and untrained persons, was explained.

European Medicine about 1799.—This was the subject of a paper by DR. A. JACOBI, of New York. In the first part of the eighteenth century everything seemed to advance except medicine. What were called galvanism, magnetism, and polarity were all vague and not followed honestly. Therapeutics was also very crude and absurd. Thus in a hospital of Bamberg the average medication of every patient was as follows: One drachm of opium, 195 grains of camphor, 1 ounce of liquor anodynus, 132 grains of serpentaria, 528 grains of cinchona bark, more than one pound of rectified spirits, and quantities of musk, naphtha vitrioli, arnica, valeriana, angelica, tincture martis tonica, and elixir roborans Whyttii. All this was given to one patient in one day. In each country some dominating spirit put forth some theory which others quickly seized, and the public was naturally not very confident and trusting. When Haller and Glisson brought forward the theory of irritability it was considered very wonderful, and they attempted to apply this term to many conditions. It was in this century that the people ran mad about somnambulism, clairvoyance, mesmerism, and many such things. It was in 1796 that Hahnemann began his career. He uttered some very remarkable statements, which were readily believed in those days if not now. He said among other things that he recognized no one as his followers but those who gave medicine in such small doses as to preclude the perception of anything medicinal in them, by means either of the senses or of chemistry. He said that "the pellets may be held near the young infant when asleep," and he also showed a belief in mind healing. Cullen was another man in this century who had his pet theories. In the second half of the eighteenth century obstetrics made a great stride. The loss of life in this branch of medicine was at this time enormous. Many monographs also appeared about this time. Jenner's name cannot be passed by at this epoch. There were new researches in anatomy and histology. The social position of physicians about this time began to improve. Looking back over the past hundred years, he thought physicians had many reasons for congratulation. The speaker brought out very clearly the faults and weaknesses of the medical profession of this period. The address contained much valuable information.

Nostrums; the Profession and the Law.—This was the subject of a vigorous paper by DR. H. C. WOOD, of Philadelphia, who struck hard from the shoulder at the audience of physicians below him. He defined a nostrum, according to Dr. Johnson, as "a medicine not yet made public, but remaining in some single hand." He spoke of the change in pharmacy. At one time eighty per cent. of the receipts of the druggist were from prescriptions. In 1890 only about thirty-five per cent. were legitimate prescriptions and about sixty-four per cent. were proprietary medicines. It was evident that the sale of these preparations was increasing. This change, he thought, was not caused by a diminished output of medicine, but by the substitution for the true and the known of the untrue and the unknown. He spoke of the false impression that all patent medicines were profitable, and dwelt on the large amount of advertising done. He said that about ten per cent. of the patent medicines used were distributed by the medical profession.

The polypharmacy tablet had done a great deal of harm and was unscientific. Physicians not only prescribed and recommended these unknown compounds, but they gave testimonials in writing about them and thus advertised them widely. He mentioned the enormous number of disinfecting compounds, most of which were worthless. These certificates have not been paid for, but have been given by the profession, which was not corrupt, but disgustingly weak. He once gave a testimonial in a weak moment, and this "lonely representative of his personal weakness" had been grossly misused. Physicians should be united in agreeing not to give certificates. France had a good law concerning patent medicines. This country was too free for any such law. He discussed patents by medical men and what the patent laws intended to protect, and how they were abused. The patenting of the process and that of the name was a different matter. Germany allowed only process patents. He finally appealed to the profession to be honest in their work; not to prescribe, recommend, or give certicates for patent medicines, and to adhere to well-known single remedies.

This address was received with great applause, both by the physicians present and by the large number of laymen, who thoroughly appreciated the points brought out.

Cancer as a Parasitic Disease.—This was a very able address by Dr. J. C. Edgar. The question was, Is cancer primarily a local disease or a constitutional one? Jonathan Hutchinson said that it was a local disease at first. The English surgeons believed there was a pre-cancerous stage which was characterized by disturbances in nutrition due to hereditary influences, to previous injury, or to some congenital defect or departure from the normal condition. Senility and the decadence of tissues were predisposing causes. Infection occurred in some places more easily than others, and especially where embryological rests or vestiges were found. There must be some outside stimulus to cause a cancer, and this must be a parasite not yet discovered. The death-rate from this disease was growing year by year, and it was four or five times what it was fifty or sixty years ago. There were few cancer hospitals compared to the hospitals and institutions for consumption, and not one had a laboratory in it. The State of New York was the first State to grant an appropriation for the study of cancer. The first money was given in 1898, and the institution was put under the charge of the medical department of the University of Buffalo. He believed that the only rational explanation for cancer must be founded upon the parasitic theory. This was reasoning from a clinical standpoint. He felt sure that a parasite was the cause of cancer, and thought there was a certain agreement even among those writers who were opposed to the parasitic theory in their delineation of the parasite. The solution of the origin of cancer must of necessity be slow in coming; the problem was certainly a biological one, and it was undoubtedly to the laboratory that we must look for its solution.

Medical Literature.—Unfortunately Drs. E. G. Janeway and Samuel Alexander were absent. In their stead Dr. William H. Welch referred to the excellent chronological exhibition of medical literature, and briefly gave a sketch of it. Medicine was divided into ancient, mediæval, and modern. The most ancient literature was found in the papyrus discovered by Georg Ebers, and it was probably about two thousand years old. Photographs of the original in the British Museum were shown, and in this work castor oil and opium were mentioned. This series of works was illustrated by authors throughout the whole period from 2000 B.C. to the present time.

At night the annual banquet was held at Rennert's Hotel, and over two hundred physicians sat down. Among the after-dinner speakers were: Surgeon-General Sternberg, Dr. James Tyson, and Dr. H. C. Wood, of Philadelphia; Dr. George Ben Johnston, of Richmond; Dr. C. Birnie and President D. C. Gilman, of the Johns Hopkins University. The references made by Dr. Sternberg to the inadequacy of the medical officers in the late war did not altogether please the audience, and were thought by some to have been in bad taste. Others at the head table were Dr. A. Jacobi, of New York; Dr. Roswell Park, of Buffalo; Dr. W. W. Johnston, of Washington, and Dr. Solis-Cohen, of Philadelphia.

Fourth Day—Friday, April 28th.

The final day of this meeting was begun by an exhibition of cases and methods by Dr. R. Tunstall Taylor at the Orthopædic Hospital. Here apparatus and appliances were exhibited and explained. Later in the day special trains took the members to more outlying asylums, where handsome luncheons were served. The exhibition of old portraits and relics was unique and merited a careful examination. Among them were portraits, paintings, diplomas, account books, and instruments of the Maryland physician one hundred or more years ago. The portrait and diploma of Dr. John Archer, the first person to receive a medical diploma in this country, were shown. Dr. Archer received his degree at what is now the University of Pennsylvania, in 1768.

For the ensuing year the following officers were elected: *President*, Dr. Clotworthy Birnie, Taneytown; *Vice-Presidents*, Drs. Samuel Theobald and David Streett; *Treasurer*, Dr. T. A. Ashby; *Secretary*, Dr. J. Williams Lord.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PARLIAMENT; MIDWIVES BILL; LEAD POISONING—CANCER IN VARIOUS ASPECTS; A CURE EXHIBITED—RHEUMATIC NODULES—HYPERTROPHIED PITUITARY BODY—BILIARY CALCULI IN INFANTS—TATTOOING—SIR W. JENNER'S WILL—TROPICAL DISEASES—COMMISSIONS—PROFESSOR MUIR TO GLASGOW—DEATHS.

London, April 14, 1899.

The midwives bill was talked out on Wednesday. It has been put down again for next week, but has no chance. A good thing too, says almost every one spoken to about it. Mr. T. P. O'Connor made a capital speech, showing that it would be very injurious to general practitioners as well as to the poor women on whose behalf it was pretended to be brought forward. He said the result would be that registered midwives with two or three months of perfunctory training would undertake all the duties, run all the risks, and face all the difficulties that needed all the skill of a medical man with his long training. Mr. Galloway also thought the bill would have the effect of substituting midwives for qualified medical men.

Sir W. Priestley, however, supported the bill on the ground that the danger to the general practitioner had been exaggerated. What does a titled accoucheur with his fashionable *clientèle* know of the struggles of his poor and hard-worked brethren? Ask this of some of them and they will say, What, indeed? and what does he care?

Lead poisoning in the potteries was the subject of a question which brought a statement that the government bill on factories and workshops will deal with

this danger in the sense of the report of Professors Thorpe and Oliver. These gentlemen have shown that leadless glazes are available, and that "gritted lead," a double silicate, almost insoluble, is effectual in other cases. The report also recommends that young persons should not be employed in recognized dangerous processes. With this ministerial promise and the report lying on the table, it is possible the House will be ready to adopt strict precautions.

Cancer is just now the subject of much consideration—the more so, perhaps, because somewhat alarming statements have been published as to an increase in the prevalence of this formidable disease. Improved diagnosis and more accurate returns of the causes of death must account for some of the higher mortality. Whether they will account for all should be investigated with care, that the public may learn the truth instead of being from time to time alarmed by sensational statements. Dr. Newsholme is of opinion that statistics do not justify such statements, and he has contributed an article on the subject to the current number of *The Practitioner*. This number is entirely devoted to the subject of cancer in its various aspects. Mr. Haviland considers it from the geographical point of view, and Mr. D'Arcy Power dwells upon cancer houses. Mr. Cheyne writes on the surgery, advocating early and extensive operations, and Dr. Coley gives his latest views as to the use of his mixed toxins. There are other papers on other points connected with this disease, so that the number gives an up-to-date summary of the subject. Dr. Roswell Park gives an account of the work done in New York, and corroborates the statements lately published by Mr. Plimmer, who has now submitted some account of his investigations to the Royal Society. He claims to have isolated and cultivated certain bodies from cancer, and by injecting the cultures into animals to have produced tumors, and from cultures of these again similar growths. His researches, like those of his predecessors, will naturally attract attention and criticism. Indeed some degree of criticism has already begun.

The Medical Society had this subject of cancer before it on Monday last, and from the point of view of treatment. Here a very interesting case was shown by Dr. Herman, viz., a woman who noticed a lump in her right breast in 1894, at which date she was forty-five years old, and had had three children and two miscarriages, the last ten years previously. In May, 1895, the lump was removed by Mr. Lawson at the Middlesex Hospital. It was cancerous and recurred. In October a second operation was performed. In July, 1898, she came to Dr. Herman, who found ulceration three and one-half by one and one-half inches over the scar, and also a lump in the other breast with enlarged glands in left axilla. The ovaries were removed and thyroid extract was administered, and in October the ulceration had healed and the lump and enlarged glands on the opposite side had disappeared. The patient had gained two and one-half stone in weight. Dr. Herman mentioned that fifteen cases treated by oöphorectomy have been recorded, with relief in only four. Mr. Boyd had published five cases treated by thyroid extract, and four in conjunction with oöphorectomy. The effect of these measures combined and separately is thus for consideration.

Mr. Stanley Boyd feared the nodules near the scar would prove malignant, as happened to one of his patients who remained free for eight months, and then such nodules came and progressed. That patient did not take thyroid well, and he was inclined to attribute more to the medication than to the operation. He referred to the case of Bishop and Page, in which thyroid was given for about twelve months with no effect apparently; but six months later the disease had disappeared.

Then Mr. Gould had reported a case of a woman apparently dying of cancer, recovering without any treatment. Oöphorectomy would seem to be useful before the menopause.

Mr. Battle agreed that the nodules looked suspicious, and the left breast, too, had a hard, suggestive feel. No other treatment he knew of would have so improved the patient.

Mr. Turner said even if the nodules proved to be malignant, the large carcinomatous ulcer had healed and the lump in the other breast gone. As the thyroid would do no harm in any case, the treatment deserved trial.

Dr. Herman, in reply, said the nodules had been stationary for months, and showed only that the cancer had gone but left its mark behind it. The results of the combined measures were far superior to either separately.

At the Pathological Society Drs. F. J. Poynton and G. F. Still's paper on "The Histology of the Rheumatic Nodule" elicited a number of opinions in corroboration of their views. They pointed out that sections through the centre and through the periphery of a nodule differed widely. In the centre the nodule consisted of fibrinous material, but nearer to the periphery round cells were found, and still nearer more or less formed fibrous tissue. The process is accordingly just the same as in rheumatic exudation elsewhere. The essential element is the formation of inflammatory fibrinous exudation, not of fibrous tissue. Whether fibrous tissue is formed depends on the severity and duration of the process. Sections of nodules showed exactly similar changes to those seen in rheumatic pericarditis and endocarditis. The rapid appearance and disappearance of these nodules seems to show that in some cases they never pass beyond the stage of fibrinous exudation. Consequently the authors suggested that the term "fibrous nodules" is inappropriate, and "subcutaneous" or "rheumatic" preferable.

Dr. W. S. Colman said he had made a section of a nodule three days old and found just the appearances described in the paper. The fibrin was not organized, though in old specimens only fibrous tissue might be found. Dr. Rolleston asked whether erythema nodosum was formed in the same way or was rheumatic. Dr. A. E. Garrod said the erythema was quite different, being associated with arthritis, but nodules were always associated with valvular inflammation. Dr. Payne was of the same opinion, as erythema affected the skin, not the subcutaneous tissues, was accompained by ecchymoses, and had no connection with acute rheumatism. Dr. Washbourn also thought erythema was not rheumatic. He anticipated that each nodule would be found to contain the virus of acute rheumatism, just as the periosteal nodes in typhoid fever had been found to contain the typhoid bacillus. Dr. Poynton, in reply, said the position of the nodules on parts exposed to friction or injury suggested that these might be factors in causation. Examination for microbes had not been successful.

Messrs. J. and T. W. P. Lawrence showed a hypertrophied pituitary body from a man who died at the age of fifty-two years. The earliest symptom was dimness of sight, which appeared six years before death. The field of vision was contracted externally on both sides. Later speech and gait were affected with progressing debility, but no sign of acromegaly appeared.

Dr. Still related three cases of biliary calculi in infants, and had collected records of twenty others in children under fourteen years of age. Of these twenty-three no less than fourteen were in the first ten

months of life; ten were in infants still-born or dying soon after birth. In new-born cases jaundice was usually present. So calculus must be reckoned among the causes of severe or persistent icterus neonatorum. Some cases of colic in infants might be due to this, as also to uric-acid calculi. The liability to gall-stones in intra-uterine and infantile life might be due to stagnation in the gall-bladder, as shown by the viscid bile so often found. In none of the cases had anything been found in the bile ducts.

An inquest on a man who died of blood poisoning three days after being tattooed has given rise to a flood of rumors and newspaper comments. It is said that society has lately made quite a fad of tattooing, especially among military men. This is likely enough, but it is more difficult to credit the report that doctors are afflicted with the craze. Yet one operator professes to have tattooed some four hundred medical men.

Sir William Jenner's will has been proved. The gross estate exceeds £385,000—a goodly sum enough, but probably a considerable part due to judicious investment, and he inherited a considerable fortune from his brother. He has left £10,000 to the College of Physicians.

The schemes for instruction in tropical diseases are doing well. The King of the Belgians, as sovereign of the Congo Free State, has sent £200 to the London school and the Indian secretary contributes £1,000. The Liverpool school has now a subscription list of £1,600 a year, and has secured Major Ross, I.M.S., as lecturer.

The council of the British Medical Association has called upon the Chamber of Commerce to substantiate its statements on secret commissions so far as the profession is concerned, as such practices would be inconsistent with membership of the association.

Dr. Robert Muir, professor of pathology at St. Andrew's University, has been elected to the vacant chair at Glasgow.

The following deaths have occurred in our ranks: Dr. Jukes de Styrap, consulting physician to the Salop Infirmary, aged eighty-three years. He was the author of the most authoritative "Code of Medical Ethics."—Dr. John Fenton Evans, major I.M.S., professor of pathology at Calcutta College.—Dr. Joseph Stevens, of Reading, aged eighty-one years. He retired from practice some twenty years ago to devote himself to archæology, to which he contributed many important papers.—James Rowlands, F.R.C.S., of Carmarthen, aged eighty-four years.

ERUPTIONS OF THE FACE DUE TO NASAL PRESSURE.

To the Editor of the Medical Record.

Sir: I recently saw, in your valuable journal for March 25th, a paper read before the Lackawanna County Medical Society, by Dr. G. D. Murray, of Scranton, on the relationship between intranasal disease and skin eruptions on the face. I merely want to point out that it is an error to attribute the facial eruptions to reflex only, as I have shown in a paper covering the whole subject read before the Philadelphia County Medical Society, October 12, 1887, published in the *Philadelphia Medical Times* and in the Transactions of the Philadelphia County Medical Society, prior to the publication of the observations of any others. As a curious fact, I may mention that a French physician read a paper on the same subject, and on the same evening, before the Academy of Medicine in Paris. Unfortunately I have forgotten his name. I am preparing a paper on this subject, embodying my subsequent observations.

Carl Seiler, M.D.

Scranton, Pa., April 19, 1899.

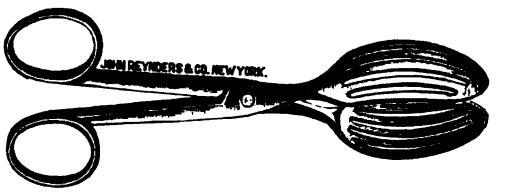
New Instruments.

AN INSTRUMENT FOR RELIEVING FECAL IMPACTION.

By J. C. ADAMS, M.D.,

Lake City, Minn.

Fecal impaction resulting from neglected constipation is not an infrequent occurrence. It is found especially in the aged, consequent on overdistention of the large intestine and wasting of its muscles. In young girls of an hysterical temperament, who often permit the large bowel to remain distended for days and weeks, the same condition, perhaps caused by dryness and induration of fæces, is met with. If fæces retain sufficient moisture and the impaction is moderate, so that there yet remains the possibility of expulsion by abdominal pressure, copious irrigation may succeed in expelling the mass, little by little. This is exceptional. Usually the injected liquid is distributed over the surface of the indurated mass and passively escapes by its sides. We can remove the indurated masses by an instrument which reaches above and hooks them down and out of the anus. Such an instrument is unsuitable for two reasons: It is difficult to dig into the mass and pull it down from above, and the mass when pulled on escapes. It is evident that what is needed is an instrument that will seize the mass from below and hold it firmly, and yet not divide it. Such an instrument should be as large as can be readily introduced without an anæsthetic. Not knowing any instrument corresponding to the foregoing description, I gave John Reynders & Co. exact measurements and a rude sketch of an instrument to be manufactured. They fully embodied my idea in the instrument shown in the accompanying illustration.



Suppose two teaspoons, fenestrated, crossed one inch below the junction of the blades and handles, and joined by an obstetric lock, so that each blade can be introduced separately, and you have the idea and approximately the size of the forceps. When closed, the points are one-fourth of an inch apart. This is designed to obviate severing the fecal mass if it should be a cylinder. The fenestræ, permitting the fecal mass to be embedded in the instrument, give a firmer hold

WIDAL REACTIONS WITH A MEASURED QUANTITY OF DRIED BLOOD; ALSO A NEW INSTRUMENT FOR STUDYING THE HANGING DROP.

By ROBERT L. PITFIELD, M.D.,

Philadelphia, Pa.,

Assistant Bacteriologist, State Board of Health, Pennsylvania.

The dried-blood method of making Widal reactions appeals to the general practitioner, because of its simplicity, and because of the ever-present bit of paper on which to impress a drop of blood, to be sent to the nearest laboratory in an envelope. One great drawback of the dried-blood method, compared to the serum methods, is that the blood cannot be measured conveniently and diluted after it has been dried.

Several methods have been devised for measuring out a definite quantity of blood before drying, and then using the total quantity. The methods of McFarland and of Wilson and Wesbrook are the principal

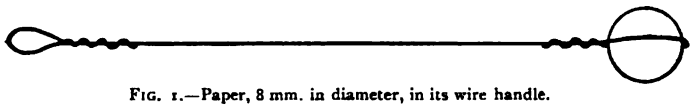


FIG. 1.—Paper, 8 mm. in diameter, in its wire handle.

ones. They both depend upon certain apparatus which is likely to be lost easily, or broken in the mails.

The principal requirements for a Widal reaction are a dilution of the blood, at a certain ratio, say one to ten, and a time limit for the reaction to appear. I have devised a method, whereby a stated and uniform amount of blood may be collected, mailed in an ordinary envelope, and accurately diluted upon its arrival at a laboratory. If a cubic millimetre of blood (the contents of the tube of the white-blood-corpuscle pipette) is allowed to drop on a piece of heavy filter paper (No. 598, Sleicher & Schüll, Germany), it will make a spot 1 cm. in diameter; or the amount of blood that a disc of paper of this size will be filled with is a drop of blood 1 c.mm. in size. If, however, the disc be dipped in more blood it will absorb more blood than the cubic millimetre, showing that the paper has a great capacity for blood if put in contact with an excess of blood.

By experiment I have found that a disc of paper of this thickness (No. 598), and 8 mm. in diameter, will absorb 1 c.mm. of blood, if it is dropped on a finger and blotted up with the paper. The paper varies slightly. I have found that certain discs absorb this readily, while other discs leave a slight stain behind. In blotting up the blood the edge should be used. We have now a simple container of certain definite capacity, filled with 1 mm. of blood or very approximately so. If this is dried, the blood may easily be dissolved out in 1 c.c. of water, bouillon, salt solution, or bouillon culture of typhoid, and we then have a dilution of one to ten of the blood. I have found that the blood will dissolve out in about ten minutes, leaving the paper white and almost entirely bloodless.

If a rough piece of filter paper is furnished instead of the disc, the blood may be sopped up by a corner, and upon sending the piece to a laboratory a disc or square 1 c.c. in diameter may be cut from it, and we will have about 1 c.mm. of blood contained in it. I have found that if a bit of wire is gently fixed to the disc, 8 mm. in size (see Fig. 1) it may be used as a

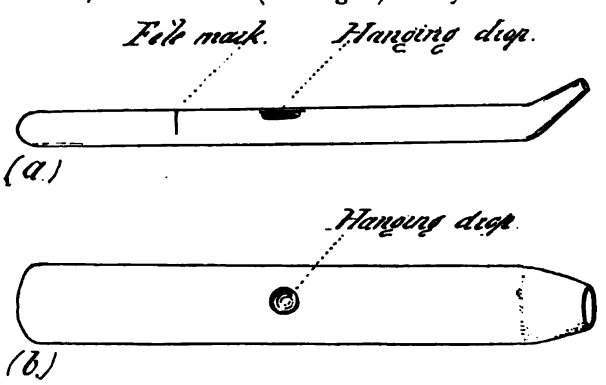


FIG. 2.—Flask for Studying a Hanging Drop and making Dilutions. (*a*), side view; (*b*), top view.
Note.—The neck of the flask should have been drawn much straighter shorter, and much wider.

handle which will be useful in absorbing the blood and in making the dilution, especially if the following apparatus which I have devised is used. The wire handle should be of annealed steel wire, tinned, and of No. 29 gauge.

I have found the ordinary cover-slip concave slide and vaseline inconvenient. Cabot uses the ordinary slide and cover. I have devised a small glass "flask," 7 cm. long, 1 cm. wide, and 4 mm. deep; it has an opening at one end and is of very thin glass. The flask holds about 3 c.c. I have marked on mine with a file scratch the height which 1 c.c. of water reaches.

The flask serves as a mixing chamber, since we may run 1 c.c. of bouillon typhoid culture into it, and then thrust the disc of blood-soaked paper into it, and after the blood is soaked out we have a dilution of 1 to 10. Then, if the flask is laid on its flat side, we may take a platinum loop full of the blood and culture, and make a hanging drop on the inner part of the upper side, and examine as we usually examine a hanging drop. The glass of the flask I have had ground and polished almost as thin as a No. 2 cover glass, and the bacilli and clumps can easily be studied with a Zeiss "D" (one-sixth). The definition is not quite so fine as with a cover glass, due perhaps to the thickness of the glass and to the different index of refraction which the Bohemian glass, of which the flasks are made, possesses.

However, in making a Widal test we do not care so much for morphology as for presence or absence of motility and clumping. The "flasks" are made by Queen & Co., who also supply the paper, discs, punche, etc.

5450 GERMANTOWN AVENUE, PHILADELPHIA.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending April 29, 1899:

	Cases.	Deaths.
Tuberculosis	170	178
Typhoid fever	12	8
Scarlet fever	226	17
Measles	306	12
Diphtheria	205	32
Laryngeal diphtheria (croup)	8	2
Cerebro-spinal meningitis	0	16
Chicken-pox	30	0
Smallpox	1	0

"The Public Health Journal" for October is responsible for the following poetical outburst:

They sawed off his arms and his legs,
They took out his jugular vein,
They put fancy frills on his lungs,
And they deftly extracted his brain.
'Twas a triumph of surgical skill,
Such as never was heard of till then;
'Twas the subject of lectures before
Conventions of medical men.
The news of this wonderful thing
Was heralded far and wide,
But as for the patient there's nothing to say,
Excepting, of course, that he died.

Consumption and Canaries.—From my own observation, I am of opinion that in many instances diseased caged birds, such as canaries, communicate tuberculosis to a serious extent among human beings. As about four hundred thousand canaries are reputed to be sold every year in the United Kingdom, and as it is stated that tuberculosis is one of the most common diseases of birds, it does not seem unlikely that the canary may have considerable influence in the distribution of tuberculous infection.—DR. TUCKER WISE, *The Hospital.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending April 29, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Tallapoosa County	April 14th	Prevalent.	
California, Los Angeles	April 15th to 22d	6	
Dist. of Columbia, Washington	April 27th	1	
Georgia, Savannah	April 17th	2	*
Indiana, New Albany	April 15th to 22d	2	
Louisiana, Shreveport	April 15th to 22d	3	
New Orleans	April 15th to 22d	9	
Massachusetts, Boston	April 17th to 28th	6	
Minnesota, Minneapolis	April 9th to 15th	1	
St. Paul	April 9th to 15th	1	
New York, Buffalo	April 20th	1	
Elmira	April 15th to 22d	1	
Pennsylvania, Allegheny County	March 30th to April 12th	4	
Cambria County	March 30th to April 12th	1	
Blair County	March 30th to April 12th	22	
Fayette County	March 30th to April 12th	20	
Somerset	March 30th to April 12th	48	
Washington	March 30th to April 12th	1	
Rhode Island, Providence	April 21st	2	
Texas, Galveston	April 1st to 15th	10	
Laredo	April 1st to 8th	17	
Virginia, Newport News	April 14th to 19th	9	
Norfolk	April 13th to 26th	41	
Portsmouth	April 13th	10	

* Origin, Montgomery, Alabama.

SMALLPOX—FOREIGN.

Belgium, Ghent	April 1st to 8th		1
Brazil, Bahia	March 18th to April 8th	8	1
Rio de Janeiro	March 3d to 10th	1	7
China, Hongkong	March 3d to 11th	3	1
England, London	March 25th to April 8th	2	
Greece, Athens	March 25th to April 8th	62	30
India, Bombay	March 14th to 21st		10
Calcutta	March 4th to 18th		8
Korea, Seoul	March 11th	*	
Mexico, Mexico	April 9th to 16th	10	4
Russia, Moscow	March 25th to April 1st	20	3
Odessa	April 1st to 8th	2	1
St. Petersburg	March 25th to April 1st	16	3
Warsaw	March 18th to April 1st		5
Turkey, Constantinople	March 20th to April 10th		22
Smyrna	March 12th to 26th		1
Uruguay, Montevideo	March 11th to 18th	1	

* Many cases and deaths.

YELLOW FEVER.

Brazil, Bahia	March 16th to April 1st	13	7
Rio de Janeiro	March 3d to 10th	91	58
Mexico, Vera Cruz	April 13th to 20th		4

CHOLERA.

India, Bombay	March 14th to 21st		7

PLAGUE.

Formosa, Tamsui	February 22d to March 8th		63
India, Bombay	March 4th to 21st		1,128 *
Calcutta	March 3d to 18th		188

* Officially reported; probably 1,900.

Mosquitoes and Malaria.—In the discussion of the theory of the dissemination of the germs of malaria by mosquitoes, Dr. Grassi presents a note to the Atti dei Lencei, in which he calls attention to the absence of malaria from certain districts where the mosquitoes are very numerous. He believes that some varieties of gnats are closely connected with the propagation of the disease. He regards the common gnat, Culex pipiens, as quite innocuous, but a larger species, Anopheles claviger, known in Italy as the "zanzarone" or "moschino," is very prevalent in localities where many cases of malaria occur. He brings up the interesting fact that the Anopheles claviger is active only after sunset as affording an explanation of the old superstition which held it dangerous to fall asleep in a malarious region just after sunset. The indications are that the interest aroused by these discussions will serve to bring about active measures for the destruction of mosquito larvæ in places where malaria abounds. Such a practical test would be of the greatest value to medical and sanitary science.

London Dust.—A London dust problem offers a fine opportunity for the many representatives of the class "inventive genius" who are to be found in the ranks of pharmacy. It has long been a matter of complaint in the metropolis that during the collection of house refuse a nuisance is caused to the public by the dust being blown about the streets, and the London County Council has had under consideration the question whether that nuisance cannot be obviated by the use of some improved form of dust-cart. Inquiries have been made as to the arrangements in force in several of the principal cities and towns in England and Scotland, but so far no form of dust-cart has been discovered which can be recommended as entirely obviating the nuisance. With a view of solving the problem the council has decided to offer a premium of £25 ($125) for the best design of a dust-cart and cover.—*English Pharmaceutical Journal.*

Bacillus Diphtheriæ.—This is characterized morphologically by marked irregularities in its form While the typical form is that of a moderately stout, round-ended bacillus, it is very apt—perhaps as a result of degeneration—to appear club-shaped, irregularly segmented, and to develop at the end a strongly refractive material which stains more deeply than the rest of the protoplasm.—DELAFIELD AND PRUDDEN.

Peculiar People.—The *London Referee* says: "If Parliament had time for accomplishing useful reforms, which it practically has not, it would proceed straightway to the smoothing out of certain anomalies in the law that have lately obtruded themselves upon public notice. A bench of judges sitting as the Court of Crown Cases Reserved has just affirmed that the Peculiar People, who neglect to call in medical advice for their ailing children, are, in the event of these dying, guilty of manslaughter. But everybody knows that public opinion would not tolerate the sentencing of these well-meaning but mistaken people to the terms of penal servitude that such a crime carries with it. People with their fervent belief in texts of Scripture—and it must be confessed that they go upon a very definite one indeed—are of the stuff of which martyrs are made. I doubt whether they could be coerced out of their convictions by law. What, then, will happen as the result of this judicial deliverance which no doubt the judges were bound to make? Pretty much what has happened hitherto: juries will hesitate to convict, and even judges themselves before whom such cases are tried will minimize the punishment of the accused all they can. We do not hesitate to deal severely with a man for his obstinate refusal to abate a nuisance, but sincere religious conviction standing in the way of the law seems to fall in a different category."

Malaria and Typhoid in China.—Dr. H. R. Robertson, writing on the health of Tientsin, says: "Although Tientsin may be considered a fairly healthy port, still a very large number of cases of malaria are met with annually, chiefly in the spring and autumn. In the spring of 1897 a number of cases presenting all the symptoms of malarial fever came up for treatment, characterized, however, by a subnormal morning temperature, while the evening rise seldom reached 100° F. The morning temperature in many cases was not higher than 96° F., though the malaise, pains in the back and limbs, and thirst were as severe as if the temperature had been many degrees higher. In these cases I found arsenic the most valuable drug. Very many types of fever have come under my notice, though, strange to say, enteric and the so-called typhomalarial, which one would expect to find prevalent, have been of rare occurrence. In the past eighteen months only five typical cases of typhoid have come under my care; all these cases, one of which was very severe, resulted in recovery. I may remark that I have little to say in the way of medicinal treatment in these cases, as I have relied entirely on cold sponging to reduce the temperature, and my dietary has consisted almost entirely of sterilized milk."

The Pigmies in Central Africa.—Mr. Albert Burrill Lloyd, an Englishman who for the past three months has been journeying in the heart of Africa,

has just returned. Mr. Lloyd gives an interesting account of pigmies he encountered on his travels. The *Evening Post*, referring to the subject, says: "On entering the great primeval forest Mr. Lloyd went west for five days without the sight of a pigmy. Suddenly he became aware of their presence by mysterious movements among the trees which he first attributed to monkeys. Finally, he came to a clearing and stopped at an Arab village, where he met a great number of pigmies. 'They told me,' says Mr. Lloyd, 'that, unknown to me, they had been watching me for five days. They appeared very much frightened, and even when speaking covered their faces. I asked a chief to allow me to photograph the dwarfs, and he brought a dozen together. I was able to secure a snapshot, but did not succeed in the time exposure as the pigmies would not stand still. Then I tried to measure them and found not one over four feet in height. All were fully developed, the women somewhat slighter than the men. I was amazed at their sturdiness. The men have large beards reaching halfway down the chest. They are very timid and will not look a stranger in the face, their beadlike eyes constantly shifting. They are, it struck me, "fairly intelligent."'"

He Wanted Some, Too.—While a drove of bullocks was being driven through an Irish village from a fair, one of the animals suddenly stopped, and, notwithstanding all the efforts of the drover, would not move on its way. A chemist who happened to see the affair went up to the bullock and injected a drug down its throat, which made the animal career down the street like greased lightning. About five minutes after the drover entered the chemist's shop, wiping the sweat off his head, and asked the shopman if he was the party who gave the bullock the medicine. "I am," said the chemist. "Well," said Pat, "I'll take a pennyworth of it, as I have to follow the beast."—*Bulletin of Pharmacy.*

Bill Nye and the Nurses.—I have just been sent to the hospital for twenty days. My physician did it. He did it with an analysis. Anybody who amounts to anything nowadays gets analyzed. Sometimes you find casts, sometimes you find maple sugar, and sometimes you find acids, oxides, paint, oil, varnish, white lead, borax, albumin, lime, hair, and cement. In these cases the patient should be placed under a strict diet, or he will in the course of his life become a corpse. I go into details about this, because a false impression got out a few weeks ago to the effect that I came here for another purpose. A reporter came to see me, and I sent word to him that I was then out on the operating-table in such a position that I could see no one, while an elderly surgeon was engaged in removing a porous plaster received during the war. I was not serious in saying this, but unfortunately I have the reputation for absolute veracity and seriousness, so that the statement got into the papers as *bona fide*, and caused American securities to go down two points in one day.

The Time for Thinking.—One of those terrible statisticians, who afflict us with diagrams showing how near we should be to heaven by climbing all the steeples if these were blended in a single shaft, has been timing the various occupations of our mortal span. Out of seventy years, you sleep more than twenty-four; but you reflect only one year and five and one-half months, and you gossip the same period. This makes one's yearly allowance for thinking about seven days, and, considering all the distractions of life, that is rather handsome. I know several men who, when they grasp the fact that they literally reflect one hundred and sixty-eight hours in three hundred and sixty-five days, will give themselves airs of philosophers. One youth, to whom I communicated this table of his intellectual toil, gasped for a moment, and then cried: "By Jove! I'm a regular Herbert Spencer!"—*Illustrated London News.*

Modern City Life.—It is becoming every day more widely felt that some large efforts must be made to abate the evils that result from our town life. Whether very large cities like London and Chicago ought to exist, is a point that may well be argued, but we are here dealing with facts as they are. The question of cheap and rapid transit is connected intimately with the big city problem, especially as it affects that contact of children with nature which is so vital. If it is essential that children should be born and brought up in towns, it is no less essential that a considerable part of their lives should be spent in the fresh air amid greenery and the songs of birds. The city arab who never saw a cow in a green field, or heard the song of a lark as it soared into the blue, is the most dreadful product and portent of our civilization. We do not see why in large cities schools should not be built where possible in adjoining country districts, in which the land can be bought cheaply. Suburban trains, which bring business men into town in the morning and return empty, could be utilized for taking children to the schools in the country at very low or nominal season rates, and bringing them back in the afternoon before the business men return. Either this must be, or we must confine our towns purely to mills, shops, and warehouses, and build up large outlying zones of healthy dwellings for the people, surrounded by trees and ample spaces.—*London Spectator.*

Why Scorchers Scorch.—French physicians have added a new disease to those that afflict humanity. They call it "locomotor hysteria." It manifests itself in an insane hurry to get over the ground. A fellow who has this disease, and has it bad, can't stand anything slow. If he goes driving, instead of enjoying the scenery, he beats his horse into a continual gallop; and when the beast drops exhausted, like the hero of the ballad, he "gets another mile out by the twisting of its tail." He runs to catch a train or ferry-boat when there's not the slightest need. But of course he's at his worst when he mounts his bicycle and proceeds to slay miles and pedestrians; then he becomes the modern terror—the scorcher. Diagnosing scorching as a disease, it is seriously proposed to carry the scorcher, when he is caught, to a hospital where he may be detained for some weeks and treated for his malady precisely like another monomaniac.—*The Public Health Journal.*

DOCTOR AND CLERGYMAN.

The Parson points the way to heaven;
And then, with tender care,
The Doctor consummates the work,
And sends the patient there!

—DR. JOHN JOHNSON (BOLTON).

Women Doctors of Antiquity.—The first qualified woman physician in Europe, so far as is known, was a young Athenian woman named Agnodice. In the year 300 B.C. she disguised herself as a man and began to attend the medical schools at Athens, which it was against the law for a woman to do. She afterward practised among the women of Athens with extraordinary success. But her secret becoming known, she was prosecuted for studying and practising medicine illegally. The Athenian women, however, raised so furious an agitation in consequence that the case was dropped and the law repealed. Coming to later times, we find several women who obtained the degree of medicine and practised in Europe before 1492, espe-

cially in the Moorish University of Spain. Trotula, of Rugiero, in the eleventh century, had a European reputation, and practised as a doctor in Salerno. At the beginning of the fourteenth century Dorothea Bocchi not only received the degree of doctor, but was professor of medicine in the famous University of Bologna. Since then two other women have been professors of medical subjects in the same university—Anna Mangolini (anatomy) and Dr. Maria delle Donne (obstetric medicine), the latter being appointed in 1799. In the year 1311 an edict was issued in France forbidding surgeons and female surgeons from practising until they had passed a satisfactory examination before the proper authorities. These female surgeons are again referred to in an edict in 1352.—*Philadelphia Medical Journal.*

A Rich Charity Patient.—An unexpected illustration of dispensary abuse occurred at the City Hospital Dispensary in Baltimore, when a man who had just applied for free treatment, on the plea that he was unable to pay a physician, dropped dead, and in his pocket was found $1,500 in notes.—*Yale Medical Journal.*

Smallpox.—Macaulay, the English historian, did not exaggerate when he called the disease "the most terrible of all the ministers of death," and said, in describing its ravages in the seventeenth century: "Smallpox was always present, filling the churchyard with corpses, leaving on those whose lives it spared the hideous traces of its power."

Liquid Air as an Appetizer.—The story comes of a Russian physician who placed a dog in a room with the temperature lowered to 100° F. below zero, by the use of liquid air. After ten hours the dog was taken out, alive and with an enormous appetite. The physician, says the *London Engineering*, tried the test himself. After ten hours' confinement in an atmosphere of still, dry cold, his system was intensely stimulated. So much combustion had been required to keep the body warm, that an intense appetite was created. The process was continued on the man and the dog, and both grew speedily fat and vigorous. It was like a visit to a bracing northern climate.—*Bulletin of Pharmacy.*

Early Use of the Siphon.—The origin of the siphon is lost in antiquity. It was, however, used in Egypt as early at least as 1450 years before Christ. In the tomb of Amunoph II., who reigned in that period, there is a delineation which represents the siphon apparently in operation, drawing liquid from one vessel to another. A siphon of extraordinary size was built for the Guindaro water-supply of Kansas City. It leads from the intake crib to the pump wells, a distance of seven hundred and forty-five feet. It is forty-two inches in diameter; its rise is ten feet above low water, and its capacity is about fifty million gallons per day.—*Sanitary Record.*

The Physics of Smell.—Had the sense of smell occupied in man the important position it bears in the hierarchy of senses of animals, it would no doubt have been the subject of a far greater amount of investigation. Sight and hearing have been subjected to a long series of ingenious investigations, which have been the means of revealing their essential nature; but taste and smell have been comparatively neglected. For this reason the address of Professor Ayrton, on "The Physics of Smell," before the British Association for the Advancement of Science, at Bristol, becomes especially interesting. The sense of smell in man is developed so rudimentarily that it affords little opportunity for study. Our memory for odor is very imperfect, and our olfactory sensation possesses none of the definiteness of perception, so that any study of smell must be made elsewhere than in the human family. Sexual odors are matters that should possess more than passing interest for the psychologist. Scarpa long ago showed that if he plunged his hand into water after handling a female toad, the males were attracted to it. Hounds will recognize by smell the trace of animals perfectly imperceptible to sight. Water, which has no smell to man, can be perceived by many animals at a great distance. The diffusion of odors, especially those having a sexual bearing, would seem to be prodigious. Professor Ayrton found that if females of certain moths be exposed in a muslin bag, the males will soon be seen to congregate around them. Professor Ayrton specially directed his attention to the smell of metals, the rapidity with which odors diffuse, and the capability of odors to traverse films of glass. In some important respects, his inquiries may be said to have augmented our knowledge of the action of the special senses.—*Medical Age.*

In Central Africa.—An interesting story, illustrating in a curious way the small beginnings of sanitation in Central Africa, comes to us from Livingstonia. Between Lake Nyassa and Lake Bangwelo lies the country of the Senga tribe, which they call Marambo, a territory as yet practically unknown to the white explorer. Mr. Donald Fraser, of the Livingstonia Mission, visited the tribe last July, and found them living in a state of filth, such as, according to Professor Koch, makes certain parts of Central Africa perfect breeding-spots for the plague. Acting literally on the excellent precept that cleanliness is next to godliness, Mr. Fraser followed up his sermon by warning the chief that more of the young were perishing because the villages were never swept, than from all the raiding by hostile tribes to which they had been subject in the past. At midnight, Mr. Fraser's account continues, he was awakened by a voice of thunder, which he found to be that of the chief, striding through the central village and shouting: "Women, all take heed. The white man says we are dying because the village is not swept. Sickness and death are coming. Rise and sweep." And the white man's warning was obeyed. It was but "the little seed" of sanitation that took root and sprouted so hopefully, and we must all rejoice to see so auspicious a seedtime, though it would perhaps be too much to expect it to flourish in the uncongenial soil of African barbarism. But what would not some of our sanitary reformers give to see so ready a response to their counsels at home?—*The Sanitary Record.*

Abortion of Appendicitis.—Dr. Feuchtenbusch, of Grand Rapids, Mich., writes that he recently had two cases of appendicitis under treatment, in both of which undiluted ichthyol was painted over the ileo-cæcal region twice daily and ice-bags were applied. In the graver of the two, ichthalbin was exhibited internally as well. The writer believes that in this case an operation was avoided only by the simultaneous employment of ichthyol and ichthalbin. Both patients, aged eleven and nine years respectively, no longer had any fever when discharged, nor was there any tenderness on pressure over the ileo-cæcal region. The action of the ichthalbin on the bowels was very beneficial.—*Merck's Report*, February.

Ovarian Pain.—The sclerotic or sclero-cystic ovary is usually very painful. This is not surprising if we reflect that the lesion reveals an hereditary or acquired predisposition to the sclerotic processes. The constitution of the patient could in most cases be defined by the term neuro-asthenic. When the primary inflam-

mation is slight, or when the sclerotic processes indicate a vicious type of degeneration of the ovary, it is certain that the rupture of the follicles is painful, and the work of elimination slow and preceded by a long congested period with apoplexy of the cortical substance. This process tends to the formation of hypertrophy, and is frequently attended by hemorrhage. In such cases the menstrual period is particularly painful. If there is prolapse of the ovaries with adhesions the local pain is increased. In the intracatamenial period, when the ovaries have been primarily affected, we often notice as a consequence a singular alternation upon the two sides of the pelvis, the pain being on one side one month and on the other the next.—ERNEST HALL.

The Dangers of Cigarette Smoking.—The evil effects are due in great part to the habit of inhaling the smoke, which does not pass beyond the first bifurcation of the bronchi. An irritation of the laryngeal filaments of the pneumogastric is set up. The effect of continually smoking small quantities of tobacco is comparable to the more intense effect that is obtained in therapy by the administration of a given quantity of certain drugs in fractional doses.—*Il Morgagni.*

Franklinization of to-day means electrization produced by the electro-static machine, in distinction from galvanization, which is a continuous electrization without tension or quantity; from voltaization, a continued or discontinued electrization of relatively large quantity, under medium or feeble tension; from faradization, which is discontinued or oscillating electrization of variable but feeble quantity, under somewhat strong varying tension.—A. TRIPIER.

Glazed Book Paper Bad for the Eyes.—The effect of glazed papers on the eyesight has recently occupied the attention of some German doctors. One authority examines the causes of the changes in the general reading and writing habits of the nation, and explains that in the earlier part of the century the old rag papers then in use, both for writing and printing purposes, were mostly of a dull gray or blue color, and were coarse-grained, so that thick letters had to be used by writers with quill pens or by printers on their old slow presses. With the introduction of more modern fibres, paper received a smoother surface, steel pens could be employed, and the printing-paper could travel over quicker printing-presses. The fashion for brilliant colors and elaborate typesetting has been carried to such a state of perfection that a reflection is often created which could never arise from the rougher surface. Now, what is the effect upon the reader's eye? In the old books or letters, with a mild and soothing light, the surface contrasted easily with the thicker and darker type or writing characters; now the highly glazed surface offers reflections of the light, which, with the more elaborate and thinner type, produce a lot of shades and lights that are most trying. The paper has often to be turned in various directions to be seen more clearly, in order to distinguish the gray (or maybe other shades) of the type from the shining white of the paper. This is similar in effect to the result in trying to decipher writing in the dusk. An experiment will soon prove this. Take an old edition, say of Shakespeare, and a new magazine on highly glazed paper, and compare the sensation in the eye after half an hour's reading. The doctors therefore propose that the public inspectors of schools should order the use of sanitary paper for the eyes, by which they mean that a glazed or highly polished surface should be avoided and the colors chosen should rather be gray or light blue, but no white, and, in fact, no brilliant colors at all. The type should be clear and simple, but not too thin. The children whose eyes require protection, and through them the parents, should be taught to demand their favorite books and papers to be printed in the right style, and the excesses of a falsely guided taste should be avoided. It is suggested that a few years of such policy would soon improve the eyesight.—*Invention.*

Prevention of the Spread of Consumption.—The following rules are suggested by the board of health of Brighton, England: (1) Expectoration indoors should be received into small paper bags and afterward burned. (2) Expectoration out-of-doors should be received into a suitable bottle, to be afterward washed out with boiling water; or into a small paper handkerchief, which is afterward to be burned. (3) If ordinary handkerchiefs are ever used for expectoration, they should be put into boiling water before they have time to become dry, or into some disinfectant solution to be ordered by the doctor. (4) Wet cleansing of rooms, particularly of bedrooms occupied by sick persons, should be substituted for "dusting." (5) Sunlight and fresh air are the greatest enemies of infection. Every consumptive should sleep with his bedroom window wide open top and bottom, and during the day should occupy a well-ventilated room. Rebreathed air is the main condition favoring consumption. If the patient is warmly clad he need not fear keeping out in any weather. N.B.: The patient himself is the greatest gainer by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectoration. (6) Persons in good health have no reason to fear the infection of consumption. Overfatigue, intemperance, bad air, and dusty occupations favor the spread of the disease.

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Original Articles.

THE HERNIA GUARANTEE AND THE MINIMUM OF CONFINEMENT AFTER OPERATIONS FOR APPENDICITIS WITH AND WITHOUT PUS.

BY GEORGE M. EDEBOHLS, A.M., M.D.,

NEW YORK.

THE writing of this paper was suggested by the perusal of an article by Dr. George Woolsey on "Some Points in the Treatment of Appendicitis when Pus is Present," which appeared in the MEDICAL RECORD of April 1, 1899. The points or propositions contained in this article are admirable so far as they go, the only objection being that they do not go far enough. In one or two respects, as I hope to show, they stop just short of the ideal surgery applicable to the class of cases under consideration. Before discussing the surgical management of cases of appendicitis with the presence of pus, to which Dr. Woolsey's paper relates, I may be permitted a few remarks relative to the technics of operations for both acute and chronic appendicitis, with absence of pus.

The readiness of surgeons at the present day to advise and undertake operation for chronic appendicitis is based upon a recognition of the following facts:

1. Chronic appendicitis not only debars its victim from the full enjoyment of health and happiness, but is a direct menace to life itself by reason of the ever-present danger of implanted attacks of acute appendicitis.

2. Chronic appendicitis dependent upon movable right kidney may, as shown by the writer,[9,10] occasionally and under favorable conditions apparently end in resolution and remain permanently cured after right nephropexy. The only other cure of chronic appendicitis possible, outside of operation, is by slow and uncertain progress of the inflammation to obliteration of the appendix, a process entailing years of suffering and constant peril of life.

3. The diagnosis of chronic appendicitis can be made in every case by the method of palpation of the vermiform appendix, elaborated and first described by the writer.[6]

4. The mortality of operations for chronic appendicitis is practically *nil*. I have operated for chronic appendicitis one hundred and thirty-two times in all, without losing a single patient.

5. With up-to-date technics a patient may leave his bed well within a week, and be back at his usual occupation at the end of two weeks or less after an operation for chronic appendicitis.

6. With proper and faultless technics hernia and a disfiguring scar can be absolutely guaranteed against, and this irrespective of the length of the incision required in the particular case.

We have at our disposal at present, to meet the indications of any given case, three good and perfectly satisfactory incisions for the surgical treatment of chronic appendicitis: the gridiron incision of McBurney, the rectus incision of Battle, and the lumbar incision. The old incision parallel to Poupart's ligament, or any incision severing the various abdominal muscles in one and the same line, should find no place in the work of the modern surgeon.

The gridiron incision of McBurney,[14] dividing or separating the muscular fibres of the various planes of the abdominal wall in the direction of the fibres of each muscle, is too well known, and its merits are too generally recognized, to call for further remark.

The incision through the rectus muscle, sometimes called the trapdoor incision, is not so generally known and practised as its advantages merit. W. H. Battle[1,2] is its author, although it was subsequently described by Jalaguier,[11] Kammerer,[12] and Lennander,[13] each apparently under the impression that the method was original with himself. Deaver[4] has admirably illustrated this incision. It consists in a vertical incision within the outer edge and parallel to the fibres of the right rectus abdominis muscle. After dividing the aponeurosis of the external oblique and the anterior sheath of the rectus muscle, the outer edge of the muscle itself is drawn inward and the posterior sheath of the rectus or transversalis fascia with the peritoneum is cut through. Lennander in his first cases divided or separated the fibres of the rectus muscle in the same line with the original incision, and I still prefer this method, which I have now employed for several years. The reasons for this preference lie in the fact that it enables us to open the rectus as near as we please to the median line. An incision thus placed avoids the division of large nerve trunks and constitutes an obvious advantage in women, in that it enables us to determine by palpation and, if necessary, by inspection the condition of the uterus as well as of both ovaries and tubes. For this purpose the incision is made just long enough to admit of the introduction of two fingers. Another advantage of the Battle incision is that it can be readily extended upward or downward as far as may be necessary, as, for instance, in tracing and enucleating a diseased appendix running upward to the vicinity of the liver, or in carrying out any operative procedure upon the uterus or its adnexa. The gridiron incision, on the other hand, has its well-marked anatomical limitations beyond which it becomes impracticable.

The choice between the McBurney and the rectus incision is determined by palpation of the appendix at the time of operation after the patient is anæsthetized. If the appendix is found within reach of an incision through the rectus, or if it can be displaced by the fingers so as to be brought within reach of such incision, the incision of Battle is preferred. Contrary conditions obtaining, the gridiron incision is employed. As a matter of fact, I have of late years employed the rectus incision in chronic appendicitis at least four or five times to every once that I have felt impelled to resort to the gridiron incision.

In closing either the gridiron or the rectus incision, a running suture of forty-day catgut applied in the manner described by the writer[6] is employed. Hernia is thus guaranteed against, and my patient may leave the bed, if he or she chooses, at any time after the bowels have moved on the third day.

The third or lumbar incision for chronic appendi-

citis, original with the writer,[6] is employed only when right nephropexy is performed simultaneously with appendectomy. I have thus far operated upon the appendix fifteen times through the lumbar incision.

The skin in each of the three incisions is closed by the intracuticular suture to avoid a disfiguring scar, a matter of some importance to most women.

As regards treatment of the appendix itself in cases of chronic appendicitis, inversion of the entire uncut appendix, as originated by the writer,[7] is preferred in all cases in which it is practicable. I have thus inverted the entire appendix in one hundred and sixteen patients, ninety-seven of them suffering from chronic appendicitis. In the remaining nineteen patients the normal appendix was inverted incidentally on the occasion of cœliotomies undertaken for the relief of other conditions.

While the technics of operation for chronic non-purulent appendicitis may be said to have reached an absolutely satisfying stage and to be considered as having done so by surgeons as a class, the same cannot be said of the operation for appendicitis with the presence of pus. A great many, if not the majority of gynæcologists the world over, have practically abandoned drainage for pus in the pelvis, closing for primary union after careful cleansing in nearly all of their cases of pus limited to the pelvis. Although the analogy between purulent appendicitis on the one hand, and pyosalpinx, ovarian abscess, etc., on the other hand, does not hold good in all respects, still I believe that further experience will lead us to close for primary union in a proportion of cases, at least of appendicitis with pus, after removal of the diseased appendix and careful cleansing and disinfection of a limited area of infection. Such cases will, of course, as far as the period of confinement and the guarantee against hernia go, be upon about the same plane with cases of chronic appendicitis.

We come now to a fact not sufficiently well understood and recognized—to wit, that even in cases of appendicitis with purulent infection so virulent or so extensive that drainage becomes indispensable, the resources of our art enable us to reduce the period of confinement to two weeks or less on the average, and to guarantee our patients against hernia. How this end is attained the writer will endeavor to show by outlining his present technics in the operation for acute appendicitis with pus.

In the first place, careful palpation is made of the tumor mass after the patient is anæsthetized and before the incision is made. The plan of the incision is based upon the result of such palpation. If the centre of the tumor mass lies behind the right rectus muscle, the incision is carried through that muscle parallel to its fibres. Whenever, as is almost the rule, the most prominent point of the tumor is located laterally to the rectus muscle, the gridiron incision of McBurney is employed, and is so placed that the intersection of the line of cleavage of the external oblique with that of the internal oblique and transversalis corresponds exactly to the middle of the tumor. Retracting the muscles we have the tumor mass squarely exposed. If the abscess is found adherent to the anterior abdominal wall it is incised, all pus gently mopped out, and the walls are disinfected either by peroxide of hydrogen or gauze moist with sublimate solution before proceeding in search of further collections of pus. If the abscess is situated against the posterior wall of the abdomen separated from the parietal incision by the intervening free peritoneal cavity, the latter must be protected by a properly placed wall of gauze. Each successive collection of pus is treated in the same way before proceeding to search for more, until we are satisfied by palpation that no further purulent foci exist. Not until then is the appendix, or what may remain of it, removed, if possible, by amputation just beyond its origin from the cæcum, and the stump inverted without ligation after the method of Dawbarn.[8] A loose and slender column of gauze is next arranged for drainage, leading in a straight line from the site of the inverted stump to the opening in the anterior abdominal wall. The quadrangular form of the latter, due to the retraction of the separated muscular fibres and the placing of the centre of the incision over the centre of the tumor mass, will insure free and direct drainage. No sutures of any kind are placed.

The slender gauze column is diminished in bulk after two or three days and withdrawn entirely as soon as possible thereafter, sometimes as early as the fifth day. The object in proceeding thus is to allow the intestines to come together as rapidly as consistent with the safety of the patient, and thus to obliterate as speedily as possible the cavity formed by the column of gauze. As soon as this cavity is obliterated and the granulations have reached the level of the bottom of the abdominal incision, the wound is carefully disinfected, rawed, and closed for primary union. An anæsthetic is administered, and the wound is circumscribed by an incision through the healthy skin, carried as close as possible to the granulating edge of the latter. The granulating surface of the wound is dissected off in one clean piece from skin and subcutaneous fat, from the fibres and aponeurosis of the external oblique, from the internal oblique and transversalis, and from the peritoneal edge. The granulations presenting at the bottom of the wound are lightly scraped away with a spoon curette. We have now before us an incision identical in every particular with the freshly made gridiron incision; skin, fat, aponeurotic and muscular fibres lying bare in all the pristine freshness of the original operation. The peritoneal edge, the separated muscular fibres, and the aponeurosis of the external oblique are brought together by a continuous suture of forty-day catgut carried in two tiers and tied with a single knot.[9] This suture is buried by closing the skin by means of the intracutaneous suture, and the operation is finished. On the next or the third day the patient bids adieu to his bed. The duration of confinement after an operation for appendicitis with pus, in which drainage is demanded, will have been the time required for the abscess cavity to become obliterated up to a level with the deep surface of the anterior abdominal wall, say from five to ten or twelve days, plus a day or two required to get well over the effects of the anæsthesia of the second operation—a total period of confinement to bed of from one to two weeks. Primary union is attained with no less certainty, although with the necessity of greater painstaking, than in fresh incisions of the abdominal wall, and with up-to-date technics the guarantee against future hernia is equally good.

So vast is the literature of appendicitis, embracing more than twenty-five hundred books and journal articles, that it is almost inexcusable to add thereto except for very good reasons. The writer has just completed the task of looking through this entire voluminous literature, and as the result of his labors has reached, among others, the following conclusions:

1. Sufficient attention has been called to the technics of the perfected operation for chronic appendicitis, to render ignorance thereof inexcusable on the part of any one practising abdominal surgery.

2. The technics of the operation for acute appendicitis with pus still form a subject for discussion. The principles underlying the operation, as enumerated in this paper, will, if adopted, lead to results as satisfactory, comparatively, as those obtained in chronic appendicitis.

3. The value and universal applicability of the

gridrion incision of McBurney in cases of acute appendicitis with pus, though dwelt upon of recent years by a number of American surgeons, are not in practice sufficiently appreciated.

4. Nor is the fact too widely known that the duration of confinement after operation for chronic appendicitis need not exceed a week, and may indeed be considerably shorter.

5. The duration of confinement after operations for acute appendicitis with pus, excepting cases in which fecal fistulæ form, need rarely exceed two weeks at the outside. Since putting into operation the technics above outlined, the longest period of confinement in the writer's practice has been in one case fifteen days. In that case five separate intraperitoneal pus pockets had to be drained, and the wound was not ready for secondary closure until fourteen days after operation.

6. Hernia need no longer be dreaded after operations for appendicitis, acute or chronic, with or without pus.

7. There seems to be no longer any good reason why all patients suffering from appendicitis, acute or chronic, should not have the benefit of operation.

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59 WEST FORTY-NINTH STREET.

Fractures of the Pelvic Bones.—The one complication to be feared, both during and after fractures of the posterior parts of the ilium, is irritation or injury of the sciatic nerve and persistent pain in this nerve. For this reason great care should be exercised in trying to keep the fragments accurately apposed while the dressing is being applied, and, while lying flat on the back will probably be painful at first, this position should, if possible, be preserved, as the pressure upon the mattress will help to hold the detached fragments in place. I think it wise to warn the patients who have these fractures that they may have neuralgic pains during and for some time after the treatment of the fracture. I would advise active antilithic treatment for rheumatic and gouty subjects during their confinement in bed and for a short time after getting about.—W. L. ESTES, *International Journal of Surgery*, February.

NAUPATHIA.

BY EDWIN K. LOSEE, M.D.,
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NAUPATHIA is as old as navigation, and its call for our consideration has grown *pari passu* with the increasing number of those "who go down to the sea in ships." When navigation was in its infancy, few besides sailors and soldiers trusted themselves to old Neptune, consequently the number of sufferers was small. But now that our myriads of ships beat the waters from the Arctic to the Indian Ocean into one continuous foam, we are constantly asked if there is any way of alleviating the anguish of naupathia. Must it be endured, or can science aid us here? Literature, so rich upon other medical subjects, is upon this almost barren. The reason cannot be that the disease is rare or trivial. Dr. Fordyce Barker, in his valuable little monograph upon this subject, speaks of the countless number who from duty or what not cross lakes and oceans, and he claims that their total suffering is equal to that from any other disease. Is it not strange, then, that so little attention has been given to this subject? On the contrary, a sea voyage is often unwisely prescribed as a treatment for the sick or convalescing when to such the shock of sea-sickness might be injurious in the extreme.

It is our purpose within the limits of this paper to study the cause and nature of sea-sickness and the best means we have at present for its prevention or for modifying its severity.

Unlike most other diseases, its phenomena are due to psychophysiological disturbance, and the field open for speculation with regard to its nature seems unlimited. Some of the theories have been very extravagant, while others are as interesting as they are ingenious. It is needless to do more than mention some of these before we pass to that one which in the light of our present knowledge seems the most consistent.

Dr. Chapmann has taken for the basis of his hypothesis this statement of Brown-Séquard, "Dilatation of blood-vessels is followed by afflux of blood and increase of vital properties," and upon this he has built his theory. He first defies Harvey on his own ground by saying: "The heart does not explain blushing, enlargement of the mammæ, turgidity of the nipple during suckling or circulation of liver without any intervention of propulsive force, and therefore the heart cannot be the sole mover of the blood." Chapmann believes in a "chemical force" which consists in the affinity between the part to be nourished and the part nourishing. This, then, is his theory in his own words: "I hold that the proximate cause of sea-sickness consists in an undue amount of blood in the nervous centres along the back, and especially in the segments of the cord related to the stomach and the muscles concerned in vomiting; and by causing the amount of blood in the cord to be increased beyond the normal, all the nerves emanating from it partake of the increased activity of the cord itself, and convey from the centre to the periphery of the nervous system an abnormally large number of exciting impulses," thus causing a large secretion of mucus in the stomach and intestines; and this he thinks explains the vomiting which in his opinion is sea-sickness.

This explanation, clever as it may be, is hardly consistent with physiology or facts; and it is a little surprising to notice that such a theory is still accepted and quoted in some of the journals of to-day. We may dismiss it on the authority of our best observers. Autopsies have not shown the result of any congestion or hyperæmia in the cord, and that fact would lead us to believe that symptoms of sea-sickness cannot be due to any marked congestion.

By some, sea-sickness is thought to be caused by the ever-changing impressions made upon the retina, producing an irritation of the brain, which results in a reflex excitement of the viscera. If this was true, blind people would not be sea-sick, and blindfolding would be a sure means of preventing the paroxysm; but that is not the case.

Others are agreed that the displacement of the viscera, particularly the stomach, due to the rolling and pitching of the ship, is the direct cause. We ought, then, to have the same set of symptoms as in sea-sickness, through any violent movement, such as horseback riding; and, indeed, we have in cases of unusual motion some of these symptoms developed.

Still, the primary cause is not due to the impact which the viscera receive when the direction of motion is changed, as in the pitching of a vessel.

Ziemssen, in his Cyclopedia, states that sea-sickness appears to be the results of minute oscillations in the column of blood, as a result of changes in the aerial pressure from the rising and falling of the ship; but this cannot be the whole cause, or would not those employed in elevators be subject to the same malady?

But ingenuity must give place to science, and the late Dr. Beard calls sea-sickness a neurasthenia. By exclusion we have reached the only quarter whence we may expect a satisfactory explanation. We shall see, however, that even beyond the possibilities of the central nervous system there may be an ulterior cause to baffle us. There are, we know, definite relations between mind and matter, but the bridge which connects the two is intangible, and their interworking so subtle that we are conscious only of results. This interdependence is one of the most absorbing subjects that we meet with in our psycho-physiological studies; and, as illustrated by sea-sickness, we may properly discuss it here.

In order that we may appreciate the concurrence between mind and matter, we should take an example in which the effect of the one is very evident upon the other. A person may be in the highest state of exaltation, when he receives the announcement of some terrible calamity. We are familiar with the result—which may be death. Still, we are ignorant of the strange mechanism between the two. Again, by a word the vasomotor system is thrown into action, and the face is suffused with a blush. And yet another example in closer relation with our subject: We are seated in a railroad coach in a dimly lighted station; next to us is another train which now begins slowly to move away. Immediately there is set up a conflict within our minds as to which train moves. The impression that we receive is, that we are moving, although our better judgment is to the contrary, and the result is the production of symptoms approaching to dizziness and nausea.

We have not yet introduced motion as being an instrument for the production of such a shock—not a mechanical shock, but one caused by the abrupt overthrow of established relations. Again, when we are seated in a rapidly moving train, with the eye fixed, there is produced upon the retina an indistinct impression or blur, and an unpleasant sense of confusion results, which is in a less degree akin to sea-sickness. In the case of some sensitive natures this situation will actually produce violent symptoms of headache, nausea, and vomiting. Very frequently we hear our friends exclaim that they cannot ride backward in train or carriage; and even horseback riding may produce in some cases a train of symptoms in the same category as those of sea-sickness. We shall see that in them all there is the same relation between cause and effect; there is simply a difference in degree, modified by surrounding circumstances or environments—the one upon sea, the other travelling by rail or horse—and we shall see that in all the primary cause is the shock or surprise to the mind reacting upon the nervous system.

An objector asks, How can this explain the fact that these symptoms are produced during sleep, while the mind is unconscious? The answer to this is the key which explains the whole matter.

Leibnitz, Sir William Hamilton, and other able metaphysicians have proved conclusively that underlying consciousness there are mental activities which are ever active from birth to death. This "unconscious mental activity," though its chief function is to regulate the higher faculties, oversees those nerve centres which control our physical life as well. We know it to be an established fact that the act of the mind in preparing objects for the soul to know falls beyond the pale of consciousness. We learn actually to depend upon this! For example, the student grapples long and earnestly with some difficult problem; still it eludes his grasp, until finally he turns away from it, perhaps to sleep, and hours afterward is suddenly awakened as the solution flashes into consciousness. Instances of most brilliant work of this kind have been authentically recorded. We see examples of it every day: a name is forgotten; in vain we endeavor to recall it, then at some unexpected moment it flashes before us. At first glance this consideration may seem foreign to our subject, but a second will show us that this same vigilant power is set over all our activities, regulating difficult co-ordinating movements which are performed almost or wholly without the pale of consciousness. The body by repeatedly performing the same act at last works automatically; consciousness is then relieved from its duties of drill-master and may take cognizance of other functions; thus the centres in the cord and brain are under the control of this mysterious power—we see and do not perceive, we hear and do not understand; hours may pass while in this state of apathy, until finally what was seen or heard is reclaimed, although we were unconscious of the effort. It presides over our automatic movements, as seen in walking; we wind our intricate way through crowds of busy people; we pass up one street, down another, and finally turn to our own door, unconscious, it may be, of every step.

Letters are combined in words, words into sentences; but we are conscious only of the meaning they convey to our minds. We call this habit—and so it is! Finally we become so identified with this habit that to disturb it produces a shock to our whole nervous system.

From our earliest infancy, this relation of senses and functions with the regulating and inhibiting power of the mind has been both consciously and unconsciously developed, until the final product is a perfect maze of delicate co-ordinations.

As the primary cause of sea-sickness, then, we offer this psycho-physiological explanation: That faculty of the mind underlying consciousness, which regulates our activities, and which has been trained to interpret and effect the necessary adjustments of our body, is taken by surprise, when brought into different relations from those of life-long habit, and this shock or succession of shocks to the mind, as in the case of the rolling and pitching of the vessel, reacts in some unknown way upon the nervous system, and we have the phenomena of sea-sickness. It is analogous to the effect of sudden fright or joy upon certain delicate organisms: all the symptoms of profound shock, or even death, may be the result.

Sea-sickness, therefore, is the result of the shock to the brain caused by the failure of the governing faculties to become affiliated, or to anticipate those unusual movements caused by the rocking and pitching, the rising and falling of the vessel. The symptoms are the expression of this peculiar kind of shock.

In confirmation of this, we know that a new habit may also be acquired; so that instead of producing exaggerated effects as these unusual movements continue during a voyage, the system may learn to tolerate that form of motion which was before antagonistic to us. Again, those who have lived upon the sea from their earliest infancy are as proof against sea-sickness as is their tarpaulin against the rain. They may live upon the land for a long time; but upon return to the sea their senses immediately adjust themselves to a previously known condition.

We should expect that the more delicate the organism the more susceptible it would be; and this is true. Women are as a rule more susceptible than men, and those of so-called nervous temperament are more so than those who are phlegmatic. The Italians and French, being of a more irritable temper, suffer more from this malady, the Germans less, and the English least. Dr. Barker thinks that for the same reason Americans suffer most of all. Children and aged people possess, as a rule, a certain immunity from sea-sickness, because in children these relations are not yet so nicely adjusted as to be affected by any violation—they have not yet become established habits. If, according to other theories, the disease was due to afflux of blood, an irritation to the viscera, or an anæmia of the brain, children would certainly be more profoundly affected. It is also true of the aged that their keenness of sense, their nervous systems are less acute to these impressions. Some can never become habituated to this novel movement, because either they have not been acquainted with it from childhood, or they are of such a temperament that they can never become accustomed to the new sensation. Others are never made sea-sick, perhaps because, in temperament, they are lacking that delicacy of poise which easily responds to reflex excitement.

We may now question how it is that the imagination may actually produce symptoms of sea-sickness, authentic cases of which are on record. By volition the mind can create an odor or a sound or picture, and the like; death has even been caused by fright due to a misinterpretation. It is not at all strange, then, that these rare cases may also be explained by a mental concussion, being produced by the imagination; it would be analogous to our first illustration, in which slight symptoms of nausea and giddiness were produced when the person imagined he was in a moving car. It is a delusion causing the same effects as if it were a reality.

This succession of shocks or surprises caused by the failure of the vigilant faculty to effect the adjustments which regularly take place in our habitual activities results in what Dr. Beard called a neurasthenia or nerve-tire, with the phenomena of sea-sickness. The other concomitant cause is the sudden and recurring changes of the relation of the fluids to the solids of the body, which help to produce these nervous disturbances. These, acting together, produce a functional disturbance of the nervous system, known as sea-sickness.

Although several autopsies have been performed, no lesions have been discovered.

The symptoms may be divided into three stages—depression, exhaustion, reaction.

There may be a prodromal period, which is characterized by an abnormal appetite. The doomed man feels from the first ravenously hungry. If this be his first voyage, he is very much encouraged and imagines that he will escape the demon. He wonders whether the supplies will hold out, and the sound of the gong is most welcome to his ears; but, alas, in how short a time all is changed!

The stage of depression may come on very gradually, simply a feeling of indisposition, or a slight headache, or feeling of stricture about the forehead. Pain may be referred to the frontal or occipital region, or there may be pain in the back of the neck. There is often a feeling of fulness of the head with flashes of heat and cold. There is often hyperæsthesia of the eye. Vertigo is generally present and may become a marked feature, varying from a mild dizziness to a dead faint.

These symptoms referable to the head may be early developed, and the only ones present. But by far the most constant and distressing symptoms during the stage of depression are nausea and vomiting, caused by reflex excitement of the vomiting centre in the medulla, having close relation with the respiratory centre. These efferent impulses descend along the vagi and cause the dilatation of the cardiac orifice of the stomach. During the introductory nausea, we have an efferent impulse descending the facial through the chorda tympani to the submaxillary gland, causing the flow of saliva. This is supposed to be the mechanism of vomiting.

The retching which may precede vomiting is exceedingly distressing, as all who have experienced it are willing to affirm, and this introductory retching is usually followed by vomiting, which in a measure relieves the distress. First the contents of the stomach are ejected; afterward an acid, greenish-yellow, gastro-biliary secretion, and sometimes there is vomiting of blood.

This copious vomiting is followed by the stage of exhaustion, and the face assumes a deadly pallor. There is now a great physical prostration. Accompanying this stage there are that despair and hopelessness which are a never-failing source of amusement to others, until they themselves are in the pangs. This is one of the most interesting phenomena of the malady, and it seems to be the one most directly related to the disturbance of the harmony between mind and matter, which is due to the undefined and unexpected motions of the vessel.

The patient may become so prostrated as to pass into a semi-comatose condition, from which it is difficult to arouse him.

Constipation is another distressing symptom, to which women are more susceptible than men; it very likely aggravates all the other symptoms, and may persist for days after the voyage is ended. The opposite condition sometimes exists—namely, diarrhœa.

A general chilliness, especially of the extremities, makes plenty of clothing not only a comfort but a necessity, and is frequently accompanied by a cold, clammy perspiration.

A disturbance of menstruation is quite a common symptom, concerning which Dr. Barker deduces the following law, which with some exceptions, he believes, holds true: "When a voyage is commenced near an approaching period, it is brought on two or three days earlier and the flow is more abundant than ordinary. But when the voyage is commenced in the first half of the interval after a period, the next appearance is retarded and sometimes suppressed for one or two periods." Opinion differs as to its effect upon pregnancy. Some think it highly perilous for a pregnant woman to take a sea voyage. Dr. Barker does not think that it ever produces abortion.

It is a fact worthy of notice that when sickness is not marked, or even when it is absent, the mental capacity for work is not up to normal. The slightest thing distracts the attention; study is an impossibility, reading becomes laborious, novels are too heavy, and we easily tire. Has any great intellectual work ever been accomplished on shipboard?

The duration of an attack of sea-sickness is usually from three to seven days, followed by a period of reaction and convalescence, which is generally rapid and uncomplicated.

Exceptions: The symptoms may be prolonged for weeks or even months, and then recovery take place. The symptoms have been so severe that the patient has passed into a state of collapse, and death has resulted. A number of deaths have been authentically reported as caused by the exhaustion produced by sea-sickness alone; still these cases are rare.

For the treatment of sea-sickness the pharmacopœia has been recommended entire and in all proportions, which goes to show that there is no specific, unless it be land. Those remedies which seem to have been the most efficacious are the nerve sedatives; and of these the bromides are the best. To these we will refer later. Chloral is another very good drug, and may be used alone or combined with bromide, in doses of gr. x.–xx. t.i.d. Cocaine has been recommended, but is not a safe drug to use; neither is hashish. Nitrite of amyl and nitroglycerin have recently been suggested; but no better results have been reported than from the others, and they are not so safe to use. Belladonna and opium are not to be recommended, and Dr. Chapmann's ice-bags are almost worse than the disease.

The proper treatment of a case begins before the patient goes to sea. If possible, he should be perfectly rested and free from the worry of final details; then, if he relies on the bromides, their exhibition should be commenced one to three days before sailing, in doses of gr. xx.–xxx. t.i.d. until mild bromization is effected; then upon the sailing-day a still larger amount should be taken. This may be all that is needed, depending upon the individual case. Bromides should not be taken to excess, as they may prove injurious; and the bromide of sodium is the best preparation. It should be procured in this country, as large amounts cannot be obtained abroad. But in order to be benefited by any of these drugs we must blunt the nervous system so as to make it insensible to shock.

Treatment of symptoms: A few drops of chloroform on sugar will sometimes relieve vomiting. Tincture of capsicum well diluted is another good drug. Alcohol should be avoided, unless in the stage of exhaustion during the latter part of the attack. Do not take salines for constipation. The best laxative is compound licorice powder in full doses. Opium with some mild astringent may be given for diarrhœa.

In this way we may alleviate, perhaps prevent, the symptoms of that most distressing malady, naupathia, and so rob an ocean voyage of half its horrors.

SUCCESSFUL EXCISION OF GASTRIC ULCER.

By HERMANN GRAD, M.D.,

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The comparatively small number of cases of "excision of gastric ulcer" on record prompts me to report a recent case. I take the liberty of calling attention briefly, in this paper, to the method of operation and the technique followed in excising the ulcer. A few preliminary remarks are in order before proceeding with the details.

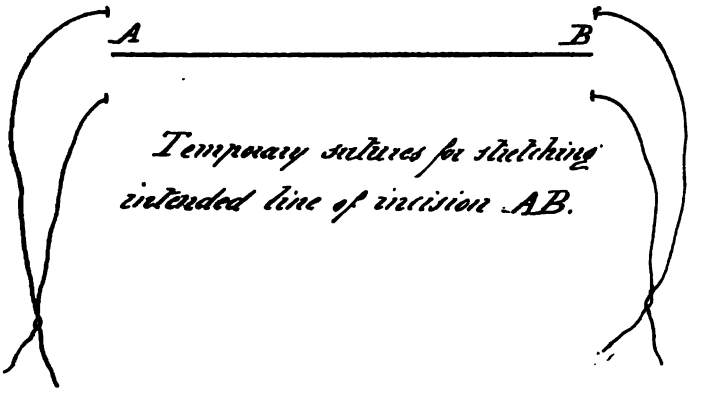
Autopsies reveal the existence of a large number of gastric ulcers, and in women they are found twice as often as in men. Indeed, the great frequency and occasionally the gravity of the disease were factors in bringing gastric ulcers prominently to the notice of the profession. Experience demonstrated that proper medical treatment effects a cure in a very large number of such lesions, and also that a small proportion of the ulcers fail to heal. Regarding those that fail to heal, the question is asked, "Shall they be excised, and, if so, at what stage in the disease shall the excision be made?" In connection with these questions, I take the liberty of quoting Dr. W. W. Keen.[1] This author, after quoting cases of excision of gastric ulcers, expresses himself as follows: "Practically, therefore, it will be seen that almost every case of partial gastrectomy for non-perforating ulcer has been followed by success. This fact, it seems to me," he says, "should determine us, in cases of gastric ulcer which do not recover within a reasonable time by medical means, to do a partial gastrectomy, especially in view of the dangers, first, of malnutrition from the presence of the ulcer and consequent constant vomiting; secondly, of the impairment of health by the constant pain; thirdly, of the great possibility of serious, repeated, and sometimes fatal hemorrhage; and fourthly, of the danger of malignant degeneration of the ulcer. I would by no means," he says, "recommend indiscriminate cœliotomy and partial gastrectomy, but that it should be performed much more frequently than has thus far been done." Dr. Keen also quotes Mikulicz as saying: "The danger to life from gastric ulcer is at least not less, but probably far greater, than the danger of complete modern operation." These celebrated authors are strongly in favor of the surgical treatment of those ulcers which fail to heal in a reasonable time. It is, however, difficult to decide the treatment of a disease the etiology of which is so obscure, because its cause is not well understood. Virchow says that the causative factor of gastric ulcer is referable to a disturbance in the circulation of the stomach. A thrombosis or embolism of a vessel supplying a certain section of the stomach would result in a diminished nutrition of the section of the mucous membrane supplied by that vessel. The gastric secretion would now come into play and digest the mucous membrane which has been thus deprived of its nutrition, and an ulcer would form. Especially would this be so if a hyperacidity of the stomach should exist at the time. Again, in acute or chronic gastritis when violent vomiting is present, rupture of blood-vessels beneath the mucous membrane, due to excessive muscular contraction, would result in a hæmatoma, which by pressure would deprive the mucous membrane of nutrition. Here, also, the hyperacid gastric juice acting on the injured mucous membrane would eventually digest it and produce an ulcer. Some have claimed that hyperacidity of the stomach is the cause of the ulcer; others have claimed for the ulcer a nervous origin; and still others say that gastric ulcers are caused by micro-organisms. In the case reported in this paper, no hyperacidity was demonstrable; apparently no chronic gastritis was present. Recently Dr. Berg[2] advanced a theory that gastric ulcers are caused by stagnation of the contents of the stomach. He says the stagnation of the contents of the stomach results from imperfect opening of the pyloric orifice, or from imperfect functional activity of the muscular coat of the stomach, and that fibrous changes in and spasm of the muscular fibres of the pylorus are the causes which lead to imperfect opening. In the case under consideration in this paper, the pyloric orifice was normal, for, passing my finger into the opening, I was conscious of no obstruction and the mucous membrane appeared perfect. Whether or not the patient suffered with spasm of the muscular fibres of the pylorus, or with imperfect functional activity of the muscular coat of the stomach, obviously could not be determined.

In May, 1898, I was asked by my colleague, Dr. Asher, of Newark, N. J., to perform an exploratory gastrotomy, and, if the diagnosis of gastric ulcer proved correct, to excise the ulcer. The questions raised in my mind at that time were these: How could the inte-

[1] New York Medical Journal, June 4, 1898.
[2] MEDICAL RECORD, July 30, 1898.

rior of the stomach be best explored, so that no section of it should be lost to view? And also, how best guard against infection of the peritoneal cavity from the escape of the contents of the stomach? With the aid of a bag made of linen, to represent the stomach,

Fig. 1



I demonstrated to myself that if the opening made in the bag were kept under control, much in the manner that fishermen control their small nets, the interior of the bag could be explored with ease. It was also shown that the escape of the contents of the bag could be prevented. I took a piece of wire, bent into the shape of the letter U, and, sewing the edges of the opening of the bag around the loop of the wire, I had the opening under full control. A similar procedure was followed in the operation, the method being of great help in exploring the interior of the stomach, and it was also possible by this means to prevent the contents of the stomach soiling the peritoneum.

Before describing the operation, I shall read Dr. Asher's report of the case, regarding the condition of the patient and the reasons for the operation.

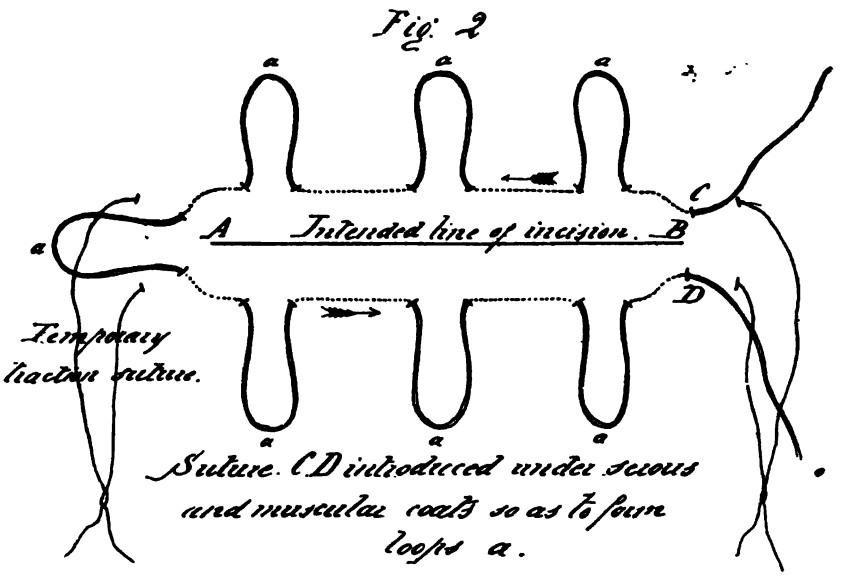
Report of the Case by Dr. Maurice Asher, of Newark, N. J.—In May, 1897, Mrs. P——, aged thirty-two years, called upon me for treatment. She had been ill for the past two years. After taking food she usually had pain in her stomach, nausea, and vomiting. The vomiting did not always occur, but the pain and nausea followed each ingestion of food. Occasionally she vomited blood. There were periods when she vomited after every meal, and again periods, sometimes of several weeks, during which vomiting would not occur. She was very thin; her complexion was not bad; her heart, lungs, kidneys, and pelvic organs were normal. Her stomach was normal in size and position, but was very painful on pressure. Analysis of the gastric contents showed the presence of hydrochloric acid, but the acidity was subnormal. The stomach was empty in the fasting condition. A diagnosis of gastric ulcer was made, and she was put upon the various ambulatory treatments without result. Bismuth, silver nitrate, diet, were all of but little value. She had occasional periods of improvement, but her condition grew steadily worse. She was ordered to bed; rectal feeding was established, and moist heat was applied to the epigastrium. As long as no food was given by the mouth, all her symptoms disappeared, but any introduction of food into the stomach brought back the pain and nausea. In about three weeks the rectum would retain no more enemata; feeding by the mouth became compulsory, and vomiting returned. An operation was then proposed, and agreed to by the patient.

After the operation the patient steadily improved; for the first few days she was fed by the rectum, and then feeding by the mouth was cautiously begun. For some time there was some pain after eating, but the nausea and vomiting were absent. Her recovery was slow but uneventful, and she is now at work as a saleswoman and in fairly good health.

Description of the Operation.—About half an hour before ether was administered, the stomach was thoroughly washed out. The usual methods in vogue were employed in preparing the field of operation. No antiseptics were employed. Sterilized rubber gloves, as recommended by Dr. Charles McBurney, were worn by the operator, assistant, and nurse. The gloves were re-sterilized once during the operation, after the stomach was explored and the ulcer excised, so as to have sterile gloves in closing the gastric incision. The skin incision was made parallel with the free borders of the ribs on the left side. Beginning at the left border of the rectus muscle, about an inch and a half below the free border of the ribs, the incision was extended down for about four inches, and later in the operation it was slightly enlarged. In exploring the stomach *in situ*, the free border of the liver was taken as a surgical landmark. The stomach was next brought into view, and its anterior surface examined. Nothing abnormal was found. The posterior surface was then explored through an opening made in the omentum. No abnormality was discovered. The incision into the stomach was next planned. Selecting for the opening a region on the anterior wall (parallel with the long axis of the organ), where the branches of the epiploica sinistra and gastric artery appear smallest, a line for the intended incision was made secure as follows:

The line A B, Fig. 1, represents the intended line of incision. The ends of this line were secured by passing a fine silk suture under the serous and

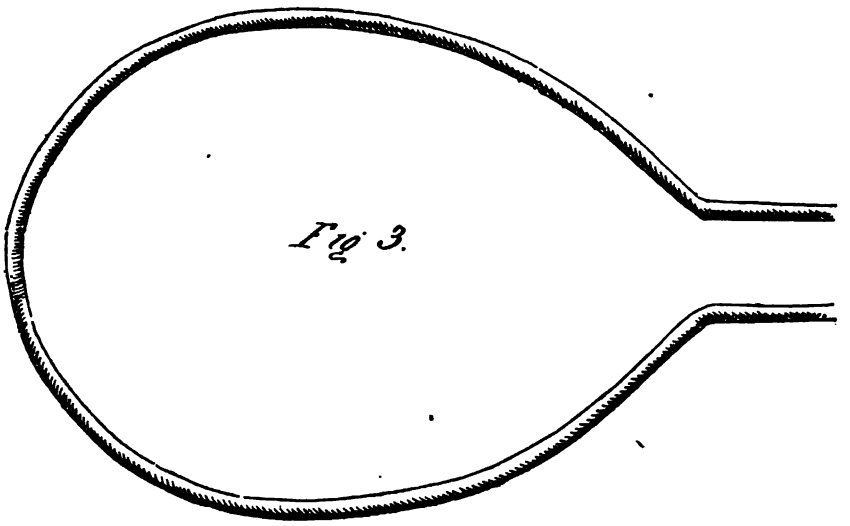
Fig. 2



muscular coats. Traction on these sutures will put the line on the stretch. The next step in the procedure was to establish a series of loops with a silk suture around the intended gastric incision, the purpose of these loops being to hold a wire frame in position, which would give support to the

opening in the stomach. The loops were formed as follows:

A silk suture was introduced under the serous and muscular coats at C, Fig. 2, and carried along in a direction indicated by the arrows. The suture emerged at D, after forming the loops shown in the diagram. Fig. 3 is a diagram of a wire frame for supporting the opening in the stomach.



Wire frame for supporting the opening in the stomach.

Before the stomach was opened, the loops shown in Fig. 2 were arranged around the wire frame, as shown in Fig. 4.

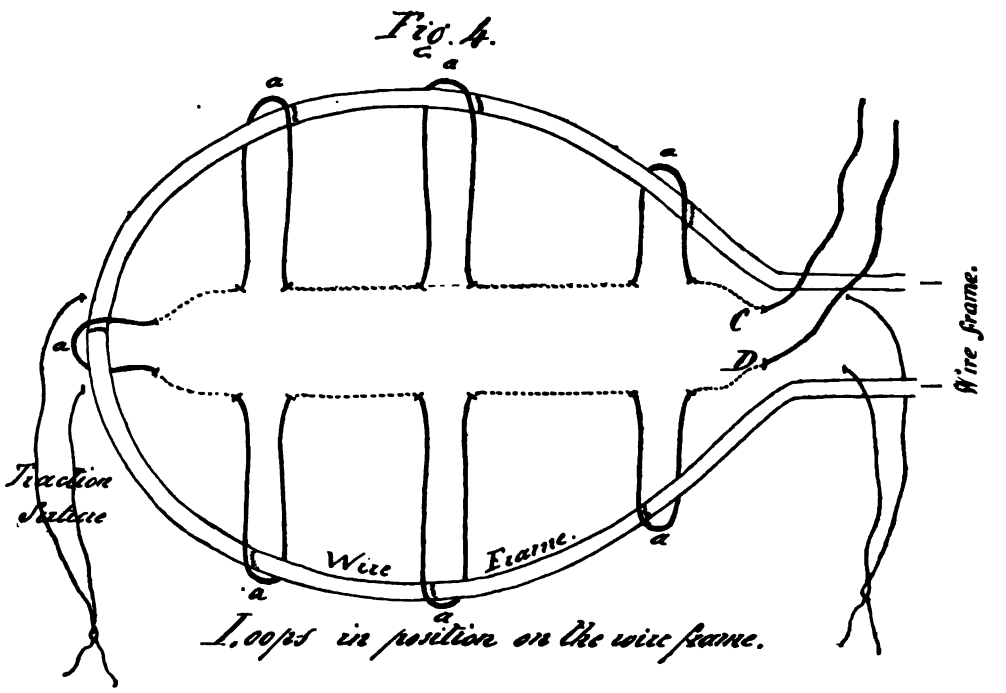
The intended line of incision was then put on the stretch, the opening into the stomach was made with a scalpel, and the bleeding points were secured and tied. By tightening the suture C D with which the loops were made, the opening in the stomach conformed itself to the shape of the wire frame as shown in Fig. 5.

The assistant, by holding the wire as one holds the handle of a pan, supported the opening made in the stomach. A probang sponge was next introduced into the opening, to absorb what fluid might be present. Having prepared everything in this manner, the interior of the stomach could be explored with comparative ease. This was effected by passing the index and middle fingers through the abdominal incision alongside the serous coat of the stomach. By looking into the organ the operator could see successive portions of the mucous membrane pushed into view by his fingers.

The opening made in the stomach was about three and one-half inches long. Careful exploration revealed an ulcer situated on the anterior wall near the cardiac orifice, about two inches from the cardiac end of the incision. The ulcer was about half an inch in diameter, and presented an appearance as though two ulcers had coalesced. In excising the ulcer the following plan was adopted: A purse-string suture of catgut was introduced beneath the serous coat, opposite the location of the ulcer. It was intended that when this suture was tied it would pucker the stomach wall at this point, and the puckered-up mass would bulge into the interior of the stomach. The ulcer would then be located on the summit of this protrusion. The work of excising the ulcer could now be performed entirely within the stomach, and no blood or infection would reach the peritoneum. Accordingly, the purse-string suture having been passed, it was tied, and the puckered-up mass, consisting of serous, muscular, and mucous coats, was excised and the bleeding points were tied. The mucous and muscular coats (the edges of the excised portion of the stomach wall) were then brought into apposition by a few interrupted catgut sutures. Lembert sutures were then passed on the serous surface, so as to bury the purse-string suture and guard against leakage.

At this stage, the field of operation was cleansed with decinormal salt solution, clean towels were applied, and the rubber gloves were re-sterilized. The wire frame supporting the stomach was now removed by cutting the sutures holding it in position. The stomach incision was then closed in the usual manner with the Czerny-Lembert sutures of catgut, a double row of Lembert sutures being used. The introduction of the sutures was greatly facilitated by the assistant making gentle traction on the temporary sutures shown in Fig. 1, thus bringing the edges of the wound in apposition.

In passing the needle through the stomach wall, it very frequently wounds blood-vessels. It is best to secure these with a ligature, because if they are allowed to bleed a hæmatoma easily results, the tissues here yielding very readily even to slight tension. The bleeding can be controlled by passing a suture of catgut with a fine needle on one or both sides of the wound in the vessel, and gently tying the suture; very

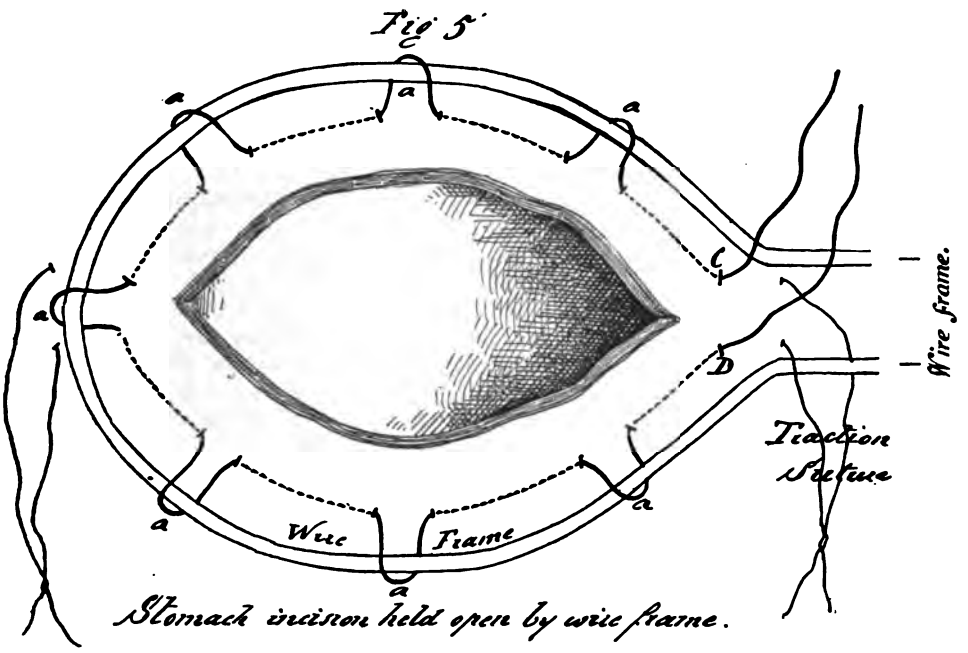


Loops in position on the wire frame.

slight tension will suffice. These sutures should not include the mucous membrane.

The stomach was next returned into the abdominal cavity, and the abdominal incision closed as follows: The peritoneum was sutured with fine catgut. A few silkworm-gut sutures were passed through the fascia and skin. The fascia was brought in apposition with continuous catgut suture. The silkworm-gut sutures were then tied and the wound was dressed with dry gauze.

The operation lasted over two hours. The patient's pulse at this stage was found to be 140. Shock was considerable. She was put to bed, and in an hour reaction set in, the pulse at this time being 120. The patient was now complaining of severe pain. A hypodermic injection of morphine was given, and the case was turned over to the excellent care of Dr. Asher. I take this opportunity to express my thanks for his paper and for his efficient assistance. The doctor informed me on the next day that the patient was doing well.



First day: the highest temperature was 100.3° F.; pulse, 100. Second day: the highest temperature was 99° F.; pulse, 90. Third day: the highest temperature was 100° F.; pulse, 88. Fourth day: the highest temperature was 99° F.; pulse, 74. On this day feeding per os began. The sutures were removed at the end of three weeks, the wound having healed by primary union.

149 East One Hundred and Sixteenth Street.

The Union of Wounds.—In the Bradshaw lecture delivered before the Royal College of Surgeons on December 7, 1898, Dr. Thomas Pickering Pick says: "The whole subject hinges on the one point of what we mean by inflammation. If we agree with Hueter and Kocher that no injury alone is competent to produce inflammation without the intervention of micro-organisms, then my whole argument falls to the ground. But if we believe, as I do believe, that inflammation may be induced without the concurrence of organisms—an inflammation, I admit, different from that excited by these bodies, for it neither tends to spread to contiguous parts beyond the area of injury, nor to infect distant parts through the blood stream or otherwise—then I say I have brought forward conclusive evidence to prove that the union of wounds is an inflammatory process. At least, if it is not, I know not what it is."

THE SCIENTIFIC AND PRACTICAL MEDICAL ASPECTS OF PUBLIC-SCHOOL INSPECTION.

By FRANCIS REDER, M.D.,
ST. LOUIS.

Any promotion of original research in problems pertaining to the preservation of health is worthy of the highest consideration. Public-health legislation has become a powerful influence. Its purpose is being more clearly understood by the populace and its good work is being appreciated.

The evil effects accruing from an epidemic have opened to scientists a new field for investigation. This particular research has been conducted so ardently, that many of the causes of disease have been disclosed, and successful methods for their prevention have been instituted. Owing to these labors, the scientific foundation of practical hygiene in almost all civilized countries has been greatly broadened and strengthened during the last thirty years. As a result epidemics have been diminished, death rates have been reduced, and the average duration of life has been increased.

One of the most practical problems of public hygiene relates to the mitigation and possible suppression of infectious and contagious disease among children in the public schools. There is absolutely no doubt that schools are a great centre for the distribution of disease. Especially is this true of a large city, where a goodly portion of the population is crowded together in tenement houses, where sunshine can find but little access, where sewerage is markedly defective, where bacteria find a good breeding-ground, where the air is vitiated, and where the elements essential to good health are more or less contaminated. It is here that we generally look for the nidus of infection, and it is generally from such a locality that the virulent germs are carried by the child to school. It is not within the scope of this paper to dwell upon conditions that might exist in the city, nor is it the object of this paper to suggest any prophylactic measures that might be instituted for infectious and contagious diseases outside of the school building. The views of this paper are wholly confined to the scientific and practical medical aspects of public-school inspection.

A substantial building, in a location where light and air are plentiful, is one of the first requisites of school hygiene. Such a building should be well provided with windows and exits. Particular attention should be given to the flooring of such a building. The boards should accurately fit into each other, so that no cracks are perceptible. The floor itself should have as smooth a finish as the wood will permit. This precaution is taken that no dust or matter loaded with micro-organisms may find lodging in any cracks, or adhere to the floor.

The ventilation of a schoolroom, especially during the winter months, is of great importance. It is only by proper ventilation that the temperature can be controlled. A room either too hot or too cold invites the

propagation of disease. A schoolroom should be well aired two hours before the session begins, by throwing open some of the windows. The extent to which this is done, however, is governed by the condition of the weather. After the close of the school hour the whole room should be exposed to draughts of air and thoroughly swept and dusted. On Saturdays—a non-school day—the whole building should be subjected to a thorough cleansing with soap and hot water.

It is generally accepted that the effects produced on health by inhaling air which has recently been exhaled, and which also contains the emanations of the skin, is dangerous. This is an important sanitary measure that can be well applied to a schoolroom —a measure that should warn us against overcrowding.

In considering the preservation of the health of the pupils and the means by which they are to be kept most fit for work, no little importance should be attached to the seat in which a child spends a good deal of its time. Ill consequences may accrue from improper postures. For this reason the seats in a schoolroom should be so placed that a child will not be compelled to sit in a cramped posture, nor forced to assume a strained position in order to be comfortable. The seat should be of such a height as to permit the feet to rest fully upon the floor.

The successful solving of the problem of hygiene pertaining to a schoolroom rests greatly with the class of pupils in attendance. A physical education, although it should begin at home, should find its continuance at school. Gymnastics should be made a part of the course of a public-school education. Since all teachers cannot be thorough in teaching this branch, and inasmuch as all pupils differ in their physical development and strength, only the lightest forms of gymnastics should be practised, and this preferably in the morning at the beginning of the session. A ten-minute exercise at the utmost is sufficient to dispel any muscular sluggishness. One of the easier studies —spelling or reading—should follow this exercise. After that the deeper studies, such as arithmetic and grammar, should be taken up.

Much of the atmospheric purity of the schoolroom depends upon the clothes a pupil wears. Clean clothes and clean hands are admirable possessions for a child. The greatest restrictions should be placed upon anything that is not clean. School children have certain habits which will probably always exist; they should, however, be controlled as much as they possibly can. The using of each other's handkerchiefs, the wearing of a schoolmate's apparel, the exchange of gum, kissing, and the moistening of lead pencils with lips and tongue, and the like, should be closely watched and, if possible, prevented. Articles in use by the scholar during school hours that invite bacteriological contamination should be removed, and articles of a less susceptible nature selected; for instance, the use of sponges attached to slates, where the saliva of the pupil will invariably be the most important cleansing agent, should be discontinued. Instead, the pupil should be provided with paper, lead pencil, penholder, and ink. The moistening of a finger for turning a leaf in a book is a habit that almost every child possesses. There is danger in this habit, and it should not be permitted. The backs of books should be covered with a stiff, glossy paper. This covering should be renewed every month. All properties, such as books, paper, pencils, and penholders, belonging to a pupil suffering from any contagious disease, should be immediately removed from the room and subjected to disinfection or be destroyed.

Another objectionable feature we find by looking about in a public school is the drinking-cup, which serves many pupils. The drinking-cup should be discarded and a glass substituted. A glass will admit of a more thorough cleansing.

What great danger are pupils of a public school exposed to? The great danger to which pupils of a public school are exposed is disease of an infectious or contagious nature, that may find its way among them and remain undetected until its transmission to other pupils causes it to be discovered.

Can such a danger be guarded against? Yes, to a certain degree. How can this be accomplished? By systematic school inspection. By a medical inspector? Yes. The critical eye of the medical expert will be able to detect diseases in their incipient stages.

How often and how long will such inspection be necessary? The systematic medical inspection as a means of improving the physical condition of the child in school and reducing the possibility of contagion, should be daily and throughout the term of school. The length of time, however, as to such inspection can be largely influenced by the conditions of health prevailing in the city and the salubrious effects of the season upon humanity; for instance, when the health of the city is and has been good, the more dangerous and suspicious months should be selected for such labors. We can look upon the months of October, November, and December as particularly favorable for infectious and contagious diseases. Then, again, February, March, and April are months not devoid of suspicion. The well-being of the children, however, can be more positively assured by the inspection being carried through every month of the school year. Schools being located in districts both favorable and unfavorable to sanitation, this would apply in particular to schools located in the latter districts.

A matter of great importance is the selection of a medical inspector. In reality he ought to be a medical expert, for he is confronted with a most serious problem—that of recognizing normal conditions, and that of diagnosing at the earliest possible time a disease which carries infection and contagion in its wake. He must be a most competent man, possessing some executive ability. He should be a close observer, and must be interested in his work. His duties, when disease is not present, are simple; but should disease be present, then his duties will be as laborious as they have been simple. A physician who seeks an appointment to such a position should be required to give substantial and satisfactory proof of his fitness for such work, to be approved by a medical board.

Errors in diagnosis of infectious and contagious diseases are only too easily made, and, unlike other errors, they carry with them consequences of the gravest nature. We know, for example, that in measles the most contagious period is during the three or four days preceding, and during the first day of, the eruption. Attempts to prevent the spread of the disease by isolating the patient as soon as the eruption appears rarely succeed. It is here that the ability of the medical inspector is taxed to its utmost, for, little as we know of the cause of measles, we suppose that the medium of contagion is the secretion from the upper air passages, which is scattered in spray by the coughing and sneezing of the child. This, however, is not the case in scarlet fever and smallpox.

A still more difficult problem confronts the inspector in diseases of the throat. Although a diagnosis may be made macroscopically, the miscroscope aids us in giving convincing evidence (and this is not always positive) of the true nature of the infection that has invaded the throat; therefore it is wise to regard all diseases of the throat at their earliest manifestations with suspicion, and resort to isolation of the patient.

The routine a medical inspector will adopt to carry out his work successfully will do much toward simpli-

fying it. He will select an hour favorable to his work, and favorable to the principal of the school. The hours of nine or ten in the morning are preferable. Upon assuming his work he will proceed to examine every child separately as to its physical condition, such examination to include the special tests for vision and hearing. The examinations should be conducted in a room that will afford the best facilities for such work. A thorough record of this should be kept in a book placed at the inspector's disposal for that purpose. The result of these examinations will give the medical officer a good knowledge of the condition of his school.

Particular importance should be attached to abnormal (diseased) conditions of the lungs. Tuberculosis causes, in the United States, more suffering and loss of life that any other single form of disease—more than all of our infectious and contagious diseases put together. Its pathogenic micro-organism has been carefully studied, and some of its modes of transmission (dried sputa being carried about by the air currents, for instance) are fairly well understood. There is no doubt that this death rate can be reduced by general sanitation and by the education of the people as to the necessity of promptly disinfecting the sputa of tuberculous patients. It is when meeting with this disease (and it need not necessarily be in the advanced stage) that the medical inspector should exert his authority. A child suffering from tuberculosis should not be permitted to attend a public school.

The relation of the medical inspector to the principal of the school should be such that the inspector's duties may not be misinterpreted. Suggestions pertaining to treatment, or any advice of a medical nature, do not come within the scope of a medical inspector's work—emergency aid excepted. As a health officer, in the capacity of an inspector, it is his duty to examine such pupils as may be brought before him when a suspicion of ill-health in the child has been detected, either by the keen sense of the teacher or the voluntary admission of the pupil. All examinations should be conducted in the presence of the principal of the school or a representative. After the conclusion of such examination the medical inspector makes his recommendation as to the fitness of the scholar to remain in school, or as to the advisability of having the child sent home—such recommendation to be made to the principal direct.

When it is found necessary to dismiss a pupil from school, a note signed by the medical inspector, stating the reason why this course has been advised, should be given the child for the information of its parents. A record should be kept, embodying everything pertaining to, and giving a clear understanding of, the case. This record should include the name, address, age, sex, objective and subjective symptoms, diagnosis, and remarks. It is advisable that a report of every month's work be submitted to the medical board.

In conducting examinations of the throat, the simplest measures should be adopted. A well-shaped piece of pine wood, to be used as a tongue depressor, and which is also of good service in the more thorough examination of the buccal recesses, answers all purposes. After the examination is concluded, the depressor should be destroyed by being burned. In the more suspicious cases of throat disease cultures should be taken and subjected to a bacteriological examination by an experienced bacteriologist, or sent to such a laboratory as may be recommended by the health board. The method of obtaining diseased matter from the throat for bacteriological examination must be conducted with the utmost care. Two medium-sized test-tubes answer the purpose well. One tube should contain a swab prepared from a bit of absorbent cotton; the other tube a culture medium. Both tubes should be plugged with cotton. When a specimen is desired, the swab is taken from its tube and is brushed gently over the diseased portion of the throat. It is then transferred to the tube containing the culture medium, and is gently passed over the medium, so that particles of the matter obtained from the throat may adhere to it. The swab is then replaced in its own tube. Both tubes are closed with an absorbent-cotton plug and sent to the bacteriologist for examination, with a note giving date, name, and address of the patient, and the reason why the specimen is sent.

In case an infectious or contagious disease has been discovered in a child attending school, the prompt isolation of this child becomes peremptory; and not only should this child be isolated, but any other child who may have come in direct contact with the diseased child should be dismissed from school, and not allowed to return until all danger has passed. Any other members of the family of the diseased child who might be attending school should immediately be dismissed, and only allowed to return at a time that would insure safety.

If a child attending school has been attacked with a severe virulent type of disease, then all school properties belonging to this child should be burned and the school-room subjected to the best methods of disinfection at our disposal—at present, formaldehyde gas. After the disinfection the room should be thoroughly scrubbed and aired. It would be advisable that for forty-eight hours this room be allowed to remain unoccupied.

School inspection is an excellent thing when it can be properly carried out. There remains no doubt that the good accruing from a systematic medical inspection would be the strongest recommendation for public schools to be placed under the jurisdiction of a health board.

4629 Cook Avenue.

Progress of Medical Science.

The Operative Treatment of Varicose Veins.—Pearce Gould (*Lancet*, April 8, 1899, p. 941) reports the results of treatment in thirty-nine accessible cases among fifty of varicose veins that had been subjected to operation at various periods previously. Almost all these patients had applied for treatment on account of pain and disability; in all the varicose veins could be emptied by placing the patient in the recumbent posture and elevating the affected extremity, and they would not refill when the erect posture was resumed if pressure was made on the internal saphena vein; and in all primary recovery from the operation had been satisfactory. The operation consisted generally in excision between two ligatures of about an inch of the upper part of the internal saphena vein. In several cases the ligatures were applied a short distance above the varix. The results were characterized by almost uniform relief of pain, even when the varicosity was not entirely corrected. In four cases aseptic thrombosis developed; in two of these the vein was incised, the clot turned out, and the wound permitted to granulate; in the other two the occluded portion of vein was excised and the wound closed.

Changes in the Nervous System in Cases of Typhoid Infection.—As the result of a histological study of the tissues in three cases of typhoid fever and from rabbits inoculated with the bacillus typhosus, Nichols (*Journal of Experimental Medicine*, vol. iv., No. 2, p. 188) concludes that the application of the Nissl method to the study of the motor cells of the spinal cord and the nerve-cells of the dorsal root-ganglia in typhoid fever shows that these cells regularly suffer

pathological changes in the course of the infection. The alterations in the motor cells are more constant and of a severer grade than are those in the cells of the sensory ganglia. The more characteristic changes consist of disintegration, solution, and destruction of the chromatic substance of the cell, starting from the axon hillock and proceeding toward the nucleus. Coincidently the nuclei of the affected cells seek the periphery. Alterations are also suffered by the nucleus and the nucleolus. While this central form of chromatolysis is the prevailing type of pathological change, disintegration, etc., of the Nissl bodies situated in the periphery of the cell and in the dendrites is also observed (peripheral chromatolysis). In experimental infection with typhoid bacilli in rabbits a similar series of lesions in the corresponding nerve-cells in the spinal cord and ganglia is encountered. The main or central type of lesions discovered is identical with that found in man and animals after section, destruction, or even slight injury of the peripheral nerves. Examination of the peripheral nerves arising from the lumbar segment of the cord (the site in man and rabbit of the most profound changes) in rabbits inoculated with typhoid bacilli showed well-marked evidences of parenchymatous degeneration. It is probable that lesions of the peripheral nerves in typhoid fever in human beings are common, and that the post-typhoid hyperæsthesias and paralyses are due to this cause. Restitution of the chromatic granules may take place in the affected nerve-cells, the new formation beginning about the nucleus and extending through the protoplasm.

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The Detection of Albumin in Urine.—As the result of a comparative study of sixteen selected tests for the presence of albumin in urine, Cammidge (*Lancet*, April 22, 1899, p. 1085) concludes that the salicylsulphonic-acid test seems to be the most convenient and the freest from objection. In delicacy it stands between Heller's test and the heat and acetic-acid tests. The acid may be used either as a solid or in saturated solution, and be applied without heat or special apparatus. It precipitates all forms of albumin, the precipitate becoming flocculent when heat is applied. Albumoses also are precipitated, but the precipitate disappears on the application of heat and reappears on cooling. With many normal urines salicylsulphonic acid yields a faint haze due to nucleoproteids. Heller's test may be employed as a check.

Increased Intestinal Peristalsis as a Result of Peritonitis.—It is so generally believed that peritonitis is attended with paralysis of the bowel that a recent communication by Cathcart (*British Medical Journal*, April 22, 1899, p. 960) showing that the condition is often really one of increased peristalsis possesses especial interest. Cases of pelvic peritonitis, gangrenous perirectal abscess, and pelvic abscess are reported in which there were tormina and tenesmus, with frequent small mucous evacuations from the bowel. It is suggested that the increased peristaltic activity is dependent upon reflex irritation of the serous coat of the bowel, and also that it may be followed by reflex paralysis, increasing the paralysis due to the involvement of the muscular coat itself.

The Treatment of Inoperable Malignant New Growths with Formaldehyde.—Formaldehyde has already proved itself to be one of our most useful disinfectants, and it has also been employed in dilute solution by inhalation in the treatment of cases of pulmonary tuberculosis, and by topical application in the treatment of laryngeal tuberculosis, with encouraging results. An additional application of the drug is suggested by the report by Mitchell (*British Medical Journal*, February 11, 1899, p. 337) of a case of sarcoma in which removal was effected by local employment of a solution of formaldehyde. A woman presented a sarcoma of the cheek, which had recurred for the second time following operation, and which two experienced surgeons declined further to operate upon. The growth was four inches in diameter and as large as a man's fist. At one point a mass of sarcomatous tissue had forced its way through the integument and was giving rise to constant and rather severe hemorrhage. Other measures failing in the control of the latter symptom, a small pad of absorbent cotton, soaked in a twenty-per-cent. solution of formaldehyde, was applied to the raw surface, covered with gutta-percha tissue and held in place with a bandage, the surrounding skin being protected by caoutchouc. The hemorrhage was soon controlled, and within twenty-four hours hardening and necrosis of the tissues had taken place, extending for nearly a quarter of an inch from the surface. With a scalpel and a sharp spoon as much of the necrosed part was scooped out as it was considered safe to do, and the resulting cavity was filled up with cotton saturated with the formaldehyde solution. Daily repetitions of this procedure led in a short time to destruction of the growth and finally permitted its complete removal, without the loss of any blood, although the tumor was a highly vascular one. The operation was attended with considerable pain, and œdema of the adjacent tissues.

Inunction of Soft Soap in the Treatment of Tuberculosis.—Hoffa (*Münchner med. Wochenschrift*) reports the employment during the past twelve years of inunctions of soft soap in the treatment of more than two hundred cases of tuberculosis of bones, joints, glands, and skin. Other measures, such as injection of iodoform, plaster bandages, etc., must, however, not be neglected. Under this treatment the general state and the appetite improve, and multiple tuberculous affections of bones and joints heal completely. The soap used must be of good quality, and from six to ten drachms should be rubbed on the body, from the neck to the thighs, two or three times a week. The soap may be removed after fifteen minutes. The inunction is practised most conveniently at night, as the patient should remain in bed for some hours afterward. The soap is believed to act by its alkalinity, neutralizing, when absorbed, the lactic acid of the organism, stimulating metabolism, and thus improving the general nutrition. The quantity of urine passed is increased. —*Lancet.*

The Thermal Death-Point of Tubercle Bacilli in Milk and Some Other Fluids.—Smith (*Journal of Experimental Medicine*, vol. iv., No. 2, p. 217) found in a series of experiments that tubercle bacilli when suspended in distilled water, decinormal salt solution, bouillon, and milk, are destroyed at 60° C. in from fifteen to twenty minutes, and the larger number in from five to ten minutes. When tubercle bacilli are suspended in milk the pellicle that forms during the exposure to 60° C. may contain living bacilli after sixty minutes.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE FOOD SUPPLY IN THE WAR WITH SPAIN.

THE work of the court appointed to investigate the charges brought by Major-General Miles, and other army officers, against the quality of the food supplied to our soldiers during the war with Spain, and against the refrigerated and canned beef in particular, has just come to an end. General Miles, as is well known, declared in the most positive terms that the greater part of the canned beef was unfit for human food, and that in his opinion, owing to the introduction of chemicals for preservative purposes, the refrigerated beef was in a high degree deleterious. Although the investigating court has had a protracted and tedious session, some of its conclusions are disappointing. For instance, the so-called embalmed-beef inquiry bears evidence of being whitewashed — that is, the court comes to the decision that the assertions of General Miles to the effect that the refrigerated beef was subjected to chemical treatment, thereby rendering it unfit for human consumption and eminently hurtful as an article of food, were not borne out by the evidence, and that consequently he was not justified in advancing these allegations. The court, however, finds that the charges brought against the canned beef were to a large extent established, and that General Miles was warranted in affirming its unsuitability for food on the transports, or as a permanent army ration. The evidence throughout the investigation was conflicting and at all times somewhat confusing to the "man in the street." Doubtless this was partly due to a partisan and prejudiced press. With regard to the statements that the refrigerated beef was chemically treated, the majority of the officers who used the beef in Porto Rico, and in the home camps of instruction, testified that they had no suspicion of such methods being practised. The testimony of some of the witnesses, who claimed that the beef had undergone the embalming process, was considerably discredited by the fact that their evidence failed to stand the test of examination, and it is also said to have been proved that the beef treated by the Powell process, which Dr. Daly averred to contain boric and salicyclic acid, was really innocent of either of these chemicals, but had been treated by fumigation. With regard to the canned roast beef, this is, to use Kipling's oft-quoted words, "another story." The fact was clearly demonstrated that regarded as a nourishing and fitting food for soldiers on active service in a tropical country, this article of diet was found wanting in every respect. In those instances in which the canned roast beef did not become tainted and altogether nauseating, the complaint was made that it was tasteless and unpalatable. Whoever has partaken of canned meat in this country "faute de mieux" will well understand that when it has been exposed for hours to the burning rays of a tropical sun, it will quickly lose whatever nutritive qualities it may have once possessed, and in this state of decay be a source of danger rather than of benefit. The truth is, that all canned meat is useful only as makeshift when fresh meat is unobtainable, and its provision as a regular army ration is strongly contraindicated. This, indeed, was the finding of the court, which stated that the canned roast beef under the conditions existing was not a suitable ration for extensive issues. The charge made that the canned beef was old, improperly packed, or of inferior quality to that generally put upon the market, was not upheld by the court, which concluded that there was no testimony that any of the canned fresh beef delivered to the government was of old date, nor was there evidence that the quality of the meat used for canning in May, June, and July, 1898, was different from that generally used, or that the methods of its preparation differed from those ordinarily pursued in its manufacture. The reasons given for its deterioration were: first, on account of the haste required in its delivery and shipment to Tampa, the meat was not given the time to settle and harden which is usually allowed for that purpose; and secondly, that injury was doubtless caused by rough handling in transportation or was due to the exposure to the climatic influences of the tropics, causing oxidization of cans, starting of seams, etc. The court, however, found it impossible to locate any great quantity of defective cans, and the careful inspection to which one million cans of the beef were subjected in Havana, in January last, indicated no unusual loss due to deterioration in quality or defective packing. In reference to the question as to whether the food supply was a cause of disease, the report says that this was so only to a limited extent, and that according to the surgeons serving with the troops before Santiago, and those in charge of the general hospitals in the United States, dysentery, diarrhœa, and intestinal disorders of a similar character constituted but a small part of the cases which passed under their observation. The findings of the court, therefore, were in a few words as follows: That the refrigerated beef was a suitable and necessary food for the soldiers in Cuba and Porto Rico, but that the canned roast beef was not. The subject of canned roast beef has been sufficiently discussed in this article, and with the possible exception of those pecuniarily interested in the matter, there will be found few to dispute the conclusions arrived at by the court on this point. Without wishing in any way to impugn the good faith and rectitude of the members of the court, as these are beyond question, we cannot but think that refrigerated beef has been somewhat unduly lauded in the report. It was clearly shown that a large quantity of this meat

pathological changes in the course of the infection. The alterations in the motor cells are more constant and of a severer grade than are those in the cells of the sensory ganglia. The more characteristic changes consist of disintegration, solution, and destruction of the chromatic substance of the cell, starting from the axon hillock and proceeding toward the nucleus. Coincidently the nuclei of the affected cells seek the periphery. Alterations are also suffered by the nucleus and the nucleolus. While this central form of chromatolysis is the prevailing type of pathological change, disintegration, etc., of the Nissl bodies situated in the periphery of the cell and in the dendrites is also observed (peripheral chromatolysis). In experimental infection with typhoid bacilli in rabbits a similar series of lesions in the corresponding nerve-cells in the spinal cord and ganglia is encountered. The main or central type of lesions discovered is identical with that found in man and animals after section, destruction, or even slight injury of the peripheral nerves. Examination of the peripheral nerves arising from the lumbar segment of the cord (the site in man and rabbit of the most profound changes) in rabbits inoculated with typhoid bacilli showed well-marked evidences of parenchymatous degeneration. It is probable that lesions of the peripheral nerves in typhoid fever in human beings are common, and that the post-typhoid hyperæsthesias and paralyses are due to this cause. Restitution of the chromatic granules may take place in the affected nerve-cells, the new formation beginning about the nucleus and extending through the protoplasm.

The Contents of the Stomach in the Gastric Crisis of Locomotor Ataxia.—As the result of a study of the contents of the stomach in a case of locomotor ataxia attended with gastric crises and hematemesis, Douglas (*Lancet*, April 15, 1899, p. 1026) found that during the crisis the stomach secreted a large quantity of digestive fluid inferior in but slight degree to that poured out during health. There was no indication that this secretion was associated either with hyperacidity or hyperchlorhydria. Apart from the presence of blood there was nothing in the fluid indicative of an actual lesion of the stomach.

The Detection of Albumin in Urine.—As the result of a comparative study of sixteen selected tests for the presence of albumin in urine, Cammidge (*Lancet*, April 22, 1899, p. 1085) concludes that the salicylsulphonic-acid test seems to be the most convenient and the freest from objection. In delicacy it stands between Heller's test and the heat and acetic-acid tests. The acid may be used either as a solid or in saturated solution, and be applied without heat or special apparatus. It precipitates all forms of albumin, the precipitate becoming flocculent when heat is applied. Albumoses also are precipitated, but the precipitate disappears on the application of heat and reappears on cooling. With many normal urines salicylsulphonic acid yields a faint haze due to nucleoproteids. Heller's test may be employed as a check.

Increased Intestinal Peristalsis as a Result of Peritonitis.—It is so generally believed that peritonitis is attended with paralysis of the bowel that a recent communication by Cathcart (*British Medical Journal*, April 22, 1899, p. 960) showing that the condition is often really one of increased peristalsis possesses especial interest. Cases of pelvic peritonitis, gangrenous perirectal abscess, and pelvic abscess are reported in which there were tormina and tenesmus, with frequent small mucous evacuations from the bowel. It is suggested that the increased peristaltic activity is dependent upon reflex irritation of the serous coat of the bowel, and also that it may be followed by reflex paralysis, increasing the paralysis due to the involvement of the muscular coat itself.

The Treatment of Inoperable Malignant New Growths with Formaldehyde.—Formaldehyde has already proved itself to be one of our most useful disinfectants, and it has also been employed in dilute solution by inhalation in the treatment of cases of pulmonary tuberculosis, and by topical application in the treatment of laryngeal tuberculosis, with encouraging results. An additional application of the drug is suggested by the report by Mitchell (*British Medical Journal*, February 11, 1899, p. 337) of a case of sarcoma in which removal was effected by local employment of a solution of formaldehyde. A woman presented a sarcoma of the cheek, which had recurred for the second time following operation, and which two experienced surgeons declined further to operate upon. The growth was four inches in diameter and as large as a man's fist. At one point a mass of sarcomatous tissue had forced its way through the integument and was giving rise to constant and rather severe hemorrhage. Other measures failing in the control of the latter symptom, a small pad of absorbent cotton, soaked in a twenty-per-cent. solution of formaldehyde, was applied to the raw surface, covered with gutta-percha tissue and held in place with a bandage, the surrounding skin being protected by caoutchouc. The hemorrhage was soon controlled, and within twenty-four hours hardening and necrosis of the tissues had taken place, extending for nearly a quarter of an inch from the surface. With a scalpel and a sharp spoon as much of the necrosed part was scooped out as it was considered safe to do, and the resulting cavity was filled up with cotton saturated with the formaldehyde solution. Daily repetitions of this procedure led in a short time to destruction of the growth and finally permitted its complete removal, without the loss of any blood, although the tumor was a highly vascular one. The operation was attended with considerable pain, and œdema of the adjacent tissues.

Inunction of Soft Soap in the Treatment of Tuberculosis.—Hoffa (*Münchner med. Wochenschrift*) reports the employment during the past twelve years of inunctions of soft soap in the treatment of more than two hundred cases of tuberculosis of bones, joints, glands, and skin. Other measures, such as injection of iodoform, plaster bandages, etc., must, however, not be neglected. Under this treatment the general state and the appetite improve, and multiple tuberculous affections of bones and joints heal completely. The soap used must be of good quality, and from six to ten drachms should be rubbed on the body, from the neck to the thighs, two or three times a week. The soap may be removed after fifteen minutes. The inunction is practised most conveniently at night, as the patient should remain in bed for some hours afterward. The soap is believed to act by its alkalinity, neutralizing, when absorbed, the lactic acid of the organism, stimulating metabolism, and thus improving the general nutrition. The quantity of urine passed is increased. —*Lancet.*

The Thermal Death-Point of Tubercle Bacilli in Milk and Some Other Fluids.—Smith (*Journal of Experimental Medicine*, vol. iv., No. 2, p. 217) found in a series of experiments that tubercle bacilli when suspended in distilled water, decinormal salt solution, bouillon, and milk, are destroyed at 60° C. in from fifteen to twenty minutes, and the larger number in from five to ten minutes. When tubercle bacilli are suspended in milk the pellicle that forms during the exposure to 60° C. may contain living bacilli after sixty minutes.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE FOOD SUPPLY IN THE WAR WITH SPAIN.

THE work of the court appointed to investigate the charges brought by Major-General Miles, and other army officers, against the quality of the food supplied to our soldiers during the war with Spain, and against the refrigerated and canned beef in particular, has just come to an end. General Miles, as is well known, declared in the most positive terms that the greater part of the canned beef was unfit for human food, and that in his opinion, owing to the introduction of chemicals for preservative purposes, the refrigerated beef was in a high degree deleterious. Although the investigating court has had a protracted and tedious session, some of its conclusions are disappointing. For instance, the so-called embalmed-beef inquiry bears evidence of being whitewashed — that is, the court comes to the decision that the assertions of General Miles to the effect that the refrigerated beef was subjected to chemical treatment, thereby rendering it unfit for human consumption and eminently hurtful as an article of food, were not borne out by the evidence, and that consequently he was not justified in advancing these allegations. The court, however, finds that the charges brought against the canned beef were to a large extent established, and that General Miles was warranted in affirming its unsuitability for food on the transports, or as a permanent army ration. The evidence throughout the investigation was conflicting and at all times somewhat confusing to the "man in the street." Doubtless this was partly due to a partisan and prejudiced press. With regard to the statements that the refrigerated beef was chemically treated, the majority of the officers who used the beef in Porto Rico, and in the home camps of instruction, testified that they had no suspicion of such methods being practised. The testimony of some of the witnesses, who claimed that the beef had undergone the embalming process, was considerably discredited by the fact that their evidence failed to stand the test of examination, and it is also said to have been proved that the beef treated by the Powell process, which Dr. Daly averred to contain boric and salicyclic acid, was really innocent of either of these chemicals, but had been treated by fumigation. With regard to the canned roast beef, this is, to use Kipling's oft-quoted words, "another story." The fact was clearly demonstrated that regarded as a nourishing and fitting food for soldiers on active service in a tropical country, this article of diet was found wanting in every respect. In those instances in which the canned roast beef did not become tainted and altogether nauseating, the complaint was made that it was tasteless and unpalatable. Whoever has partaken of canned meat in this country "faute de mieux" will well understand that when it has been exposed for hours to the burning rays of a tropical sun, it will quickly lose whatever nutritive qualities it may have once possessed, and in this state of decay be a source of danger rather than of benefit. The truth is, that all canned meat is useful only as makeshift when fresh meat is unobtainable, and its provision as a regular army ration is strongly contraindicated. This, indeed, was the finding of the court, which stated that the canned roast beef under the conditions existing was not a suitable ration for extensive issues. The charge made that the canned beef was old, improperly packed, or of inferior quality to that generally put upon the market, was not upheld by the court, which concluded that there was no testimony that any of the canned fresh beef delivered to the government was of old date, nor was there evidence that the quality of the meat used for canning in May, June, and July, 1898, was different from that generally used, or that the methods of its preparation differed from those ordinarily pursued in its manufacture. The reasons given for its deterioration were: first, on account of the haste required in its delivery and shipment to Tampa, the meat was not given the time to settle and harden which is usually allowed for that purpose; and secondly, that injury was doubtless caused by rough handling in transportation or was due to the exposure to the climatic influences of the tropics, causing oxidization of cans, starting of seams, etc. The court, however, found it impossible to locate any great quantity of defective cans, and the careful inspection to which one million cans of the beef were subjected in Havana, in January last, indicated no unusual loss due to deterioration in quality or defective packing. In reference to the question as to whether the food supply was a cause of disease, the report says that this was so only to a limited extent, and that according to the surgeons serving with the troops before Santiago, and those in charge of the general hospitals in the United States, dysentery, diarrhœa, and intestinal disorders of a similar character constituted but a small part of the cases which passed under their observation. The findings of the court, therefore, were in a few words as follows: That the refrigerated beef was a suitable and necessary food for the soldiers in Cuba and Porto Rico, but that the canned roast beef was not. The subject of canned roast beef has been sufficiently discussed in this article, and with the possible exception of those pecuniarily interested in the matter, there will be found few to dispute the conclusions arrived at by the court on this point. Without wishing in any way to impugn the good faith and rectitude of the members of the court, as these are beyond question, we cannot but think that refrigerated beef has been somewhat unduly lauded in the report. It was clearly shown that a large quantity of this meat

was in a putrid state on its arrival at Porto Rico, and it is also a matter of common knowledge that frozen meat will keep sweet but a limited time in a hot climate. The statement is made that refrigerated meat was a necessity, because meat on the hoof was not available; in Cuba there were no cattle, and although there were many in Porto Rico, the court held that the general commanding the troops to be employed in this invasion might reasonably have expected that his antagonist would take the very simple precaution to drive back or destroy all means of subsistence in the country that his enemy could utilize, consequently no reliance should have been placed on the cattle of these islands as a certain means of subsistence. This is unanswerable reasoning so far as it goes, but was it not possible to transport live cattle from this country for the use of the troops? It is true that those in charge of the transport arrangements had many difficulties with which to contend, and perhaps under the circumstances such a procedure was not feasible, but it seems that if, in the first instance, energetic and efficient steps had been taken, this plan might have been successfully carried out. The campaign in Cuba and Porto Rico has, at any rate, once again driven home the fact that fresh food is indispensable for white men living in the tropics.

SIN AND DROPSY.

We are able to note another striking result for "Christian Science." The case is that of a woman who died in Mount Vernon recently under the ministrations of a deluded woman, called at the instigation of a worse-than-deluded husband. The woman had been ill for three months with "dropsy," and had died without treatment and apparently without an accurate diagnosis. According to the husband, the load of original sin in the woman, manifested by dropsy, was too much for the female exorciser, and the sufferer, therefore, had to die. We should like to know whether a more powerful or an earlier application of prayers, or an attempt by another "healer," would have been beneficial in the case. The coroner very properly held an inquest on the case, and a verdict was rendered against the faith-curer accordingly. It is quite time that people who will not protect themselves against "faith cure," "Christian Science," and the like, by the exercise of some rudiments of intelligence, should be taken in hand and protected *nolens volens*. It is obviously wrong for an individual to commit any act which is subversive to social order—or, in other words, against the laws which are an expression of the will of the majority. We prevent a man's committing suicide if we can, and we denominate the attempt a crime. We do this, not in order to prevent an individual's inflicting pain upon himself, or to save a life of any particular value to the community, but because we do not wish those human specimens, who are in a permanent or a temporary condition of mental deterioration, to inflict an injury upon society by the example of an attempt at self-destruction. When an individual claims that he has a right to kill himself if he so wishes, we try to convince him by argument or by legal process that he has not, and in some cases we call him insane and put him in an asylum. The man who claims that he has a right to kill himself has no less tenable a legal position than the man who says that "he does not believe in doctors," and refuses to consult one for himself or for members of his family in the presence of such well-known diseases as typhoid and scarlet fever. Such pernicious fools who go about among people as ignorant as themselves but less crafty, gibbering about sin as the cause of disease, and claiming a heaven-sent ability to remove all or a part of the concrete evidences of this sin by prayer, should be restrained, but in such a way that they could not pose as martyrs, and thus appeal to ignoramuses who might be affected by such sentimental nonsense. The use of prayer by these people ought to be considered a hideous travesty by those who look upon such spiritual petitions as a sacred appeal to an omnipotent power, and not as a senseless incantation at the bedside of a suffering fool or a defenceless child. The three things which seem to us largely responsible for the spread of this present delusion are embodied in the fact that it is cheap, that it is easy and convenient to apply, and that ignorance and superstition are always with us. We cannot and would not try to alter the first and second conditions, but we can try to mitigate the effects of the third. We wish the authorities of Mount Vernon success in the attempt to do their share of mitigation in this instance, and we should, furthermore, like to have an essay from the interesting woman who is looked upon as the leading freak in a choice collection of her kind, upon the relation of ascites to congenital sin.

EMBALMED BEEF.

Anent the recent articles in certain drug journals, that boric acid, borax, salicylic acid, etc., are not injurious to health when used as preservatives in beef, and the alleged experiments on a number of woodchoppers with foods so preserved, it only proves, if it proves anything, that woodchoppers are hard to kill. The chemical manufacturer, drug dealer, or editor of a drug journal is not generally considered by practising physicians good authority in matters which pertain to clinical therapeutics or physiological effects from the use of chemicals as foods, or in the use of chemicals in preservation of foods, and there arises a possible suspicion in the minds of the practising physician, logically the only competent observer, that opinions furnished from the pharmaceutical journals on these matters may be colored by a too partial interest in their advertising drug customers.

Practising physicians and surgeons, especially army surgeons, are the proper ones to judge of the detrimental effects of chemically prepared beef, and since the late war their testimony has been so overwhelmingly against its use that no amount of sophistry, report of whitewash commission, and court of inquiry can refute it.

When the day of successful extirpation of the human

stomach arrives, and the substitution of efficient india-rubber stomachs has proven feasible, then boric acid, salicylic acid, formalin, fluo-silicate of ammonium, aniline dyes and other coal-tar products and the dozen of other secret chemicals now advertised, sold, and used, may have a chance and be appreciated, nay, even approved of and enjoyed, at the soldiers' camp-fire banquets.

It was a famous soldier, we believe his name was Napoleon Bonaparte, who said, "Armies march and fight on their stomachs." We tremble for the warriors who shall be compelled to do heroic service for their country with only the stomachs they were born with if filled with chemically preserved foods, especially with such chemicals as are not in any sense component part of the human organism.

The chemist, even if he be employed by a packing-house or a fruit, vegetable, and sauce canning factory, or an editor of a drug journal ought to know this. If he doesn't, let him submit himself to a disinterested jury of experimenters and become the subject of the dangerous experiments, and feel the results himself before he imperils the health of the public by such monstrous allegations. If a young person employed as a chemist in a canning establishment publicly intimates an opinion that salicylic acid and boric acid as preservatives are not hurtful to health, he might grow wiser if he ate such foods as a soldier, and lived to grow older.

News of the Week.

A Hospital for Working-Women. — The name of the proposed new hospital for women, to be built in Brooklyn, which was to have been the Hospital for Breadwinners, has been changed to the "Skene Hospital for Self-Supporting Women." This change has been made in recognition of the practical interest Dr. A. J. C. Skene has taken in the project, he having recently resigned the presidency of the faculty of the Long Island College Hospital so as to devote himself entirely to the work of the new institution.

Convention of Trained Nurses.—The second annual convention of the Nurses' Associated Alumnæ of the United States and Canada was held during three days last week at the Academy of Medicine. Delegates from twenty-six hospitals in various parts of the country were present. The Post-Graduate Hospital Training-School for Nurses of this city was admitted to membership in the Associated Alumnæ and invited to send delegates to the convention. Mrs. Hunter Robb, of Cleveland, formerly superintendent of the Johns Hopkins Training-School, delivered the president's address at the opening session. She spoke of the lessons which the late war had taught trained nurses, and discussed the influence that the war may have upon trained nurses in the future. She referred to the recently celebrated quarter-centenary of trained nursing, and reviewed the history of the work which started here in New York. She deplored the rapid increase of schools without a corresponding increase in quality, as it resulted in criticism that had to be borne by trained nurses, both good and bad. It was hoped, however, that some of these evils might be prevented through the agency of the recently formed Superintendents' Association, which includes now more than one hundred members who are the heads of the best training-schools in the country.

A New Building for the Woman's Hospital.—It is announced that the buildings of the Woman's Hospital, at Lexington Avenue and Fiftieth Street, are soon to be torn down and replaced by a new hospital, a six-story building of stone and brick. The building will be of the French Renaissance style, and will be arranged to accommodate several hundred patients. Besides the wards, there will be a number of private rooms.

Infection of Measles in a Letter.—A Sioux Indian twenty-two years old, a student at the government training-school for Indians at Carlisle, Pa., died not long ago of black measles. One week before his death he received a letter from the Pine Ridge agency, South Dakota, stating that his brother and sister had died from malignant measles. The infection was seemingly carried in the envelope, as there were no cases of measles in the school at the time.

Red-Cross Nurses for Manila.—The New York Red-Cross Auxiliary for the Maintenance of Trained Nurses, through its chairman, Mrs. Whitelaw Reid, sent on the transport *Newport* six trained nurses, selected in San Francisco, to Manila. This society sent twelve nurses to similar service from New York, the War Department distributing them, four each, on the transports *Grant*, *Sheridan*, and *Sherman*. Their services have already been reported as being of great value on the crowded transports, as well as since their arrival. They all go under contract for six months' service in the Philippines, and their expenses and salaries are paid by the Red-Cross committee.

A Quarantine War Averted.—Last November an announcement was made by the Mississippi board of health and by various local boards in Louisiana that they would in future treat New Orleans as an infected place, in the same category as Havana and other suspicious ports, and require the disinfection of persons and baggage from that city. This decision was due to the popular belief that New Orleans had the yellow fever last summer long before it announced the fact, and that the disease prevailed to a greater extent than was admitted by the authorities. In consequence of this alleged concealment of the truth it was said that quarantine would be declared against New Orleans on May 1st, no matter what the health conditions might be at the time. Recently, however, an agreement has been reached whereby Mississippi will have its official medical inspector in New Orleans, with the privilege of examining suspicious cases. In return for this concession the Mississippi authorities pledge themselves not to quarantine on a suspicious or even a genuine case of yellow fever. Heretofore the rule has been to

quarantine on a rumor. The new rule adopted is that a town is not to be regarded as infected and is not to be quarantined against until there is evidence that the disease has become epidemic there and is beyond control.

The Medical Society of the State of North Carolina.—The forty-sixth annual meeting of this society will be held at Asheville, May 30th to June 2d. The president of the society is Dr. L. J. Picot, of Littleton, and the secretary Dr. G. W. Pressley, of Charlotte.

The Cornell Medical Faculty.—The members of the Cornell University Club gave a reception one evening last week to the faculty of the medical department of the university. Many members of the faculty of Cornell were present.

A "Christian Scientist" died a few days ago in Mount Vernon, N. Y., after a three months' illness during which she persistently refused medical treatment. The coroner endorsed on the death certificate that she died "of neglect, dropsy, and Christian science treatment."

Testimonial to Dr. MacGauran.—At the last meeting of the New York Celtic Medical Society, the members presented to Dr. G. D. MacGauran, who is about to remove to Lawrence, Mass., a service of silver. The presentation speech was made by Dr. Francis J. Quinlan, and other speeches were made by Drs. Constantine MacGuire, O'Brien, MacGowan, Morrissey, and Cronin.

Army Rations in the Tropics.—By direction of President McKinley a special order regarding the food supply of the United States to the tropics was to-day sent to General Otis at Manila, General Brooke at Havana, Cuba, and General Davis at San Juan. In order to determine what alterations, if any, in the established ration would be conducive to the better health of troops serving in tropical climates, each of these officers is directed to institute a board of three officers, serving respectively in the line, medical, and subsistence departments, to examine into the subject of any desired changes in the ration for the troops serving in his command, and to cable the results of such inquiry to the Secretary of War. It is safe to say that, despite the report of the latest of the whitewashing committees, canned "roast beef" will not appear among the rations recommended by these boards.

A New Floating Hospital of the St. John's Guild.—The second floating hospital of St. John's Guild was successfully launched one day last week in Brooklyn. As the vessel slid down the ways a number of carrier pigeons were released from a flower-covered cage at the bow, and the vessel was named "*Helen C. Juilliard.*" The using of carrier pigeons at the launching is a Japanese idea, and was adopted at the suggestion of the Japanese consul. The cage used was employed for a similar purpose at the launching of the Japanese cruiser *Kasagi* at the Cramp yards in Philadelphia. The *Helen C. Juilliard*, named after the donor of the hospital, has a length over all of two hundred and fifty feet, and her tonnage is six hundred and eighty. It is expected that her first trip in service will be made in July. Brooklyn will be included in the service upon two days of the week. The first crib on board has been endowed by a society of little Brooklyn girls, "The Loving Links," which raised $500 for the purpose. The first floating hospital has been named the *Emma Abbott*, the guild having been made one of the residuary heirs of the Abbott estate.

Another Sure Cure for Consumption.—The Italian newspapers are publishing marvellous tales of an alleged radical cure for tuberculosis discovered by Prof. Vincenzo Cervello, professor of materia medica and pharmacology at the Royal University of Palermo. The remedy consists of formalin administered hypodermically.

Consumptives' Hospital of the Marine-Hospital Service.—A sanatorium for the treatment of sailors of the merchant marine suffering from tuberculosis is now in course of construction on the abandoned military reservation at Fort Stanton, New Mexico. This reservation contains about 10,240 acres, and the buildings on it are being repaired and refitted for the purposes of a sanatorium. The hospital is to be refurnished and supplied with all modern instruments and apparatus. Passed Assistant Surgeon J. O. Cobb has been detailed to take charge of the institution, and is now at Fort Stanton making the final preparations for opening the hospital.

Alleged Overpayment to the Post-Graduate Hospital.—The commissioners of accounts have submitted a report to the mayor of an investigation of certain charges brought against the New York Post-Graduate Medical School and Hospital. They reported that the city had paid the hospital last year $25,000 for free patients, while the amount that should have been paid was only $4,949.40. It is alleged that patients occupying endowed beds and also those admitted as pay patients at less than full rates have been charged for to the city as free patients.

New York State Medical Examination.—The following is a summary of the results of the April examinations for license to practise medicine in this State: Total number of candidates, 68; successful, 51, or seventy-five per cent.; unsuccessful, 17, or twenty-five per cent.; passed with honor, 6; highest general average, 93.9 per cent. The rejections in anatomy numbered 7, in physiology and hygiene 3, in chemistry 6, in surgery 2, in obstetrics 2, in pathology and diagnosis 11, and in therapeutics, practice, and materia medica 9; total, 40. Of the 17 rejected candidates, 8 were rejected in but one topic, 4 in two topics, 1 in three, 1 in four, 1 in five, and 2 in six.

Philadelphia County Medical Society.—At a stated meeting held April 26th, Dr. D. J. Milton Miller reported a case of perforation of the bowel in the course of typhoid fever, with recovery, followed by a second and fatal perforation, and he exhibited the specimen. He reported also two other cases of fatal perforation, and made reference to cases of operation in which perforation was not discovered. He pointed out the difficulties in the diagnosis of perforation, and laid particular emphasis upon complaint of sponta-

neous pain by the patient as a symptom of threatening perforation. Dr. John H. Gibbon reported the case of a child, five years old, who had swallowed a campaign button, which had lodged in the œsophagus opposite the second dorsal vertebra. The button was located by skiagraphy, and was removed by means of the coin-catcher.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending May 6, 1899. April 28th.—Medical Inspector M. C. Drennan ordered to additional duty at the marine recruiting rendezvous, Philadelphia. Passed Assistant Surgeon W. C. Braisted detached from the naval hospital, Newport, R. I., and ordered home to be ready for orders for sea duty. Assistant Surgeon J. J. Snyder detached from the *Wabash* and ordered to the naval hospital, Newport, R. I. Medical Director A. L. Gihon, retired, granted leave for one year with permission to leave the United States. April 29th.—Surgeon J. M. Steele ordered to temporary duty at the recruiting rendezvous, Baltimore. Assistant Surgeon S. B. Palmer detached from the *Annapolis* and ordered home. Assistant Surgeon W. M. Garton detached from the naval hospital, New York, and ordered to the *Annapolis*. May 2d.—Surgeon J. D. Gatewood ordered to the bureau of medicine and surgery for temporary duty. May 3d.—Medical Inspector C. U. Gravatt detached from the *New York* and from duty as fleet surgeon of the North Atlantic Squadron and ordered home to await orders. Medical Inspector P. Fitzsimons detached from the *Brooklyn* and ordered to the *New York* as fleet surgeon of the North Atlantic Squadron. Surgeon C. E. H. Harmon detached from the *Amphitrite* and ordered to the *Brooklyn*. Surgeon J. M. Edgar detached from the *Richmond* and ordered to the *Amphitrite*. Surgeon G. P. Lumsden detached from the *Franklin* and ordered to the *Richmond*. Surgeon S. H. Dickson detached from the *Massachusetts* and ordered home to await orders. Surgeon J. C. Byrnes detached from the Norfolk navy yard and ordered to the *Massachusetts*. Passed Assistant Surgeon F. W. Olcott ordered to the *Texas*. Assistant Surgeon G. D. Costigan detached from the *Indiana* and ordered to the naval hospital, Chelsea, Mass. Assistant Surgeon M. S. Elliott detached from the *Texas* and ordered home to await orders. Assistant Surgeon J. H. Payne detached from the naval hospital, Chelsea, Mass., and ordered to the *Indiana*.

College of Physicians of Philadelphia.—At a stated meeting held May 3d Dr. A. A. Eshner read a paper entitled "Some Reflections upon Cellular Physiology and Pathology." He stated that life may be viewed as a manifestation of cellular activity, which if properly expended is represented by health, and if perverted leads to disease. Disturbance in the relation between waste and repair, or failure in elimination of the products of waste, results in inanition or intoxication. These aberrations may arise from changes taking place within the body or result from the operation of agencies introduced from without. Physical agencies of extraneous origin, as violence, heat and cold, and micro-organisms may also cause disease. Profound or long-continued derangement of nutrition may result in structural alterations and these in turn in organic change. Dr. De Forest Willard read a paper, prepared by himself and Dr. S. M. Wilson, entitled "A Case of Ovarian Cyst of Thirty-five Years' Duration; Patient Dying of Influenzal Bronchitis at Seventy-Five Years of Age." The case was one that had been tapped repeatedly with conservative results. Dr. William J. Taylor read a report of "Two Cases of Operation for Perforation in Typhoid Fever," both of which terminated fatally. One was operated on within four hours and the other within two hours after perforation was diagnosticated, death occurring in the first at the close of the operation and in the second after twenty-one hours.

Obituary Notes.—Dr. Joseph J. Kirkbride died at Philadelphia on May 4th, at the age of fifty-seven years. He was a son of the late Dr. Thomas S. Kirkbride, and was for more than twenty years connected with the Pennsylvania Hospital for the Insane. He was graduated from the medical department of the University of Pennsylvania in 1872, and was until a few years ago engaged in active medical practice.—Dr. Charles Weber died at Pricetown, Pa., on April 30th, at the age of seventy-eight years. He was a graduate of the University of Tübingen, and had been in this country for fifty years.—Dr. William Whitney Godding, superintendent of the Government Hospital for the Insane in Washington, died at that institution on May 6th. For some time he had been suffering from kidney and heart disease, but remained at his post until within the last week. Dr. Godding was born in Winchendon, Mass., in 1831. He received the degree of Bachelor of Arts from Dartmouth College in 1854, and that of Doctor of Medicine from Castleton Medical College in 1857. He engaged in general medical practice for two years, and then became assistant physician in the New Hampshire State Asylum for the Insane, where he remained for three years. He then resigned to resume private practice at Fitchburg, Mass. In 1863 he became assistant physician in the Government Hospital for the Insane, in Washington, and after a service of seven years in that institution he was promoted to the superintendency of the Massachusetts Hospital for the Insane, at Taunton. He returned to Washington in 1877, and succeeded Dr. Charles H. Nichols as superintendent of the Government Hospital. Dr. Godding was acknowledged to be one of the foremost experts in mental diseases in the United States.—Dr. William Russell, of Barre, Mass., died of mumps on May 6th, at the age of ninety-nine years. He was a graduate of Harvard in the class of 1826.—Dr. Willard Parker Bowser, of Brooklyn, died on May 4th, aged forty-nine years. He was born in Canada and was graduated from the New York University Medical School in 1877. He practised for a time in Canada and later in England, but settled in Brooklyn about eleven years ago. He leaves a widow and one son.—Dr. M. B. Ferguson, of New London, Conn., was found dead in his bed on the morning of May 6th. He was about sixty years of age.

Society Reports.

ASSOCIATION OF AMERICAN PHYSICIANS.

Fourteenth Annual Session, Held at Washington, D. C., Tuesday, Wednesday, and Thursday, May 2, 3, and 4, 1899.

First Day—Tuesday, May 2d.

THE president, DR. C. BAUMGARTEN, of St. Louis, made a few opening remarks, in which he referred to the object of the society being earnest work, no one caring who was president and who was not. This was a society for the special study of special diseases; it stood for the specialization of labor. It differed from most other societies. Nearly all the time was devoted to the study of scientific subjects. He referred to the late Dr. William Pepper, and the loss the society, the public, and the University of Pennsylvania had sustained in his death.

Congenital Idiopathic Dilatation of the Colon.—This paper was read by DR. J. P. CROZER GRIFFITH, of Philadelphia. There were several causes that might produce this condition. It might be acquired or congenital. The acquired variety usually came late in life, or during adult life. There might be an acquired dilatation, oftenest the result of chronic constipation; a congenital dilatation dependent on some form of stenosis, or a congenital idiopathic dilatation, which was one not dependent on any discoverable cause. The dilatation might be at the sigmoid flexure or it might extend farther. He gave a variety of causes to which it was due. There was also a congenital tendency to dilatation when the dilatation itself did not exist at birth. It was not possible to draw a sharp line between these cases. We could not always say whether the dilatation was present at birth or not. He had examined all the cases in literature he could find. He related the history of a patient of his, a child five months old, who suffered from constipation for a week. Then it had diarrhœa, and when it was two and a half years old it was supposed to have swallowed a campaign button, and had no evacuation for a long time. It was so miserable and in such pain that a rectal tube had to be introduced to let the gas escape. The child was brought to the hospital for operation. An artificial anus was made; but the child grew thinner, and died. An autopsy was made at the child's home by its own physician, and it was reported that nothing wrong was found in the colon. In another case like the first, he thought that the trouble was atony of the bowel, but he found extreme dilatation. He had collected twenty-five cases, and had found fifteen to twenty mentioned by other writers. A glance at the histories of these cases showed a characteristic group of symptoms. There were constipation and abdominal distention. Purgatives were sometimes successful in removing this dilatation, and sometimes not. In about half the cases constipation was the first symptom noticed, but sometimes there was abdominal distention also. Patients who lived more than a year had repeated attacks. During these attacks there were frequently pain and vomiting; in other cases these symptoms were absent. Some writers said that the fecal masses were scybalous, but he had found them soft, as a rule. Diarrhœa was the terminal symptom. The prognosis was unfavorable. Eighteen out of twenty-five died; a few reached adult life, and only two recovered. In eighteen there were autopsies, and one was operated on. In this case there was enlargement of the large intestine. The sigmoid flexure was frequently not the only part dilated. Usually the rest of the colon was dilated also; sometimes the colon without the sigmoid flexure, and sometimes the rectum. There was a thickening of the walls of the colon in almost every case. Ulceration of the mucous membranes was usually found, especially when there was diarrhœa. The diagnosis was easy. The treatment was hygienic and medical. Massage and electricity were useful. The bowels should be emptied; enemata should be used, but they did not always give benefit. The rectal tube should be used to remove the gas. Puncture of the intestines with a trocar was sometimes necessary when the gas distention was very great. Laparotomy was also done. An artificial anus had been made, as in the case of Osler and Halsted, in which the child recovered. The colon should be taken out and the ends of the normal gut should be brought together.

The Relation of Idiopathic Dilatation of the Colon to Phantom Tumor.—This paper was by DR. REGINALD FITZ, of Boston, in which he spoke of such cases in adults, and related a case of his own. He referred more especially to phantom tumor. The phantom tumor was not difficult to make out. Anæsthesia was of great assistance in the diagnosis, and under it the tumors of this character disappeared at once, only to reappear when consciousness returned. He thought there were two varieties of dilatation, one due to defects of development and hence congenital; the other making its appearance weeks or months after birth, which may be called idiopathic. The published cases of idiopathic dilatation were few. He spoke of the surgical operations for such cases, and said how hard it was to go through life with an artificial anus.

DR. WILLIAM OSLER, of Baltimore, showed photographs of a series of cases. He said that in the case referred to by Dr. Griffith in his paper colotomy was done by Dr. Halsted, and the child, when last heard of, which was not very long ago, was alive and well, and not dead, as Rotch in his "Pædiatrics" said. Immediately after the operation the symptoms disappeared, the child improved, grew fat and well, and within a week it had gained many pounds in weight. In his second case the patient lived for two years, and at the time of its death was much emaciated and had recurring attacks of constipation and diarrhœa. There was a distention of the colon and a narrowing of the sigmoid flexure, and above this a concretion was found. The third case is interesting on account of the few symptoms presented. The child was brought into the surgical clinic for knock-knee, and during the examination the mother remarked that the child had not had a natural evacuation since its birth two years previously. There was a large tumor, with much abdominal distention. The child was still alive. The fourth case showed how dilatation of the colon may disappear spontaneously. The patient had heart trouble with ascites, and with this swelling the dilatation disappeared. The fifth case was now under observation. From the good results in the first case he thought that laparotomy and colotomy should be done early. The operation was not usually serious.

DR. A. JACOBI, of New York, said that in a great many cases in which the diagnosis was made the patients have had constipation from the first day of birth. The large intestine might cause it; but there were few autopsies to prove this. He thought that there might be an irregular muscular development of the intestines or of the mucous membrane, or there might be a rupture of the intestinal muscles, or a diffused hemorrhage between the muscular layers of the intestine.

DR. GRIFFITH said he tried to avoid the use of the word congenital, but he had to use it. It was not usually expected to find this dilatation at birth, because nothing had entered the intestines, but when it was found early there was thought to be some con-

genital tendency. When this dilatation was delayed it might mean that the tendency was not so well marked. At the autopsies hypertrophy of the intestinal walls was found, and not atony.

DR. FITZ agreed with Dr. Griffith about the meaning of the word congenital, but when the dilatation did not appear at one or two years of age, it was too late to call it by that name. Colotomy was done only to prevent immediate pain and to save life, but it was not desirable to go through life with an artificial anus.

A Case of Presystolic Mitral Murmur Associated with a Systolic Tricuspid Murmur and Jugular Pulse.—This was the subject of a paper by DR. JAMES TYSON, of Philadelphia. One feature of this case which was not indicated in the title was that it was complicated by pregnancy, and a careful study was made both before and after the birth of the child. Dr. Tyson spoke of the causes and the physics of a presystolic murmur, and thought that such murmurs were most interesting. The case was that of a married woman who was seven and one-half months pregnant. She had been ill eight years before and did not know what the trouble was, and two years later she had had a miscarriage. For the past five or six years she had had a cough which disappeared in summer; she was short of breath and had palpitation. Three months before admission to the hospital she was said to have had pneumonia, and had been growing worse. On admission she was thin and pinched, and her face was much flushed. She had general bronchial catarrh. The pulse was peculiar. The speaker described the position of the heart and the apex beat and general outline. There was a short rough murmur at the apex, terminating abruptly, and presystolic in time. He described the points of intensity of the second sound, and showed some tracings of the position of the heart, indicating the position of the murmur. He also presented pulse tracings. After the woman became pregnant she felt better. When in labor she grew livid and was cyanosed; the forceps was applied at once and the child was delivered. She felt better and the physical signs changed after delivery, which was just what should be expected. There were a difference in the jugular pulse and a diminution in the intensity of the murmur. There was no œdema. Hypertrophy of the left ventricle was present. Dr. Tyson brought forward various theories to explain this change.

DR. E. G. JANEWAY, of New York, said that one thing he had noticed was, that in about one-third of the cases this murmur could be heard behind. This had not been supposed to be the case. The murmur was not so loud or so characteristic as the mitral regurgitant murmur, but it was clear. He had noticed that in cases put down as one kind of murmur in the hospital, the patients often go out and come back under another service, and their cases were diagnosed differently and recorded differently at different times, while the autopsy contradicted the diagnosis. Often when the ventricle was dilated and the liver engorged there was a systolic murmur, but when the liver was reduced this murmur disappeared and the presystolic murmur came back. It was much like the pulmonary murmur as to position.

DR. CHARLES CAREY, of Buffalo, said, in referring to Dr. Janeway's remarks, that the transmission behind of the murmur might be due to a pulmonary condensation. It was rare to have a deformed auriculo-ventricular orifice produce a condition that would not cause trouble both forward and backward, *i.e.*, a stenosis and a regurgitation.

DR. GRIFFITH said that three or four years ago he had read a paper before this association in accord with what Dr. Janeway had just stated, and he had noticed that the text-books said nothing about this condition, except perhaps the older books.

DR. TYSON said in conclusion that he had thought most highly of Dr. Griffith's paper, and had it in mind when he reported this case. He had often noted what Dr. Janeway mentioned. The murmur was much louder at the apex, even if it could be heard elsewhere.

A Case of Mitral Stenosis with Fever (Non-Malarial) of Relapsing Type.—This was the subject of a paper by DR. F. P. HENRY, of Philadelphia. In this case the fever recurred at intervals of about one week. The recurrence was sometimes tertian, sometimes quotidian, and sometimes double quotidian. The patient was a dressmaker, and had had typhoid fever three months before admission. She had had rheumatism in childhood and severe headache and pain in the head and back. Her menses disappeared for two months. Her temperature was 99.2° F. She had a presystolic murmur. Her heart was not enlarged. One day after admission her temperature was normal, and later it was below normal and then above again, and it constantly relapsed; this kept up for several days. She was pregnant. The fever was not malarial; it was evidently caused by the heart trouble. The character of the blood was that of chlorosis. He thought the diagnosis was either pernicious anæmia or ulcerative endocarditis.

DR. GEORGE DOCK, of Ann Arbor, said that if the fever was caused by some morbid process in the blood it was interesting, but he had not carried his investigations far enough.

DR. W. W. JOHNSTON, of Washington, said it was evident that we must look for a micro-organism as the cause, reasoning from analogy. He showed a chart of a case of recurring fever. The intervals were not regular. It was treated as rheumatism and the patient got well.

DR. CHARLES CAREY, of Buffalo, said there was nothing in the description to exclude rheumatic fever.

DR. WILLIAM H. THOMSON, of New York, said that intermission was usually connected with some malarial origin. He once published a case in which the patient became periodically worse every other day, and this was regular. About 5 A.M. he had a nervous attack. He first had a rise of temperature. For the past four and a half years his temperature has been normal. It was difficult to give the cause of this.

DR. BOND said that this intermission might have been due to trouble in the gastric or intestinal tract. In one case there was vomiting with dilatation of the stomach. The patient had a slight indigestion, but she was later absolutely well. In most of the cases there were no gastric symptoms, eructation, or fermentative symptoms.

DR. HENRY said in conclusion, in answer to Dr. Dock, that the patient recovered, and an autopsy was not possible. He thought that some micro-organism must be the cause of the disease.

The Immediate and Remote Effects of Athletics upon the Heart.—This was the subject of a paper by DR. ALFRED STENGEL, of Philadelphia. It was astonishing how easily a systolic murmur was developed in athletes. In 1893 he examined the University of Pennsylvania football team, and he found that three out of nine had a murmur which disappeared after a rest. Muscular exercise lowered the blood pressure in the peripheral vessels, and increased the pressure at the centre. The second wind was the recovery of the right ventricle after a dilatation. This did not hurt young, healthy persons. Unfortunate results might follow violent exercise in young and inexperienced persons. The danger in athletics was not very great. The systolic murmur was usually over the pulmonary area. A trained athlete might recover compensation from dilatation in a few days. The bad effects in some persons, and even in athletes,

might not be manifest for years to come. Long-continued indulgence in severe sports caused some cardiac hypertrophy, and this came from over-distention of the right heart in straining. Supervision was necessary in college athletics. Young men should continue some forms of exercise after the discontinuance of athletics.

DR. JACOBI asked if he had used the *x*-rays.

DR. STENGEL replied that he had not in these cases.

DR. A. V. MEIGS, of Philadelphia, said that researches like this were likely to be fruitful. Not much was known on this subject. Few men became great athletes. The common view of compensation after hypertrophy was theoretically correct, but it was often untenable.

DR. C. F. FOLSOM, of Boston, said that many cases like these were reported after the civil war. Many cases were found in young men defective at the start or from want of systematic exercise. It was easier to strengthen the muscles of the body than those of the heart.

DR. OSLER said that he wished to emphasize one point, and that was the frequency with which he found a systolic murmur over the pulmonary area in healthy persons. The army and navy medical boards should remember this. He had occasion to examine several men that had been rejected by these boards, and who were well and strong. He had been active in getting such men passed. Such rejections did great injustice. The question of second wind was interesting. He had written an article in the third volume of Pepper's "System of Medicine on this subject. The question of second wind was the question of the right ventricle. There was always danger to the man over forty years old who indulges in over-exercise. Such exercise was risky. Great strains had been brought on the hearts of men who insisted on riding and keeping up with younger or more vigorous persons.

DR. JAMES J. PUTNAM, of Boston, spoke of a paper which he had written several years ago, on the condition of the heart among policemen. Murmurs had been found which later disappeared. He thought it was because they were nervous. He agreed with what Dr. Osler had said about wheel-riding and hill-climbing in men over the age of forty.

DR. DOCK said that it was important to note the pulmonary circulation. There was often acute emphysema in athletes. Many of these men are not trained to expire the air in breathing. The air must be thoroughly expired to get the second wind. The immediate prognosis was interesting. These men with apex murmurs were capable of hard work. He related the case of a man who had been first rejected for military service on account of one of these pulmonary murmurs. Dr. Dock examined and passed him, and he outdid his comrades in hard work.

DR. STENGEL said he did not mean to say that athletics at college were dangerous; as a matter of fact he had not seen many cases with serious symptoms among college students. He did wish to emphasize the point that college athletics should be under careful medical supervision.

The Interpretation of Pulse Tracings.—This was the subject of a very carefully prepared paper by DR. A. R. CUSHNY, of Ann Arbor, in which he exhibited pulse tracings and sphygmograms, and showed how stimuli to the left or right ventricle affected the rhythm of the pulse beats.

DR. DOCK showed a specimen of a heart, in connection with Dr. Cushny's case. It was dilated and hypertrophied. The patient had been treated but did not improve. There were also lung symptoms and anasarca and œdema of the legs, and an almost negative response to treatment by rest or medicine. He had always been very anæmic, so he was not bled. Such specimens as this with their sphygmographic tracings throw some light on these conditions of the heart.

DR. JACOBI said that he had noticed in some cases that the intermission was not complete at all. Auricular and ventricular diseases were not affected equally.

DR. CUSHNY said that in about one-half the cases he examined the auricles were affected and in one-half the ventricles.

The Operative Treatment of Spinal Tumors.—This was the subject of papers by DRS. J. J. PUTNAM and J. COLLINS WARREN, of Boston. This subject had been gone over by many investigators, and especially by Schlesinger, of Vienna. The first case described was one of intradural fibroma with pain in the back and legs; later the patient could not use his left leg without great pain. Gas in the bowels caused great distress. The pain occurred usually at night after the last meal. A tumor was diagnosed, but the patient would not consent to an operation. He could not stand alone. Control of the bladder was lost. An operation was performed, and the spines from the four lower lumbar vertebræ and the lamina of the fourth lumbar vertebra were removed. The tumor was reached and removed easily, with but little hemorrhage. The patient was now slowly gaining, had every movement possible, and appeared rather strong. The knee jerk, which was fairly exaggerated, was now normal. Other cases were reported in the papers, and twenty patients, it was stated, had so far been operated on. When to and when not to operate was a question which must be decided by the general symptoms.

Tabes.—This paper was read by DR. M. ALLEN STARR, of New York. He said he had examined about three hundred cases. We must separate the optic type from the spinal type. The spinal type might be acute or chronic. In the optic type blindness was most prominent and the earliest symptom. These different types of tabes must be treated in different ways. The system needed building up, and dieting to the point of starvation should be avoided. Electricity and rubbing should be used. Syphilitic treatment should be put off until later, and large doses of the iodides were of doubtful benefit. Alcohol might help in moderate doses. Exercise was of great benefit, but it should be taken in moderation and should be followed by rest. Good tonics were of more value than other drugs.

DR. WHARTON SINKLER, of Philadelphia, said that he did not believe in large doses of the iodides in these troubles.

DR. THOMSON said that he used the actual cautery and red-pepper packs.

DR. FOLSOM said that he gave the iodides, but he did not mean to say that tabes was a syphilitic disease. Some patients could not take these salts, as they had iodism early, such as œdema of the retina. In giving these drugs it was important to get the patient under its full effect as soon as possible.

DR. BOND believed it was well to give the iodides for a week and then to stop them for a while.

DR. SACHS spoke of the similarity of the types. He thought that there were some cases of acute spinal lues simulating tabes, and that was why the iodides gave such good results.

DR. CAREY spoke of the time when the iodides should be given. They should be taken on a full stomach, from one-half an hour to two hours after eating.

DR. JANEWAY said that he adhered to the old-fashioned way of giving the iodide with mercury and the compound tincture of cardamom. Under this treatment patients gained weight and improved. He thought too large doses were often given.

Dr. Folsom said he gave as much iodide of potassium as the patient could bear, and then he gave the bichloride of mercury to the point of salivation.

Dr. Starr said in closing that it was important to be precise. Some of the best results came from the use of the water treatment and the alternation of heat and cold water. This was a disease of the neuron, but there might be no lesion of the spinal ganglion itself, while the peripheral endings in the skin and in the spinal cord were affected; therefore we should help the skin. The feeling that all cases were syphilitic was wrong. This treatment should be postponed until the system was toned up.

Kernig's Sign in Meningitis.—This was the subject of a paper by Dr. J. B. Herrick, of Chicago. This sign was an inability to extend the leg when the thigh was flexed at right angles to the body. He noted nineteen cases with six autopsies, and said that this sign was present in eighty to ninety per cent. of the cases seen, and was only exceptionally present in other affections. It did not result from intracranial pressure. The technique was simple.

Dr. Osler did not think that the sign had been of great help in diagnosis, but in certain cases it might prove to be of much value. It was an interesting sign, and the experience of Dr. Herrick and others showed that it was present in a large number of cases.

Dr. Griffith said that he had found the sign in two cases which he saw just before he left home, and its presence was of great help to him.

Astasia-Abasia.—Dr. J. C. Wilson, of Philadelphia, related a case of this disease. This trouble, he said, had attracted very little attention in America. In looking up the literature he found, out of forty-three titles, twenty-two French and five American cases. His case was that of a man twenty-four years old, of good family. His mother was epileptic, and he had some ancestral histories of morphinism and dipsomania. He was shocked by the receipt of a telegram, and was not able to walk. He said that his leg felt as if it was made of copper, which was a very characteristic description. He had very irregular muscular movements. He was given the valerianate of zinc, gr. i. three times a day, with massage and faradization, and in two weeks he could walk better. This condition was a symptom of hysteria.

The case was discussed by Drs. Jacobi and Thomson. Dr. Henry said that he had seen a similar case. Dr. Wilson said in conclusion that most of such cases occurred in winter.

Periodic Family Paralysis.—A case of this affection was reported by Dr. John K. Mitchell, of Philadelphia, who stated that this was a rare disease in this country, and was evidently due to some poison within the body which caused a morning paralysis. The case described was hereditary.

Dr. Putnam said that he had seen an analogous case.

Second Day—Wednesday, May 3d.

The Continued Fever of Epidemic Influenza.—This paper was read by Dr. W. W. Johnston, of Washington. The onset of fever was sudden in all cases of influenza. Sometimes a short, acute, catarrhal stage was followed by prolonged fever, but more frequently the attack was very mild in the beginning, but progressive weakness and increasing fever finally forced the patient to seek medical aid. As a rule the evening temperatures were ascending for from two to five days. Defervescence was gradual, resembling typhoid fever, and the normal point was reached at different dates. The common characteristics of the later stages of influenza fever were the long-continued minor oscillations and the very delayed disappearance of the evening rise, long after patients have resumed a more active life. The recognition of the nature of this fever was sometimes difficult, and it might be taken for enteric fever or even for acute tuberculosis.

Typhoid Fever among the American Soldiers in the Recent War with Spain.—This was the subject of a very exhaustive paper by Dr. Victor C. Vaughan, of Ann Arbor. He said: "In August, 1898, Dr. Sternberg appointed a board consisting of Major Walter Reed, U. S. A., Major E. O. Shakespeare, U. S. V., and myself, to study the causes and the spread of typhoid fever among the troops in the various corps within the United States. The members of this board have been and still are engaged in this investigation. The work is not completed, but the board feel justified in formulating certain conclusions. We have visited all the large camps in the United States, making direct personal inspections, studying the water supply, the quality and quantity of the food, and its method of preparation; the nature of the soil of the camp, the space allowed regiments, the arrangement and size of the tents and number occupying each one; the location of sinks with reference to the mess tent, the disposition of fecal matter, etc. Medical and other officers were called upon for testimony, and then followed a study of the records of the surgeon-general's office. Before we had concluded our first day's inspection at Camp Alger we discovered that there was one factor which must be dealt with, and that was the incorrect diagnosis of disease. Most of the typhoid fever was called malarial fever of a protracted variety. At once competent men were asked for and obtained promptly by Dr. Sternberg, to go to the various camps and make scientific examinations of the blood and apply the Widal test in febrile cases. As a result of these careful examinations it can be stated that malaria was a very rare disease among the troops that remained in the United States, not one case being found at Camp Alger and one at Chickamauga. There can be no doubt that reported cases of malaria were typhoid fever in almost every instance. This latter disease was covered up with other names; for in one command the death-rate from indigestion was put down as fifteen per cent., and other diseases were called dengue, gastric fever which is the German for typhoid, also typho-malaria, etc. The infection was very general. Many of the volunteer regiments were infected with typhoid before they went to the government encampments. More than ninety per cent. of the volunteer regiments were infected before being ordered there. Some brought the disease from home and some from the State encampments. How did the disease spread? There is no evidence that the water supplied in the larger camps was infected. At many places the soldiers and the citizens had their drinking-water from exactly the same source, and yet there was no typhoid among the citizens. It may be said truthfully that the spread of this disease was caused by the improper disposal of excreta. The epidemic was not due to sending northern men to a southern climate; it was not due to the locality or to the massing of men in one place, but it was brought about by camp pollution. The men's feet carried the excreta, flies carried it to food, and thus it was spread. The only means of preventing a spread of infection is the complete sterilization of fecal matter in camps which are to be occupied for three weeks or longer. An epidemic is demoralizing. The success of a campaign depends on the hygienic methods and precautions used. This could have in part been prevented had the government been more careful in the selection of volunteer surgeons. Seven per cent. mortality in camps which should be hygienic is rather high. Many cases were called diarrhœa, and in about eight per cent. of the

cases the patients had not been reported before that time, and thus the fever was far advanced before it was recognized. It is hard to break up typhoid fever in a camp even if it is moved, and even a sea voyage, as in the case of the rough riders, does not stop it altogether. Many cases were not recognized until they were convalescent at city hospitals."

Dr. Vaughan's paper was listened to with marked attention and received great applause.

SURGEON-GENERAL GEORGE M. STERNBERG said: "It is certainly strange and very discouraging that after the lessons of the civil war we should have a repetition of camp infection from a disease we know so well and recognize to be from filth. I had hoped for better things, that the profession in general would more fully appreciate the dangers. It was on April 25th that I issued a sanitary circular to all medical officers, pointing out the dangers in this regard, and explaining how infection might be avoided. Surgeons should appreciate the importance of camp sanitation, but the line officers were inclined to consider all talk about cleaning the camp, about flies carrying infection, etc., as a fad of the doctors, and did not recognize the danger until the epidemic had occurred. Doctors in civil life do not pay so much attention as they should to the sterilization of the excreta of their typhoid cases, and these were the men who made up our regimental surgeons. They were appointed by the governors of the States and became responsible for the health of the soldiers and our camps. Typhoid invaded all the camps, even in the North where the regiments did not leave home. It does seem inconsistent that we should attempt to show the Spaniards how to eradicate yellow fever from their cities, while our camps are infected with typhoid fever. I can only hope that the results of this war may be impressed upon the profession, and that we may devise some way of avoiding similar disasters in the future."

DR. F. P. KINNICUTT, of New York, said: "It seems to me that Dr. Vaughan has shown in a striking way the probable cause of typhoid in the late war, and unless medical officers have sufficient knowledge and power to enforce proper sanitary precautions in the army, I do not see how we can hope for anything better in the future. I had an invitation to inspect the sanitary conditions at Camp Montauk, and I found that disinfection of the excretions from typhoid cases was exceedingly inefficient. At this camp the natural topography made the condition unfavorable, and I saw the camp cooks washing dishes at some of the numerous stagnant pools that abound in that neighborhood. I confess that camp sanitation is a difficult problem, but I believe that greater knowledge on the part of our medical officers and greater power given them would bring about better results."

DR. GEORGE L. PEABODY, of New York, said: "It seems to me that this paper constitutes the most terrible indictment I have yet heard upon the general efficiency, or rather inefficiency, of the army surgeon, and it would seem quite in line with future progress to use it as a tract for distribution to the profession."

DR. STERNBERG: "In reference to the medical department of the army I should like to say that we had an insufficient number of medical officers even for the small army of peace times, and when the call for such a large number of volunteers came, with the demand that they be put into the field immediately and thoroughly equipped, the medical force could not expand to meet the emergency properly. The adverse conditions at Montauk, for instance, should not be held against the regular army medical officers. Most of the regular medical officers were disabled in the Santiago campaign, and there were but few of them at Camp Montauk. The majority of the physicians there were contract or acting assistant surgeons appointed from civil life and serving with regiments."

DR. JACOBI: "I do not know what the rights and duties of the surgeon-general are, but he should certainly not be compelled to accept all the rubbish that might be sent to him by an ignorant governor. If he is compelled to accept such appointments, it is about time something should be done to abolish such a practice."

DR. STERNBERG: "I do not mean to say that those men who went with the regiments were below the average in the profession; they were no worse than many left at home whose large practices prevented their accepting such positions in the army. Most of the surgeons went home with their regiments in good shape, but their training had been gained at the expense of many soldiers' lives. The trouble was, these surgeons did not know much about sanitation, from their insufficient training in the medical schools, most of which pay no attention to sanitation and hygiene. The line officers were also in many cases to blame, for they ignored the surgeon's recommendations and said they would not pay attention to 'doctors' fads.'"

DR. DOCK said that most of the volunteer surgeons went into camp with the expectation of fighting nothing but malaria, and in one regiment each man was provided with two hundred grains of quinine and a three-ounce bottle of paregoric, with instructions to take some of each at the first signs of illness. Some surgeons gave as much as thirty to forty grains of quinine a day, and did not recognize the typhoid case which was also suffering from an overdose of quinine.

DR. SOLIS-COHEN, of Philadelphia: "I want to say a word for our volunteer regimental surgeon. It is a matter of record that Colonel Porter's regiment from Pennsylvania had almost no fever and but two deaths from any cause. This was due not only to the efficiency of the surgeons, but also to the efficiency of the line officers, who thoroughly carried out the sanitary measures suggested by the surgeons. I do not believe the responsibility for this awful disaster is upon the profession to the extent that the paper would imply, for I think with Dr. Sternberg that many of the line officers are responsible in that they considered all sanitary suggestions as medical fads."

DR. VAUGHAN said in conclusion: "I am afraid there may be some misunderstanding as to what I said about the volunteer surgeons. I meant that the average volunteer surgeon was better than the average doctor in civil life. The point of the whole matter is that the medical officer is powerless unless the line officer will uphold him and follow his directions. I honor the graduate of West Point and Leavenworth, but I think it is a shame and a crime that the line officers of our regular army have no education as to sanitary knowledge. The medical officers had hard work thrown on them, and they did it well, considering the difficulties."

A Case of Hæmochromatosis, with Exhibition of the Patient.—This was shown by DR. WILLIAM OSLER, of Baltimore. The patient was a man of good family history, who noticed about four years ago that he had begun to change in color. He was a vigorous, healthy man, but on examination a well-marked hypertrophic cirrhosis of the liver was found with enlargement of the spleen. He had the long duration of the disease, the increasing bronzing of the skin, enlarged liver, and had had recurrent attacks of purpura. Examination of the urine showed the presence of iron.

A Case of Hæmochromatosis, with Exhibition of the Specimen.—This was shown by DR. WILLIAM H. WELCH, of Baltimore. He presented the specimens from a case of this disease, which had been thoroughly studied by Dr. Opie. The patient presented extreme pigmentation of the skin, and an examination of the

various organs of the body showed that they were all more or less pigmented, and had undergone hypertrophic changes. Two kinds of pigment were present, the one containing iron, and the other free from it; the latter being found principally in the heart muscle and in the walls of the small intestine.

Dr. J. G. Adami, of Montreal, said he had seen a case of this disease, almost identical with the one referred to by Dr. Welch. The woman had such an extreme pigmentation of the skin that she was known in the wards as "Blue Mary."

Dr. Welch thought Dr. Adami's case was the only one recorded as having occurred in a woman.

Otitis Media in Lobar Pneumonia of Children.—Dr. S. J. Meltzer, of New York, related a case in point, and said that at the onset of pneumonia there was usually an earache, which lasted for one day and then either lessened or disappeared. In none of the cases did the pain outlast the pneumonia. There was no discharge from the ear.

Dr. Jacobi said that he did not think there was an otitis media when there was no pus. Possibly the earache was simply an angina, and that might be the connection between the two symptoms. He stated this simply as a suggestion.

Dr. Kinnicutt said that if so many children died from various causes with an otitis media, that must militate against his reasoning.

Dr. Jacobi said that the presence of bacteria in the ear should not be considered as a proof of this trouble. We did not diagnose diphtheria if we found the organism in the throat, and we could also find the tubercle bacillus without the existence of tuberculosis. The finding of bacteria did not prove that they constituted a part of the morbid process. The presence of mucus and muco-pus did not prove it either. He believed that while those who held that the muco-pus in the middle ear was normal might not be right, the others who said the condition was an otitis media were not right either.

Dr. T. M. Rotch, of Boston, said that it was important to recognize the frequency of affections of the middle ear in young infants, but such young children usually did not have any pain at all. He had found it necessary to have the ears examined once a week as a routine procedure.

Dr. Meltzer said in conclusion that he had not seen cases with pus in lobar pneumonia. Others also held that the condition was not otitis media.

Endocarditis of Tonsillar Origin, with a Report of Five Cases.—This paper was read by Dr. F. A. Packard, of Philadelphia. He had found endocarditis and tonsillitis quite frequently connected, and he related five cases of the kind. He said the connection between the two diseases was an interesting question. In his cases there had been no previous history of articular pain or joint trouble, and he thought they were simply tonsillitis causing endocarditis secondarily. The staphylococcus had been found at the autopsy in the tonsils and in the pulmonary vessels. It was well to keep a lookout for endocarditis in tonsillitis.

Dr. James Tyson, of Philadelphia, said that endocarditis was not the only disease from this cause. He thought that nephritis also came from this, and the two conditions were quite analogous.

Dr. William S. Thayer related a case of a child, four years old, that had a slight sore throat, and then a convulsion and high fever with some slight stiffening of the neck, and it died within thirty-six hours. He thought that it had cerebro-spinal meningitis. The autopsy developed nothing abnormal, but cultures showed a general streptococcus infection. He agreed with what Dr. Packard had said.

Dr. Thomson spoke of a case of quinsy which was followed by rheumatism. The next day the patient had pleurisy, followed by a heart murmur with signs of parotiditis, and then ecchymotic spots on the body appeared.

Dr. Dock thought that rheumatism was the manifestation of various kinds of affections. He mentioned a woman who had rheumatic iritis of an acute type, with subacute joint swelling. Her pain was relieved in the usual way. The only prodrome was a sore throat two weeks before.

Dr. Rotch said that Dr. Thayer's case was like the angina described by Senator ten years ago. He thought that Dr. Packard did not know how normal the heart valves were before the attacks of tonsillitis.

Dr. Packard said in conclusion that in three cases he did not know anything about the heart, but he did in the other two. The point he wished to make was, that we ought to stop talking about tonsillitis and endocarditis as members of the rheumatic family. They were evidences of an infection extending from the tonsil to the endocardium.

A Case of Fatal Epistaxis, with a Study of the Blood.—This was a paper by Dr. George Dock, of Ann Arbor. The patient was admitted for epistaxis which had existed for six weeks. He had had fever, followed by catarrh. When admitted, he had been bleeding. His pulse was 120 and dicrotic. His blood was thin; urine negative. There were hemorrhages into the retina. He went to the throat clinic first for the bleeding, and then came into the ward. Plugging was tried and then transfusions of gelatin. He died of acute œdema of the lungs. The autopsy showed a variety of affections. The examination of the blood was most complete. There was a great diminution in the number of red blood corpuscles, there being at one time 360,000 in a cubic millimetre of blood. There were many nucleated red corpuscles in the field, and a moderate leucocytosis existed. A small endothelioma of the nasal septum was found.

Dr. Thayer had seen several years ago a condition like this in a case of pernicious anæmia in a man sixty years of age. All the corpuscles were of the smaller variety with small nuclei, and in the field there were often as many as fifteen nucleated red blood corpuscles at the same time.

Dr. Stengel said that in the examination of the blood he had never found as many nucleated red blood corpuscles as had Dr. Dock or Dr. Thayer. There was no sharp line of distinction between the different forms of nucleated red corpuscles. Some held that with these kinds of blood corpuscles the diagnosis of pernicious anæmia was not to be thought of, but that was not true.

Dr. Osler mentioned a form of epistaxis of which he had seen three instances in early childhood; the bleeding recurring and sometimes proving almost fatal, as did superficial varicose angiomata on the surface of the skin. Two cases were in brothers, and one had recently died of cancer of the stomach. One looked like a case of acne. There was nothing like it in the literature.

The Diplococcus Form of the Colon Bacillus.—This was a paper by Drs. J. G. Adami, Maud E. Abbott, and F. J. Nicholson, of Montreal. It treated of small bodies in the liver cells which were thought to be bacterial. Their bipolar form of staining, their bacteriology, morphology, and the results of inoculation were described.

Dr. Welch said that Dr. Adami's investigations were interesting, and they were of value in suggesting the interpretation of these little intracellular bodies that he had been able to demonstrate. He said Dr. Adami apparently described two distinct diplococcus forms of the colon bacillus, and the speaker thought that these should be separated from each other. At

the Johns Hopkins Hospital he had for years been making systematic observations in the autopsies, and had found the colon bacillus so very frequently, more particularly in the lungs and liver, but not so often in the spleen, kidneys, and bile, that unless there was some evidence of a definite lesion no importance was attached to its presence. Of course this idea that certain organisms and certain cells of the body were by process of digestion disposing of bacteria was an important suggestion, but the evidence, while accumulating, seemed to him to be as yet scarcely conclusive. Perhaps the most plausible view was that taken by Dr. Adami, and the demonstration of bodies having the morphology of diplococci in the cells was a justification of this view that it was extremely difficult to explain away. Notwithstanding this, it seemed that there was still room for a reasonable scepticism as to that interpretation. He thought this work was important and showed the power of the cells to protect the body.

DR. ADAMI agreed with Dr. Welch in his position of scepticism, as this subject required such careful study that he was perfectly willing to spend some years yet before hoping to convince any one that this was the proper conclusion.

Demonstration of an Acromegalic Skeleton.—This was done by DR. WILLIAM S. THAYER, of Baltimore, in which he described the symptoms of the case during life and the anatomical findings at the autopsy.

DR. OSLER said that one of the most remarkable features of this case was the persistent character of the headache, and yet here a very small pituitary enlargement was shown, and there never had been any disturbances of the visual field.

Tumors Involving the Hypophysis.—This was a paper by DR. JAMES STEWART, of Montreal. It was discussed by Dr. Starr.

Third Day—Thursday, May 4th.

Experimental Research Disproving the Theory that Paraxanthin Poisoning was a Cause of Migraine.—This was a very elaborate paper by DRS. F. PFAFF and J. J. PUTNAM, of Boston. As a preliminary explanation Dr. Putnam referred to his work done several years ago on this subject, and said that five cases of typical migraine and seven cases of epilepsy had been collected. The results were uniform and agreed with former results. The analyses were tedious, and took several months. The necessity for procuring four litres of urine from each patient might explain the small number of cases.

DR. PFAFF then described the chemical examination of the urine, and showed how the xanthin was to be separated from the paraxanthin. The urine should be that passed during and after an attack of migraine. He did not think that migraine was caused by paraxanthin.

DR. RACHFORD said that he depended on the physiological as well as chemical tests for the results. He explained his method, and said he believed in the physiological test. The condition was one of leucomain poisoning. The speaker described the poisonous fluids from a migrainous case, and mentioned the ammonia compound of the xanthin group and the instability of the liver as affecting these poisonous fluids. Remedies were suggested to affect the liver and intestinal canal.

DR. C. A. HERTER said that it was clear that many opposing opinions were held on this point. Persons should have great experience in order to draw conclusions in this matter. Those who contended that migraine depended on the presence of paraxanthin must prove this.

DR. PFAFF, in reply to Dr. Rachford, said that if the toxicity of the final fluids depended on the ammonia product of paraxanthin one could prove this by experiments on animals, using fixed quantities. He had injected 70 c.c. into a rabbit and it did not show the least discomfort.

The Action of Hepatic, Renal, and Other Cells upon Phenol and Indol under Normal and Pathological Conditions.—This paper was read by DR. C. A. HERTER, of New York.

The Toxicity of the Urine.—This was a paper by DRS. F. FORCHHEIMER and R. W. STEWART, of Cincinnati. Fresh urine was injected into a mouse and it died. The shock may have killed it. The same urine boiled did not cause death. When filtered it did not kill, and when boiled and injected the results were not uniform. When boiled and kept it became more toxic the longer it was kept. The addition of boric acid had no effect. Urine kept a long time would always kill mice. There were many sources of error, but the methods which excluded bacteria rendered the urine almost harmless. We were justified in saying that the bacteria were not the only poisonous element in the urine. A former paper was referred to, in which a faulty method was described. Recent experiments seemed to show that the views heretofore held in regard to the toxicity of the urine were erroneous.

Perforation of the Stomach by a Foreign Body in an Infant Seven Weeks Old.—This was a report of a case by DR. T. M. ROTCH, of Boston. An infant was attacked suddenly with abdominal pain and vomiting. Symptoms of peritonitis developed. Laparotomy was done. The infant died, and in the stomach wall was a small perforation in which there was a thread.

An Aneurism and the X-Ray.—This paper was presented by DR. F. H. WILLIAMS, of Boston. A small aneurism was not made out by auscultation or percussion, but the *x*-ray showed it. The autopsy demonstrated the value of the *x*-ray.

The other papers were read by title.

The following officers were elected: *President*, Dr. E. G. Janeway; *Vice-President*, Dr. William H. Welch; *Recorder*, Dr. I. Minis Hays; *Secretary*, Dr. Henry Hun; *Treasurer*, Dr. J. P. Crozer Griffith; *Councillor*, Dr. William T. Councilman.

The following new members were elected: *Honorary Membership*, Dr. Israel T. Dana, of Portland. *Active Membership*, Drs. J. B. Thacher, William B. James, and William H. Park, of New York; Drs. R. C. Cabot, Morton Prince, and J. H. Wright, of Boston; Dr. John S. Ely, of New Haven; Dr. L. F. Barker, of Baltimore; Dr. W. G. Johnston, of Montreal.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Sixteenth Annual Meeting, Held in New York City, May 9, 10, and 11, 1899.

BEVERLEY ROBINSON, M.D., OF NEW YORK, PRESIDENT.

First Day—Tuesday, May 9th.

THE meeting was called to order at 10:30 A.M. by the president, DR. BEVERLEY ROBINSON, of New York, in the hall of the Academy of Medicine.

Opening Address.—The president, in his opening address, declared his belief that, in the near future, the physician would become more than ever before the counsel and guide in all mattters affecting the public health. He dwelt long and earnestly upon the ideal character of the physician, and exhorted his hearers to uphold steadfastly this ideal, and do their utmost, both individually and collectively, to elevate the social and

scientific plane of their chosen and honored profession. The speaker asserted that, without intruding at all upon the domain of theology, the physician could and should administer to the soul as well as the body, and should ever strive to keep himself in close touch and sympathy with his patients. Regarding modern medical science, he thought that the rôle played by microbes in disease had often been misinterpreted. In many instances it was probable that even the destruction of the microbes found to be present would not stamp out the disease itself. Laboratory research should be fostered, but the most important work of the clinician should not be ignored.

Treatment of Consumption by Air and Light in Colorado.—Dr. Charles Fox Gardiner, of Colorado Springs, read a paper with this title.

Air as a Cure.—He said that air was the first requisite in the cure. Air and light differed widely in their character and purity in various localities. The air should be pure; it should be dry and thin in order to increase chest expansion; it should be cool in order to act as a stimulant, and it should contain a considerable proportion of ozone. These properties were to be found in the air of Colorado. The chemical intensity of the light in that State, as compared with that in the East, could be strikingly demonstrated by exposing a photographic plate, under as nearly as possible identical conditions, in the two localities. He had made a severe test of the climate of Colorado on several patients, during that part of the year when the weather was most inclement, *i.e.*, from September to April. The result was presented on a colored chart, thus indicating at a glance the character of the weather and the number of days suitable for out-door life.

Ranching.—He had practised medicine for several years on a ranch, and knew something of such life. He had become convinced that it was all that a well man could do to eat and digest the food furnished in such places; moreover, the life was too rough, and there was too much exertion for the average pulmonary invalid.

Tent Life.—He favored life in a tent, the latter to be eighteen feet high, sixteen feet in diameter at the base, and having a five-foot wall. The average tent became very foul when closed up, and hence special precautions should be taken so to construct the tent as to secure proper ventilation. As far as possible, persons suffering from consumption should live out-doors all of the twenty-four hours.

Dr. W. L. R. Phillips, of the weather bureau, Washington, D. C., said that he thought the value of light in the treatment of consumption had not received its share of attention. While it was true that pulmonary patients had recovered in high altitudes, he felt that they had done so under great disadvantages, and that the cure was to be largely attributed to the light in such localities. In his opinion, there had been experiments made showing that light increased the hæmoglobin in the blood and very materially improved the general health of consumptives.

Dr. E. O. Otis, of Boston, asked what was the average number of hours that Dr. Gardiner had been able to keep his patients in the light and out on the piazza.

Dr. Gardiner replied that the average case in Colorado could be kept out five and a half hours a day all through the winter, and this length of time could be materially extended if the patient could be properly controlled.

Dr. N. S. Davis, Jr., of Chicago, said that he was convinced that climate had much to do with the promptness and efficacy of the out-door treatment of tuberculous cases. During the last few years the pendulum of opinion had been swinging toward the view that tuberculous patients could be treated in all sorts of climates, provided they could be kept out-doors continuously. It was true that certain patients suffering from tuberculous disease had been cured in widely differing climates, but it was equally true that in certain climates the chances of effecting a cure were much greater than in others. He believed personally that a climate like that of Colorado was especially suitable for the treatment of these cases.

Dr. Samuel A. Fisk, of Denver, expressed his firm belief in the value of climatic treatment, but warned against underestimating the rôle played by nutrition.

Suggestions concerning Early Diagnosis in Pulmonary Tuberculosis.—Dr. Sherman G. Bonney, of Denver, read this paper. He said that he had not infrequently failed, for a considerable time, to find the tubercle bacilli in the sputum, although the symptoms and physical signs pointed clearly to the existence of pulmonary tuberculosis. Of 546 cases seen in his private practice, 388 had arrived in Colorado with distinct evidence of tuberculosis in both lungs. In 36 cases an interval of less than three months had elapsed from the making of the diagnosis to their arrival in Colorado; in 20 cases the interval had been between nine and twelve months; in 83 cases it had been between twelve and eighteen months; in 225 cases the interval had been over eighteen months. Thus, the average delay in the 546 cases had been a little over eighteen months. Since compiling these statistics he had learned of a paper, written some years ago by Dr. S. E. Solly, in which the average period of delay in one hundred cases had been two years. Dr. Bonney said that in 105 of his own cases there had been well-defined cavities present. Nearly fifty per cent. had given a family history of strong susceptibility to tuberculosis. In 129 cases there had been a distinct onset of a definite bronchitic character; in 159 cases there had been a gradual anæmic onset; in 114 there had been a sudden hemorrhage as the first symptom, and the average period elapsing before their arrival in Colorado had been two years and three months. In 61 cases there had been a distinct idiopathic pleurisy preceding the pulmonary process, occurring as an initial manifestation or subsequently. The average interval between the attack of pleurisy and the arrival in Colorado had been three years. There had been a much shorter average period in cases beginning with a distinct bronchitis, or with influenza, than in the others, particularly those beginning with hemorrhage, and this fact should teach an important lesson to the general practitioner. A pulmonary hemorrhage, of undetermined nature, should be looked upon as fair evidence of the existence of a localized tuberculous process, and this evidence assumed still greater importance when occurring suddenly in the course of other diseases. By the systematic use of the clinical thermometer, at intervals of several hours, one might often clear up a doubtful case. It was a fact that thorough physical exploration of the chest was rarely made until, from the rational symptoms, a provisional diagnosis of pulmonary tuberculosis had been made. If the examination was not made on the bare skin, the conclusions would be untrustworthy. A common error was to neglect to explore the whole chest. The patient should be made to cough just before inspiration, as this was an exceedingly valuable means of eliciting moist crepitation in the bronchial tubes.

Dr. Fred. I. Knight, of Boston, said, with regard to the presence of bacilli in the earlier stages, that he had very rarely failed to find the bacilli in the sputum of his patients. It was true that these patients had usually had cough, whereas those developing pulmonary tuberculosis without cough usually came first into the hands of the general practitioner. The delay observed in hemorrhagic cases in seeking climatic change was interesting as apparently confirming the view that these cases ran a slower course than the others.

Early Diagnosis by the Laryngoscopic Picture.—Dr. John O. Roe, of Rochester, said that he regarded the laryngoscopic examination as exceedingly important in making the early diagnosis of pulmonary tuberculosis. In this way the diagnosis could be made not infrequently before the bacilli could be demonstrated in the sputum, or physical changes could be detected in the lungs. The peculiar anæmic condition of the larynx and the general appearance of the mucous membrane gave a very early hint as to the probable existence of tuberculosis of the lungs.

Dr. R. H. Babcock, of Chicago, said that he had been impressed with the very large percentage (seventy-one per cent.) of Dr. Bonney's cases that had been kept at home for treatment until the later stages. It was probably true that in many of them the delay had been caused, as the reader of the paper had said, by the neglect to make an early diagnosis; but he could not help believing that not uncommonly this delay was really due to the reluctance of the physician to lose sight of his patient. It seemed to him impossible for any physician, no matter how ignorant of physical diagnosis, to retain such patients for eighteen months or more without recognizing the true condition. It was his custom invariably to recommend these persons to seek a favorable climate as a first step, and to insist upon the advantages of doing so. If due attention were given to even slight changes of temperature for a period of a week or more, he felt sure that the study of the rational symptoms would lead to a correct and early diagnosis. He was skeptical about a laryngological examination detecting tuberculosis before it could be recognized in the chest, for he had frequently called upon medical friends, who were expert laryngologists, and had not derived from them such assistance.

Dr. R. G. Curtin, of Philadelphia, said that the delay in sending many patients away was often due to a lack of money or to reluctance to leave home.

Dr. Richard C. Newton, of Montclair, said that, in his experience, tuberculosis of the larynx was comparatively infrequent, and hence he, too, was skeptical as to making an early diagnosis from the appearance of the larynx.

Dr. E. Fletcher Ingals, of Chicago, said that there was something peculiar in the almost atrophied condition of the larynx which would lead the laryngologist to suspect pulmonary tuberculosis. If he saw this condition of the larynx, he would not feel justified in reporting such a case as one of tuberculosis, yet it would afford good grounds for suspecting the existence of consumption. This probably explained why Dr. Babcock's laryngological friends had not helped him in the diagnosis.

Dr. Roe remarked that the laryngologist must distinguish sharply between tuberculous laryngitis and the peculiar state of the larynx very commonly observed in phthisical patients.

Dr. C. F. McGahan, of Aiken, S. C., confirmed this statement.

Dr. Otis said that the importance of susceptibility to tuberculosis had been emphasized, but he would like to call attention to the question of exposure to tuberculosis, and also to two factors brought forward by the French school—viz., (1) the vital capacity and (2) lowered arterial tension.

Dr. Phillips said that he had observed very commonly a subnormal temperature in tuberculous patients; it seemed to him almost as common as elevation of temperature.

Dr. Knight said that all laryngologists agreed that there was a certain appearance of the larynx which led to the suspicion of tuberculosis of the lungs, but it had been described too vaguely.

Dr. Roe, in reply, said that the larynx in these cases would be so atrophied as to make the muscles and vessels stand out with unusual prominence. In addition, there was a striking pallor of the larynx, notably about the epiglottis.

Dr. S. W. Langmaid, of Boston, said that this appearance of the larynx was a sign of anæmia rather than of tuberculosis, but there were a paresis and a changed condition of the glottis which showed that the nerve force had been greatly diminished, and that seemed to him much more indicative of tuberculosis.

Notes on the Tuberculin Test.—Dr. E. O. Otis, of Boston, read a paper with this title. He said that he had injected some cases of undoubted tuberculosis which had not exhibited the characteristic reaction, and, on the other hand, had obtained a distinct reaction in cases in which there had been nothing else to indicate tuberculosis. His experience with this test comprised one hundred and eleven cases, which had been tested originally with the idea of determining how many cases of cervical adenitis were tuberculous. Out of fifty-six cases of this kind, thirty-three had given a distinct reaction, six a slight one, and two a doubtful reaction. It was true that a certain proportion of cases of syphilis would react to the tuberculin test, but this, in practice, did not seriously impair the diagnostic value of the test in tuberculosis. In none of his cases had there been any serious result from the application of this test, although in a number of instances the reaction had been quite severe.

The Reaction.—If a patient experienced sensations of weakness, of heat and cold, and with these there were anorexia, pain in the limbs, severe headache, sweating, and a rapid and feeble pulse, it was considered that a reaction had occurred, irrespective of the range of temperature.

Dosage.—He had injected the tuberculin in the arm and preferred Koch's preparation because of its concentration. The injection should be made deep into the muscles. The majority of observers favored the use of doses of from ½ to 10 mgm. He had never used over 12 mgm. of Koch's tuberculin, and usually from 5 to 10 mgm. for an adult, and ½ to 3 mgm. for children. In non-tuberculous patients the reaction would sometimes be obtained if the maximum dose, just given, was exceeded.

Dr. Langmaid said that in the early days of the tuberculin test, a number of his patients at the Massachusetts General Hospital had, without his knowledge, been subjected to the test. He had been astounded at the remarkable appearance presented by the larynx, and this had led him to ask for an explanation. He had then learned that one of the internes had been induced to abstract a few of the speaker's patients for the purposes of this test. He mentioned this fact because of the impartial and spontaneous testimony regarding the action of the tuberculin on the larynx. He would like to know what Dr. Otis thought would be the outcome of his cases of cervical adenitis in which the tuberculin reaction had been obtained.

Dr. Otis replied that he had made these observations because it seemed to be an unexplored field. He thought it had been proved that a fair proportion of cases of adenitis subsequently developed tuberculosis.

Dr. Otis, in closing, said that in the few cases in which he had used this test in private practice the patients had made no objection to it.

Subsequent Histories of "Arrested Cures" of Phthisis Treated at the Sharon Sanatorium.—Dr. Vincent Y. Bowditch, of Boston, read a paper with this title, based on his experience at this sanatorium, which is situated not far from the sea and without special reference to altitude. The statistics since the opening of the sanatorium in 1891 were reviewed. Excluding two recent cases, there remained thirty-four cases, of which six had died, twenty-four were now

alive and well, and four had had a slight return of symptoms, but were outwardly well. One patient had been away for seven years, and had had no recurrence. An effort was always made to secure for the discharged patients conditions of life entirely different from those under which the disease had been originally contracted. The chief features in the treatment at the sanatarium were the insistence upon fresh air, judicious exercise, and wholesome food, medicine being used quite sparingly as adjuvants.

DR. J. E. STUBBERT thought too much stress should not be placed upon the presence of tubercle bacilli as positive proof of the existence of pulmonary tuberculosis; he had very often been unable to find them in incipient cases, and had known the bacilli to be absent for five weeks at a time in cases presenting unequivocal signs of consumption. In a case of this kind, three different observers had failed to find the bacilli during this rather long period.

DR. EDWARD R. BALDWIN, of Saranac Lake, said that at the Adirondack Sanatorium they were in constant correspondence with one hundred and fifteen patients who had been discharged in the last ten or twelve years; and while a few had relapsed slightly, the majority of them were well and at their homes.

Roentgen-Ray Examinations in Incipient Pulmonary Tuberculosis.—DR. FRANCIS H. WILLIAMS, of Boston, read this paper. He said that in forty-five adults examined with the *x*-rays, he had ascertained that the average excursion of the diaphragm on the left side was two and one-half inches, and on the right side about one and one-half inches more. He had been impressed with the association of rheumatism and tuberculosis. In five cases the *x*-ray examination had given notice of changes in the lungs before the physical signs. If the area of increased density was much below the surface of the lung, as, for instance, in a central pneumonia, its presence would not be recognized by auscultation and percussion, but its shadow would be seen on the *x*-ray screen as surely as though this area were more superficial. By careful experimentation he had demonstrated that a lung the seat of pneumonia or tuberculosis offered ten times more resistance to the *x*-rays than did a healthy lung. The diagnosis of tuberculosis was not made by the *x*-rays alone, but, in some instances, it had certainly given early notice of a departure of the lung from the normal, and this information, taken in connection with the history and rational symptoms, afforded a valuable basis for an early diagnosis. In cases of pulmonary tuberculosis the *x*-rays showed the apex of the lung darkened and the excursion of the diaphragm shortened. He had made more than two thousand examinations of the thorax with the *x*-rays, and had never seen any injury result therefrom.

DR. FREDERICK I. KNIGHT, of Boston, said that, in his experience, many months often elapsed after evidence of the initial catarrh of a tuberculosis before it was possible distinctly to recognize pathological changes in the lungs by the alteration of the percussion note.

DR. J. E. STUBBERT said that the fluoroscopic screen was far more accurate and convenient than the fluoroscope. He had yet to see an incipient case of tuberculosis that could not be accurately diagnosticated by the *x*-rays. Examination with the *x*-rays was especially useful in cases in which tuberculous foci were scattered throughout the lungs—a class of cases in which the physical signs were apt to be equivocal.

DR. WILLIAMS, in closing, said that the illustrative cases that he had reported had been, for the most part, those in which consolidation had been demonstrated by the *x*-rays, although not even moist râles could be heard on auscultation. Emphysema could be recognized easily and certainly with the aid of the *x*-rays.

Intermediate Altitude for the Consumptive.—DR. B. P. ANDERSON, of Colorado Springs, read a paper on this subject, in which he gave his experience with patients whom he had sent from his locality to spend the winter months in a lower altitude—three thousand to thirty-eight hundred feet. These cases, which numbered about two hundred, had all improved immediately with this change, and the majority of them had returned to Colorado for the summer, these months being too hot in the intermediate altitudes.

DR. LEONARD WEBER, of New York, indorsed this plan of sending patients to an intermediate altitude, but remarked that the profession did not now lay so much stress as formerly on a high altitude.

DR. S. E. SOLLY, of Colorado Springs, said that this practice of sending patients to the lower altitudes of Arizona and New Mexico was very beneficial, particularly in advanced cases of patients having a rapid pulse, very susceptible to catching cold, and unable to take much exercise. The trouble with the lower altitudes was that there were not proper accommodations and food for such invalids.

Why Fumigation of Apartments Occupied by Tuberculous Patients at Health Resorts should be Under Municipal Control.—DR. CHARLES F. MCGAHAN, of Aiken, S. C., in this paper cited cases illustrative of the carelessness, ignorance, and cupidity of proprietors of these resorts as proof of the need for municipal supervision.

DR. CHARLES FOX GARDINER said that after having made a series of negative inoculations of animals with dust from hotel rooms that had been inhabited by consumptives for many years, he had come to the conclusion that the danger from this source, though real, had been greatly exaggerated, and that it was better to feed these people well and teach them to open their windows.

DR. GUY HINSDALE, of Philadelphia, said that probably the best way of disinfecting apartments was by exposing them to the sun, but where this was impracticable formaldehyde-gas disinfection, or some similar method, must be used.

Some Remarks on Climate in Relation to Renal Disease.—DR. J. B. WALKER, of Philadelphia, in this paper, spoke of the influence of variability of temperature and dampness, particularly of the soil, on persons affected with renal diseases. Cases of a certain class, he said, did well in the summer, but not so in the winter, unless sent to some place like Atlantic City or Lakewood.

DR. R. C. NEWTON remarked that he could not recall having seen a single case of Bright's disease during a four years' residence at Fort Elliot, Texas. Here, although the people were very careless about eating and drinking, the soil and air were very dry.

DR. PHILLIPS averred that Atlantic City was, both absolutely and relatively, more moist than Philadelphia, but the temperature in the former was much more equable.

DR. S. A. FISK, of Denver, quoted a saying about the stock yards that the men could tell Western steers by their healthy kidneys. He had rarely met with renal disease in the West.

DR. HENRY SEWELL said that in his part of the West local radiation and evaporation were very rapid, and the usual vasomotor disturbances did not seem to be so common as in the East.

DR. L. DUNCAN BULKLEY spoke of his personal experience during the past thirty years as a sufferer from renal insufficiency, and expressed the belief that his continued good health was largely attributable to keeping his skin protected, night and day, with pure woollen garments, and the habit of taking a quart of milk daily on an empty stomach.

DR. N. S. DAVIS, JR., quoted some interesting insur-

ance statistics of deaths from renal disease in five thousand cases. They showed that the highest mortality had been in the far West—California, Utah, etc.; the next highest in New Jersey and Pennsylvania; then in the Southern States, and then in New England and New York.

Climate as it Affects the Skin and Its Diseases.—Dr. L. Duncan Bulkley, of New York, contributed a unique paper on this subject. He stated that certain cutaneous diseases which were common in one country would be almost never seen in another country. Thus, lupus and true prurigo were especially prevalent in Austria. Syphilis spread very easily in warm climates, but did not gain much of a foothold in cold countries such as Iceland and Greenland. The air along the great lakes seemed to predispose to eczema. Psoriasis would often disappear on removal to a warmer climate, and it was comparatively infrequent in the tropics. Acne was aggravated by residence on the seashore. He had come to the conclusion that the value of mineral springs had been greatly overestimated.

Hygienics of the Skin.—Dr. L. D. Judd, of Philadelphia, read a communication having this title. He advocated rubbing the skin in the morning with warm water, following this by cold water until the skin was all aglow. Soft linen or a soft crash towel should be used to dry the surface. It was well known, he said, that those who wore woollen clothing next the skin were very prone to catch cold; he therefore preferred porous linen. Wool was the proper material for outside garments, but it should be entirely discarded for underwear.

Underwear and Bathing.—Dr. Bulkley said that these views regarding woollen underwear were entirely at variance with his own belief and experience. It was exceedingly important to use woollen garments having no cotton. He did not favor frequent bathing so much as in the earlier days of his practice.

Mesh Linen Underwear.—Dr. Babcock said that he had tried the mesh linen underclothing, but had found that he could not keep warm without putting on another suit over it. With the linen he had not appreciated sudden changes of temperature so keenly, but had been unable to keep so warm as with woollen underclothing.

Dr. C. C. Ransom, of New York, said that an extensive experience with people working in Turkish baths had led him to believe that there was no real connection between much bathing and disease of the skin. He looked upon the cold morning plunge as pernicious for most people, and instructed his patients to take a bath at the temperature which was agreeable for them at that particular time, barring, of course, a decidedly warm bath.

Dr. Walker said that he was very fond of woollen clothing, both day and night, but as an undergarment there was nothing so agreeable to him as the linen mesh, though it was not durable and was expensive. Although one often felt cold while wearing this linen mesh, one did not often take cold.

Dr. Judson Daland, of Philadelphia, said that he would be loath to recommnend the linen mesh underwear indiscriminately, though he believed most people erred on the side of wearing too much underwear.

Hydrotherapy in the Treatment of Insomnia.—Dr. Irwin Hance, of Lakewood, read this paper. He said that in cases of insomnia there was usually some disturbance of the nervous and circulatory systems, and this explained why hydrotherapy proved so beneficial. He reported cases illustrating the benefit of hydrotherapy combined with static electricity, asserting that when he had used hydrotherapy alone the results, though good, had been attained much more slowly.

Dr. Ransom suggested that Dr. Hance would find a stilll larger field for hydrotherapy in these cases if he were careful to avoid great variations in temperature at the beginning of the treatment. Shocks were to be especially guarded against in the treatment of neurasthenics.

Second Day—Wednesday, May 10th.

The Climatology of Nudity.—Dr. W. D. Robinson, of Philadelphia, read a paper with this title. He rehearsed the chief facts and laws of physics bearing upon the properties of light, heat, sound, and electricity. He stated that the theory of light now most generally accepted was that light and electricity were identical. The object of the paper was to show the possible therapeutic value of light in disease. A number of cases of lupus, he said, had been cured by concentrating the sun's rays on the affected area. The so-called *x*-ray burns were apparently not burns, but the result of intense electrification.

Dr. Phillips said that he felt sure that climatologists would make greater advances by studying temperature (heat) and electricity than by giving so much attention to the air and to barometric pressure. It had been shown by experiment that there was a greater absorption of oxygen and elimination of carbon dioxide. It had also been found that the exposure of culture media to light before inoculating with germs produced such a powerful influence that it prevented the subsequent growth of the germs.

Dr. R. C. Newton recalled eight cases of typhoid fever of an exceedingly mild type observed by him among men who had been constantly out-doors on scout duty.

Recent Inquiries Concerning the Blood Changes Induced by Altitude.—Dr. S. E. Solly, of Colorado Springs, presented this communication. In it he detailed the experiments of various observers, notably those of Schomann and Rosenquist, on animals placed in bell-jars and subjected to various barometric pressures. These investigators concluded that the changes in the blood occurring in connection with diminution of barometric pressure were best explained on the theory of an increased proliferation of the red cells. Dr. Solly's own experiments in Colorado had consisted largely in inquiring into the methods and sources of error in these blood examinations. The general result of this inquiry seemed to be confirmatory of the theory just mentioned.

Dr. E. O. Otis said that last year he had expressed himself as not convinced that this polycythæmia was a general one, and he was still inclined to believe that it existed only in the peripheral vessels. If there was a true increase in the general volume of the corpuscles, it was difficult to comprehend the rapid restoration of the normal state on the return of the individual to the sea-level.

Dr. A. Jacobi, of New York, said that altitude was not the only cause of a disproportion in the number of blood cells and in the percentage of hæmoglobin, as this condition was not infrequently observed in slow convalescence from various diseases.

Dr. Judson Daland, of Philadelphia, spoke of the many sources of error in blood examinations, even under the most modern and approved technique. For example, there was a large error introduced by the hæmatokrit, and dependent upon the velocity of rotation and the size of the corpuscles. With the Fleischl hæmometer there was necessarily a large personal equation. From the evidence that had been offered he felt reasonably sure that there was a blood regeneration in high altitudes.

Dr. Phillips asked Dr. Solly if he had any hypothesis to offer in explanation of the assumed changes

in the blood. He was personally of the opinion that the evidence adduced pointed strongly toward an actual increase in the number of red blood cells and in the hæmoglobin. He had been able to account for this increase only by the influence of light on the hæmoglobin; and some recent experiments by Italian observers seemed to lend support to this view. These investigators had found that local irritation of the skin, as by a mustard plaster, was sufficient to cause an increase in the hæmoglobin, and this increase was much more noticeable when the body was exposed to sunlight.

Dr. Solly, in closing the discussion, said that the chief evidence of these changes in the blood had been noted in the laboratory, as a result of changes in the barometric pressure, and entirely independent of the influence of light.

Altitude and Heart Disease.—Dr. R. H. Babcock, of Chicago, presented this paper, together with a report of nine cases. It was evident from these histories that it could not be said that every case of cardiac disease was affected injuriously. His conclusions were: (1) That all forms of cardiac disease did not contraindicate a sojourn in a high altitude; (2) the ill effects of low barometric pressure, in some forms of cardiac disease, were explicable by the accelerated venous flow and the quickened heart beat; (3) high altitude was most apt to prove incompatible in pronounced aortic and mitral stenosis, and in regurgitant disease when complicated by pleural or pericardial adhesions; and (4) uncomplicated regurgitant cases, with or without myocardial changes, might endure, without injury, low barometric pressure.

Dr. Sewall, of Denver, said that, in his opinion, the influence of metabolism on the circulation was very much more important than the mere mechanical factors. Very recent experiments had shown a remarkable reduction in the specific gravity of the blood in persons living at a high altitude. He was convinced that the right side of the heart in most individuals coming to Denver was overtaxed for a period of a few days or weeks, probably as a result of the increased aspiration into the thorax. According to his experience, cases of aortic regurgitation were most injuriously affected in a high altitude.

Dr. C. E. Quimby, of New York, said that with the removal of atmospheric pressure the reserve or hidden tension of the vessels was developed.

Functional Cardiac Murmurs.—Dr. A. Jacobi, of New York, read a brief abstract of his paper on this subject. His object was to prove that functional murmurs were very much less frequent than generally supposed, and were usually the result of disease of the myocardium.

Dr. E. Fletcher Ingals expressed the opinion that cases of alcoholic heart, coffee heart, and tobacco heart, if followed for years, would be found eventually to be examples of serious disease of the myocardium.

Dr. John C. Munro, of Boston, said that he had frequently noted the occurrence of a cardiac murmur in persons anticipating a surgical operation, which disappeared very promptly afterward.

Dr. Harold Williams, of Boston, said that he had been impressed with the occurrence of such murmurs in overtaxed hearts, apparently as a result of a too feeble contraction of the ventricle.

Dr. Jacobi, in closing, said that the temporary murmurs spoken of were commonly observed in chorea. He did not believe in cardiac murmurs as a direct result of anæmia *per se*, but in cases of long-standing anæmia the muscles became enfeebled, and, as a result of this poor nutrition, an organic murmur appeared.

Prognosis in Chronic Valvular Affections of the Heart.—Dr. N. S. Davis, of Chicago, presented this paper, based on two hundred and fifty cases in his own practice. He stated that, contrary to popular opinion, sudden death in heart disease was comparatively rare. It occurred in aortic regurgitation only, and, according to Broadbent, in about one-fourth of the cases. Of thirty fatal cases of which he had records, the age at death had been fifty years for mitral stenosis, forty for mitral insufficiency, and thirty-six for both aortic stenosis and insufficiency combined. Chronic valvular disease of rheumatic origin must be commonly regarded as intermittently progressive. The prognosis was influenced by the amount of hypertrophy already present, by habits of life, and by general nutrition. In one hundred and three cases, in which the duration of broken compensation could be ascertained, the average duration had been 2.6 years in mitral insufficiency, and the maximum seventeen years; in aortic stenosis the average had been 3.8 years, with a maximum of twenty years; in aortic insufficiency, the average had been 2.75 years, with a maximum of seven years. In general, those having stenosis of the aortic valves lived longer than those having insufficiency.

Dr. Roland G. Curtin, of Philadelphia, cautioned against making an unfavorable prognosis in heart disease because of the liability of unduly depressing the patient and aggravating the condition.

Dr. Babcock remarked that when two valvular lesions coexisted, the prognosis was better when they were of the same kind than when they were dissimilar.

Treatment of the Cardiac Asthenia of Pneumonia.—Dr. H. L. Elsner, of Syracuse, presented a contribution to this subject. He took the view that the toxæmia of pneumonia speedily resulted in cardiac asthenia and vasomotor paresis. Thus theoretically nitroglycerin should prove a dangerous remedy. He had never seen a patient recover from pneumonia who had been vigorously treated with this drug. His plan of treatment consisted in giving a mixture, composed of fifteen drops each of the compound spirits of ether, aromatic spirits of ammonia, the compound spirits of lavender, and the tincture of valerian, at intervals of an hour or two. In addition, he usually prescribed one-fourth of a grain of sparteine sulphate and four to six grains of caffeine at intervals of four or six hours. He also thought well of giving tablespoonful doses of Hungarian wine every half-hour. He believed nitroglycerin was injurious except when the arteries were distinctly diseased and the pulse was persistently of high tension.

Dr. Walker said that he had had most excellent results from nitroglycerin in pneumonia. He also used dry cups very freely.

Dr. Curtin remarked that the action of nitroglycerin was so evanescent that it should be administered at intervals of two hours.

Dr. Daland said that he had given to three individuals, suffering from slight bronchitis, as much as one-fourth of a grain, four times a day, without any effect. He thought venesection most useful in pneumonia when the right heart was overtaxed.

Dr. Babcock spoke in defence of the use of nitroglycerin, and asserted that it was both safe and efficient if the dose of one-one-hundredth of a grain by the mouth was not exceeded.

Dr. A. Jacobi said that digitalin was not an alkaloid, but a resinoid, and, after many years of trial, he had discarded it as utterly useless.

The Cardio-Œsophageal "Gush" and "Click."—Dr. Roland G. Curtin, of Philadelphia, reported cases in which these curious sounds were heard. His reasons for believing them to be of œsophageal origin were: (1) The sound seemed to come from the mouth; (2) closing the mouth muffled the sound; and (3) it

was not audible below the middle of the sternum. It was probable that the heart in diastole pressed out a small quantity of air, and that this was readmitted during systole. The sounds were heard with the diastole of the heart, over the middle of the sternum, and were not transmitted to other parts.

Empyema from a Surgical Standpoint.—Dr. John C. Munro, of Boston, read this paper. In his opinion, there were very few adult cases of empyema in which ether could not be safely given by a skilled anæsthetist, but unless so given it was likely to be dangerous, though not more so than chloroform. He had had delayed or poor expansion in both streptococcic and pneumococcic cases; it was apt to be slower in the latter class. The deaths, in his cases, had been from the dislodgment of emboli, from relapse or extension of a pneumonia, and, in the pneumococcus cases, from rapid and general infection. He rarely operated in these cases without resection of rib, and preferred to make the opening in the seventh or eighth interspace. The drainage was as good when the incision was made anteriorly or in the mid-axillary line as if made posteriorly in less accessible parts. These patients improved more rapidly if allowed to sit up as soon after the operation as this could be safely done. Systematic gymnastic exercise and the use of the pneumatic cabinet were useful in aiding chest expansion.

Dr. Curtin suggested that chest expansion could be most conveniently obtained by sending the patient to an elevated region and instructing him to ride a rough-trotting horse.

Dr. Elsner said that sudden death on the operating-table might often be averted by operating from the back instead of turning the patient on the side.

Dr. A. Jacobi remarked that with children ether should always be used, not chloroform.

Traumatic Rupture of the Heart without Penetration of the Chest Wall.—Dr. Richard C. Newton, of Montclair, N. J., reported a case of this kind coming under his observation, due to a blow on the chest received in a bicycle accident. There had been coincident fracture of the sixth intercostal cartilage. The person lived about one hour. The autopsy showed no disease of the pericardium. The speaker said that such ruptures of the heart were very rare, but he had been able to find a few cases on record. In one of these the rupture was produced by a blow on the chest with a bamboo cane. The longest time this injury had been survived was fourteen hours.

Bicycling in its Relation to Heart Disease.—Dr. A. C. Getchell, of Worcester, Mass., read a paper on this subject. He said that dilatation of the heart not uncommonly occurred in untrained riders. The long-continued muscular exertion caused an accumulation of toxins in the blood, and this, together with the prolonged acceleration of the pulse, resulted in enfeeblement of the heart. The existence of this toxæmia was proved by the common occurrence of a mild "fatigue" fever. Acute dilatation, if often repeated, would permanently damage the heart. He protested against the growing custom of permitting children under fourteen years of age to ride indiscriminately even on smooth and level streets. Many cases of "bicycle heart" had been detected by those examining recruits for the late war. Young adults were less likely to be injuriously affected by bicycle riding, but those undertaking it after the age of forty should be cautious about riding up hills or against strong winds, and the gear of the bicycle should be moderate. These people should seek medical advice before attempting to ride.

The Relation of Local Meteorological Conditions to the Influenza Epidemic in Philadelphia in the Winter of 1898–99.—Dr. Howard S. Anders, of Philadelphia, in this paper reviewed the literature. He said that in the recent epidemic the mean atmospheric pressure had been moderately high for the two months preceding the outbreak. In the corresponding months of the previous year, when there had been but little influenza, the pressure had been much less. The weather had been slightly colder during the outbreak than in the previous year at this time. The temperature during November and December, 1898, had been decidedly equable.

The Cold Wave of February, 1899.—Dr. Guy Hinsdale, of Philadelphia, in this paper presented a *résumé* of the chief events of this memorable period, and traced the course of the cold wave. One hundred and four persons had lost their lives between January 29 and February 13, 1899, by freezing and by avalanche in Colorado. The new records established for Washington and Philadelphia were respectively 15° and 6° F. below zero.

The Effect of Violent and Prolonged Muscular Exercise upon the Heart.—Dr. Harold Williams, of Boston, read a paper with this title, based upon observations made on seventeen vigorous men before and after a cross-country run of twenty-five miles. Fourteen completed the distance, the best time being two hours and fifty-four minutes. Percussion of the heart was made independently by three examiners. Very slight dilatation of the left ventricle was noted in all of them after a rest. Some of them lost five degrees in temperature, and some lost six pounds in weight. One curious fact shown by the pulse tracings was that this violent muscular exercise was attended by a low arterial tension. Albuminuria, when present, was usually associated with casts. In eleven of the thirteen men examined after the race by auscultation there was a murmur along the left side of the heart, at the apex, and in the back—a true mitral regurgitant murmur. It was apparently due to the participation of the most muscular part of the heart in the general exhaustion. The murmur lasted from a few minutes to half an hour, and the men were not permanently injured.

A Case of Aneurism.—Dr. Thomas Darlington, of New York, reported this case, which was interesting because of the peculiar mode of rupture. The aneurism caused absorption of the sternum, and then ruptured during an attack of coughing. About a pint of blood was projected against the ceiling, and then a clot plugged the opening and caused a cessation of the hemorrhage. Death occurred subsequently from rupture at another spot.

Officers Elected.—*President*, Dr. A. Jacobi, of New York; *Vice-Presidents*, Dr. R. H. Babcock, of Chicago, and J. W. Brannan, of New York; *Secretary and Treasurer*, Dr. Guy Hinsdale, of Philadelphia; *Member of Council*, Dr. Beverley Robinson, of New York.

A Method of Placental Expression.—In the *Deutsche medicinische Wochenschrift* Dr. Budberg recommends the following method: With the expanded hand depress the abdominal wall with a rubbing motion, until the palm of the hand and the fingers approximate the posterior surface of the uterus, the thumb and thenar eminence resting on the fundus. With the other hand the lower end of the uterus is grasped. Pressure is made during a pain only, and between the pains is gradually diminished, but the hands are not removed from the uterus until the placenta is expressed. By this method the bladder is also emptied and catheterization becomes unnecessary. The writer employed this method in nine hundred and fifty labors. In six cases it was necessary to enter the uterus to remove the placenta.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PARLIAMENTARY—ILLICIT COMMISSIONS — PREVESICAL HERNIA — AN ANOMALOUS ARTERY WOUNDED — SYPHILITIC STENOSIS OF BRONCHI—INJURY TO MUSCULO-SPIRAL NERVE — SKIN ERUPTIONS IN GRANULAR KIDNEY—COLLEGE OF SURGEONS—MRS. POTTS—MR. ALLISON — DEATHS OF SIR WILLIAM ROBERTS AND DR. FRAZER.

LONDON, April 21, 1899.

THE new lunacy bill passed the second reading in the House of Lords on Tuesday. It is an important measure. One of its features embraces the temporary care of incipient insanity. No person is to be permitted to receive more than one such patient at the same time, and no such patient is to be recertified after the expiration of the term mentioned in the first certificate until two years have elapsed after that expired period. The work of the commissioners will probably be increased if this bill becomes law, and an increase of their number may become desirable. The question of pensions is treated in a spirit which is sure to provoke protests, not only on account of the small amounts accorded, but from the way in which these are made dependent on the good-will of the committee under which the officer has last served.

In the House of Commons the subject of lead poisoning has again come up, and the home secretary has said that an inquest ought to be held in all cases in which death occurs. The bill to amend the public health acts passed the second reading on Wednesday, and was referred to a select committee. The sale of food and drugs bill is before the standing committee on trade, and seems likely to become an act.

The subject of illicit commissions is exciting much vexation. The chamber of commerce is challenged to produce proof of its charge against the profession. The gruesome assertion that doctors take such commissions from undertakers is repudiated with scorn. It seems the undertakers have their own institute, and this has protested against the statement of the chamber of commerce. The commercial class may perhaps measure professional morality by its own, and, as to this, Lord Russell's bill to circumvent the swindling in company promotion is sufficiently eloquent.

Prevesical hernia was the subject of the paper at the Medico-Chirurgical Society, by Mr. G. H. Makins, founded on the case of a man, aged forty years, who had had a right hernia reduced on two occasions. Pain persisted in the right iliac region, with tenderness, etc., and under anæsthesia a hard swelling was found, extending across the hypogastric region into the left iliac fossa. On abdominal exploration he found a subperitoneal tumor with adhesion of small intestine, displacing the bladder backward and to the left. After removal it was seen to be a uniform hernial diverticulum, containing adherent omentum. Mr. Makins referred to some recorded cases, and drew a distinction between true prevesical cases and properitoneal, in which latter the sac forms an integral part of an inguinal hernia.

Mr. J. Hutchinson, Jr., related a similar case. He explored the inguinal region, and on passing his finger through the ring found fulness on the inner side. Abdominal section revealed an opening to the right of the bladder, leading into a pouch containing a loop of strangulated intestine. This was liberated by notching the ring. These cases, he said, must be rare, as this was the only one in the London Hospital in fifteen years. He did not consider true prevesical herniæ similar to retroperitoneal. In all recorded cases but one (and in that the record is deficient) ordinary hernia had pre-existed. The formation of pouches might be due to a lax state of peritoneum, as after the return of a hernia *en masse;* or to the close contact of the bladder with an inguinal sac, as often seen. Possibly the sac might be drawn out and a pouch formed by contraction of the bladder. With symptoms of internal obstruction and a history of previous hernia, laparotomy should be done and other regions explored besides the inguinal canals.

Mr. Macready mentioned the explanation offered long ago by John Cooper as a possible one, but preferred the view that the hernia was due to pouches, which Rokitansky attributed to irregularities in development of the peritoneum.

Mr. Eccles had met with a case in which, thinking the symptoms due to nipped omentum, he explored the sac and found healthy omentum. Exploring further, he found a sac behind the os pubis containing no intestine, but a bit of omentum considerably congested. On drawing this out, the symptoms were relieved.

Mr. Bryant (president) mentioned two cases of prevesical hernia in which, on passing his finger through the ring, he had found an opening through which intestine had passed, and he had drawn it out.

Mr. Makins, in reply, said such little pouches as he had spoken of could often be seen in the cadaver, if the anterior abdominal wall were examined from behind.

At the Clinical Society Mr. Spencer described a case in which, when laying open a tuberculous abscess in the groin, an artery as large as the brachial was wounded just in front of Poupart's ligament. After being tied and divided, the upper end pulsated strongly; not so the lower. The artery was probably given off from one of the iliacs. On the opposite side was a similar anomalous artery, crossing Poupart's ligament. It was suggested that it might be a superficial obturator. Another speaker thought it might be an aberrant branch of the deep epigastric, and this explanation was supported by others.

Dr. Rolleston and Dr. Cyril Ogle then read notes of three cases of syphilitic stenosis of both bronchi. This lesion is very rare unless in combination with the same affection in the trachea. Only seven other cases are recorded, in three of which only one bronchus was affected. Dr. West remarked that he had not met with such a case during many years as pathologist to two hospitals. Dr. Rolleston had noticed that half the cases recorded had come from Guy's Hospital. Perhaps this is because, the lesion having been once noted, a sharp lookout for it has been kept.

Mr. Clement Lucas read an account of two cases of ununited fracture of the humerus, caused by the musculo-spiral nerve being interposed between the fragments. In these cases he cut down on the nerve at the back of the arm, and traced it to where it was engaged in the fragments. The nerve was resected and sutured. The bones were resected and treated as usual. In one of the cases a second operation had to be undertaken before union occurred. When last seen the bones had united, but the nerve had not recovered.

Mr. Langton mentioned a case in which he had exposed the bone and found a very oblique fracture and the nerve lying behind the upper fragment, nearly divided, with a bulbous swelling at each extremity. He wired the bone and sutured the nerve. The wiring answered, but the paralysis remained, and he was of opinion that less improvement from suture occurred in the musculo-spiral than in most other nerves.

Dr. West read a paper on skin affections in granular kidney. Some of these eruptions were of grave significance. They were often widespread and obstinate. Erythema, pityriasis rubra, dermatitis exfoliativa, gen-

eral eczema, and lichen when general in the late stage of granular kidney, indicated that the patient would soon die—not from the skin disease, but from the kidney. The prognosis of cases when a general skin affection occurred was most grave. Cases were mentioned by other speakers which seemed to support the serious import of extensive eruptions in granular kidney.

The Royal College of Surgeons has been unsuccessful in an appeal against the assessments of the buildings. The Jacksonian prize of the college is not to be awarded this year, the committee having reported that no dissertation of sufficient merit has been received. The committee on the celebration of the centenary of the college charter unanimously recommend that the proposal be adopted. This was done, and among other things it was decided to consult the members and fellows as to seeking power to confer honorary diplomas.

Mrs. Longshore Potts, described as a "female American doctor," and whose advertisements have excited disgust, has been mulcted by the jury in £175 damages for negligence and want of skill. Mrs. Potts was said to be in California at present and too ill to come over. Testimonials were offered on her behalf, signed among others by a bishop.

Mr. Allinson, who was struck off the register, has been fined £5 and costs for still calling himself doctor. A summons for describing himself "ex-L.R.C.P." was dismissed.

Sir William Roberts died on Sunday, in his seventieth year. He was physician to the Manchester Infirmary for many years, and was the first professor of medicine in Victoria University. He was knighted in 1885, and subsequently came to London, where also he obtained a considerable position. In 1897 he gave the Harveian oration, and had previously delivered the three courses of lectures at the College of Physicians. His writings on digestion and on the kidney must be familiar to your readers, and you will remember, too, his forcible memorandum in the report of the opium commission.

Dr. William Frazer, F.R.C.S.I., of Dublin, also died on Sunday, the 16th inst., in his seventy-fifth year. He had for many years a large practice, was examiner in materia medica at the College of Surgeons, and lecturer at the Carmichael School. He was also librarian to the R. I. Academy, and a distinguished antiquarian. He had an attack of influenza last November, after which cardiac trouble developed and progressed.

CASE OF SPONTANEOUS RECOVERY AFTER BARBAROUS MUTILATION INVOLVING LOSS OF GENITAL ORGANS.

To the Editor of the Medical Record.

Sir: The accompanying photograph and history were kindly placed at my disposal by Dr. Symons, the British medical man residing at Sorrento, Italy. It has occurred to me that the case was interesting in several ways. In the first place, it affords an apt illustration of what nature can accomplish, unaided and without antiseptic precautions, in the way of healing extensive wounds inflicted by decidedly unclean instruments.

It also shows the barbarous mutilation which was practised freely by the wild hordes of King Menelik, called soldiers by euphemy, during the recent Italian war in Abyssinia.

The subject from whom the picture was taken by the doctor was a native of Sorrento. He was returned by the military authorities to the municipality, as unfit for further duty. The story which he told Dr. Symons was briefly as follows:

During the battle of Adowa he received an extensive sabre cut over the right ear. This rendered him insensible. On returning to consciousness, the frightful mutilation to which he had been subjected became painfully apparent. The battlefield was deserted, and, in spite of his extensive loss of blood and the pro-

Spontaneous Healing of Extensive Injury by Mutilation Inflicted by Abyssinians on an Italian Soldier.

found surgical shock, the unfortunate lad managed to crawl on his hands and knees some four or five miles to camp, where some rude assistance was rendered.

It was only after days of torture and agony that proper surgical treatment, then no longer of vital importance, was found for this poor victim of savage cruelty (rather worse than our memorable campaign at Santiago).

It may be stated that the subject of this brief but startling history is now in excellent physical condition. He has gained considerably in weight since the time of the mutilation.

Edmund Charles Wendt, M.D.

Sorrento, Italy, April 24, 1899.

The Operative Treatment of Baldness.—Dr. Menahem Hodara, of Constantinople, has recently made a bold attempt to remedy the baldness resulting from favus by implanting hairs removed from other parts of the patient's head. The hairs were trimmed at each end with scissors. Some four weeks after implantation a certain number of the hairs were found to have taken root, and a new crop was produced. He thinks himself justified in stating that "clinically there can be no doubt that small bundles of hair stems implanted in incisions made with the scarifier can take root and grow, forming in time long and viable hairs." By microscopical examination he has satisfied himself that after some weeks a real new bulb forms at the lower end of the implanted hair. Why should not the same treatment be applied in cases of ordinary baldness? Many bald men would gladly submit to have their scalps ploughed and afterward sown with new hairs if there was a reasonable hope of even a moderate harvest. This new system of capilliculture surely opens out large possibilities.—*British Medical Journal*, February 25th.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 6, 1899:

	Cases.	Deaths.
Tuberculosis	165	192
Typhoid fever	16	6
Scarlet fever	204	17
Measles	332	14
Diphtheria	171	28
Laryngeal diphtheria (croup)	4	3
Cerebro-spinal meningitis	0	8
Chicken-pox	34	0
Smallpox	2	0

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the supervising surgeon-general of the United States Marine-Hospital service during the week ending May 6, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Mobile	April 29th	1	
California, Los Angeles	April 22d to 29th	1	1
Dist. of Columbia, Washington	April 28th	1	
Florida, Jacksonville	April 23d to 30th	9	
Illinois, Chicago	April 17th to 29th	2	
Louisiana, New Orleans	April 22d to 29th	16	1
Shreveport	April 22d to 29th	2	
Maryland, Baltimore	April 30th to May 2d	2	
Massachusetts, Boston	April 17th to 26th	9	
Michigan	April 22d to 29th, present at two places—Benton Harbor and Kalamazoo township.		
New Mexico, Las Cruces	April 27th	Many new cases.	
New York, Buffalo	April 29th	1	
Ohio, Cincinnati	April 21st to 28th	15	2
Pennsylvania, Erie	May 2d	2	
Pittsburg	April 22d to 29th	1	
Texas, Del Rio	April 18th	1	
Galveston	April 15th to 22d	8	
Virginia, Newport News	April 25th to May 1st	4	
Norfolk	April 25th to May 2d	4	1
Portsmouth	April 25th to May 2d	15	
Washington, Spokane	April 22d to 29th	2	

SMALLPOX—FOREIGN.

Brazil, Rio de Janeiro	March 11th to 24th	..	11
China, Hongkong	March 11th to 25th	4	3
Columbia, Barranquilla	April 1st to 8th	8	
England, London	March 8th to 15th	3	
Formosa, Tamsui	February 10th to March 10th	88	2
Greece, Athens	April 8th to 15th	16	5
India, Bombay	March 28th to April 4th	11	10
Calcutta	March 18th to 25th	..	6
Madras	March 11th to 25th	..	1
Korea, Seoul	March 11th to 18th	Smallpox present.	
Mexico, Chihuahua	April 8th to 22d	..	3
Mexico	April 16th to 23d	16	5
Nicaragua, Bluefields	April 15th to 22d	1	
Russia, St. Petersburg	April 1st to 15th	30	8
Turkey, Constantinople	April 10th to 17th	..	10
Smyrna	April 8th to 15th	..	1

YELLOW FEVER.

Brazil, Rio de Janeiro	March 10th to 24th	112	88

CHOLERA.

India, Bombay	March 28th to April 4th	..	3
Calcutta	March 18th to 25th	..	17

PLAGUE.

Formosa, Tamsui	February 10th to March 10th	201	123
India, Madras	April 18th to 24th		1

Memory.—The London *Spectator* says that Lord Rosebery has perpetrated a *bon* or *joli mot*. Some one asked him what memory was. "Memory," said Lord Rosebery, "is the feeling that steals over us when we listen to our friends' 'original stories.'"

Catching Cold.—An excellent letter on catching cold was contributed by a correspondent of the London *Spectator* of January 7th. It is pointed out that cold is unknown in many very cold portions of the globe. For example, Nansen and his men, during the three years which they spent in the Arctic regions, never caught a cold, yet they were exposed to cold, fatigue, and wet to a degree which we at home can scarcely realize. . . . Still, they, never caught a cold and (mark this, for it is very important), with the exception of Nansen's brief attack of lumbago, their health did not suffer in any way from the exposure. It may be said that they were all strong men, marvellously hardy; they were able to withstand cold. But what was the fact? Directly they reached civilization they all caught cold. Nansen's own statement to the writer was: "There is no doubt that cold is an infectious disease. We had none during our journey, and we all got it (very badly, too) at the very moment we reached Norway." After relating several other instances of extremely cold places where catching cold is common, and supplying evidence tending to show that cold is an infectious complaint, both with men and domestic animals, the writer says: "All this seems to force us to the conclusion that a cold is a specific infectious disease, and that without the possibility of infection it is impossible to catch it. That is to say, that it is due to a micro-organism, and that without the presence of this micro-organism the disease cannot be contracted, be the exposure what it may. What is the bearing of this belief? Is it of any importance to us, if true it be, to recognize this truth? Contrast it for a moment with the commonly accepted theory, which may be roughly stated as follows: First, that the greater number of illnesses begin with a cold. This is more or less correct. Second, that all colds must necessarily be due to exposure of some kind to draughts, damp, cold, or wet, though this exposure may be so slight that the sufferers are often quite unconscious of it and say: 'I am sure I don't know how I have taken cold.' The practical result of this theory is that in their fear of these unrecognized exposures people are apt to take more care of themselves—in other words, to coddle more and more. This treatment tends to make them more and more delicate, less and less able to withstand exposure, more and more sensitive to the depressing effects of cold, less and less capable of reacting healthily against it, and, what is worse and worse, more and more afraid of fresh air and ventilation. . . . If it is true that exposure is not the direct cause of the disease; if, as seems probable, it only acts by lowering our vitality and so enabling the germs to get a foothold, surely the more we become inured to such exposure the less likely will it be to affect us in this way—a thought which if acted upon would go far toward preserving that hardiness which is so characteristic of our nation, which would prove as effective a protection against cold as against other enemies. May we hope for anything further? Shall we ever be able to avoid colds altogether? Probably we shall; probably ere long our bacteriologists, having discovered the hostile microbe, having learned his habits, traced his life-history, and tracked him to his lair, will be able to show us how we can get the better of our foe. So that in the oft-recurring struggle he, not we, will succumb, and we shall soon cease to fear him. *Hoc erit in votis.*"

Anecdotes of Sir William Jenner.—Many are the tales told of the late Sir William Jenner, who, although his practice for the greater part of his career lay among the rich and aristocrats of Great Britain, was more distinguished for the *fortiter in re* than for the *suaviter in modo*. The London *Telegraph* has just published incidents in his life related by Dr. Cooper Bentham, who was with the great physician as his assistant from 1875 until his retirement a few years ago. Jenner's younger days were spent in grinding poverty, and for some time after he qualified he was in general practice and had much difficulty to make ends meet. He is said to have owed his connection with the court of

England to a series of lucky circumstances, but subsequent to that event his life was one of almost unexampled prosperity, and with the exception probably of Sir Andrew Clark and Sir William Gall, his yearly takings have never been exceeded by any English physician. His income in 1876 and the following years, according to Dr. Bentham, averaged between $60,000 and $75,000. His largest fees were paid by Americans—$26,000 on two occasions. Jenner was remarkable for his rapid and accurate diagnosis of a case and for his marvellous power of reading the character of his patients. One of his regular visitors—a lady—would cheerfully pay her fee just to have the opportunity of gossiping with him. Her first words would be, "Have you heard——" and Jenner would break in, "No, I have not. Please to put this thermometer in your mouth, that I may take your temperature." And he kept the tube between her lips for ten minutes, so that only five minutes were left for the lady to indulge in chatter; the maximum length of time he allowed for a consultation being fifteen minutes. He is said to have done more consultation journeys in his time than any other physician. His reputation was so great that he would be called to all parts of the country, and even to Scotland. Once he went to Scotland to see a rich man. He was to meet a Glasgow professor. Before Jenner was called in, the son-in-law was anxious to have a homœopath, but the professor refused, saying: "No, you must have the best man in England. We will telegraph for Jenner." Jenner came, and the young man was very pleased with the explanation of the case. "Ah!" he said to Jenner, "you will understand, Sir William, that a drowning man will catch at a straw." "Yes," replied the great doctor, a confirmed allopath; "I can understand that, but I cannot understand his leaving a plank to do so." Here is another anecdote told by the late Sir Russel Reynolds, his dearest friend: Jenner was ill, suffering from some stomach trouble, and Reynolds called to see him. When he entered the bedroom, Jenner said to him: "Look here, Reynolds; these chaps who are attending me want to introduce a trocar into my perineum. What would you say if you were I?" Reynolds immediately answered: "I would say that I would see them d—d first." "The very words I made use of!" chuckled Jenner.

Evidence before the Plague Commission.—Colonel Robertson, of Mysore, in giving evidence before the plague commission at Bangalore, stated that the attitude of the people was uncompromisingly hostile to the plague measures. In large cities it was impossible to deal effectively with the epidemic, the fear of which destroyed natural affection. Captain Roe, chief plague officer, maintained that segregation was unsuccessful, owing to the difficulty of catching the people; if segregation were abolished, the natives would not run away. Major Dean declared that Yersin's serum was useless. Haffkine's serum conferred a temporary immunity, but not to the extent supposed.

Notification in Germany.—With six-and-twenty states and thirty-six provinces in the kingdom of Prussia, the former enjoying home rule and the latter ample freedom in local government, nothing like uniformity in notification can be expected; but the features most worth consideration are the various degrees and conditions of notification, though the application of these to the several diseases and under particular circumstances may not be to our mind always well judged. The diseases which in one or other district may possibly be notifiable comprise smallpox, varicella, typhus, enteric, scarlet, and relapsing fevers, diphtheria, measles, rötheln, whooping cough, mumps, cholera, dysentery, puerperal fever, erysipelas, epidemic cerebro-spinal meningitis, pneumonia (croupous or gangrenous), influenza, leprosy, yellow fever, Oriental plague, ophthalmia neonatorum, granular ophthalmia (syphilitic), pemphigus of the newborn, scabies, favus, plica polonica, syphilis, malarial fever, tuberculosis, and anchylostomiasis; also trichinosis, hydrophobia, anthrax, and glanders in man and beast. In some notification is compulsory (*obligatorisch*), in others voluntary (*facultativ*), and either form may be perpetual or temporarily put into force at the discretion of the local authority; it is of general application or required only when the disease threatens to assume an epidemic character.—*Public Health.*

The Effect of Soil on Consumption.—Seeking to discover what property in the air of unhealthy houses favors the growth of the tubercle bacilli, Dr. Ransome is said to have found a condition which explains the problem of this microbic vitality. Experimenting on the air from the lungs of healthy persons and consumptive patients, and noting the character of the air and vapors of clay soil, sandy soil, and town soils, he obtained a liquid in each case. The liquids were sterilized, and in them were soaked pieces of filter paper and of ordinary wall paper. The papers were intended to form breeding-grounds for the bacilli of tubercle, and when the microbes were sown on the paper they multiplied and flourished in each case. The outcome of these most noteworthy experiments has an important bearing on the prevention of consumption and on the general sanitary treatment of patients. For they prove to us that the germs of tubercle possess a wonderfully elastic constitution. They multiply, grow in the lungs and in the other organs of our bodies, but they thrive equally well in the organic matter which is contained in the air we emit from our lungs and in the foul vapors that arise from unhealthy soils. They inculcate the great lesson that dryness of soil and light (and plenty of it) are the natural agents to which we should look for the destruction of the microbes that convey tubercle to us. Long ago Sir George Buchanan and Dr. Bowditch, of Boston (United States), also showed that, according to the dryness of the soil produced by good drainage, the cities in which such sanitary works were carried out showed a marked decrease of the death rate from consumption.—*London News.*

The Menopause.—A vaginal examination should be advised in all cases as often as every three months, to be sure that no disease of the pelvic organs exists. The return of the menses after a period of several years is to be taken as a warning of some serious condition existing, and great care should be used in examining to find the cause. The treatment of patients at the time of the menopause depends upon the conditions and characteristics of individual cases, climate, marital and home life, and constitutional dyscrasias and idiosyncrasies. The following are a few hints applicable to all: As little waste of nervous energy as possible; as few cares and responsibilities as possible; a cheerful home and companionship; moderate and daily exercise, but not to exhaustion; frequent bathing to free the pores of poisonous accumulations; all excretions should be free and regular; massage where vitality is low and no exhausting hemorrhages have occurred; change of climate or scene where there are unhappy home surroundings; medicines should be selected for each case, as different symptoms appear.—Dr. A. B. Dake.

"Surgical Interference" or "Surgical Intervention"?—The *Canadian Practitioner* for January credits the *Richmond Journal of Practice* with the following: We have never understood why authorities in surgery use the word "interference" when speaking of surgical or operative treatment. When a surgeon

performs an operation for the correction of a deformity, the mitigation of pain, or the saving of life, does he mean to say that he interferes? If it be interference, then he is culpable; but certainly no operator will plead guilty to the charge of doing meddlesome surgery, and the inevitable conclusion is that the term "surgical interference" is a misnomer. Whenever we read it in text-books, or in current literature, we feel like substituting the word "intervention" for "interference," using the word intervention in the sense of interposition, or, better still, mediation—a coming between for a friendly purpose. The word interference suggests the idea of collision, clashing, opposition, officiousness, intermeddling, etc. According to Webster, "A man may interpose with propriety in the concern of others; he can never intermeddle without being impertinent or officious; nor can he interfere without being liable to the same charge, unless he has rights which are interfered with." Let us see what Trench has to say. We quote: "In our practical use, interference is something offensive. It is the pushing in of himself between two parties on the part of a third who was not asked, and is not thanked for his pains, and who, as the feeling of the word implies, had no business there; while interposition is employed to express the friendly, peace-making mediation of one whom the act well became, and who, even if he was not specially invited thereunto, is still thanked for what he has done."

Germany's Inebriates, after one more year of such carefully mitigated liberty as the Kaiser's subjects are permitted to enjoy, will enter upon a period of restraint calculated to fill them with mingled horror and indignation. With the beginning of 1900 there will go into effect a truly remarkable law—a law which places every habitual drunkard under an interdict involving complete submission to the will of a duly appointed "curator." This person will be empowered to put the individual whom he regards as a dipsomaniac anywhere he pleases, there to undergo treatment for the malady as long as the "curator" wishes. And the law formulates a fine, broad distinction in telling what a habitual drunkard is. It says that the term includes everybody who in consequence of inebriety cannot provide for his affairs or endangers the safety of others. This measure was first advocated in Germany thirty-five years ago, but hitherto its enactment has been prevented by influences not difficult to understand. How the regulation will work remains to be seen.—*Sanitarian.*

Timothy Grass.—A bacillus closely related to that of tuberculosis, capable of growing on potato and glycerin agar, staining with the Ziehl-Neelsen method, and producing pathogenic effects on inoculation in guinea-pigs practically identical with those of Koch's bacillus, has recently been discovered by Dr. Moeller on the blades of timothy grass on the Görbersdorf hills. It is to be hoped that the name "timothy-grass bacillus," which is at first sight rather ludicrous and suggestive of grasshoppers, will be changed; that is, if the bacillus proves to be a distinct species and not our old enemy modified by environment. It is an undoubted fact that pastures are frequently infected by the sputa of phthisical human beings, and, as the *British Medical Journal* says, "in the near future the examination and disinfection of grass may form part of the régime of our sanatoria." Pastures may be infected, too, by the distribution of phthisical sewage (from the washings of handkerchiefs) over them. Guinard records, too, that some of the French peasantry regularly give washing water to cattle to drink, knowing that the softness of the water and its slight salty taste lead the animals to prefer it frequently to pure water. —*Medical Magazine.*

The Advantages of Cycling.—The great advantage of cycling as a method of locomotion is found in several ways: (1) The weight is rolled along; (2) the weight of all the body above the legs is supported by the saddle, so that the legs themselves have not, as in walking, to support and propel at the same time, but nearly all the muscular power can be utilized for propulsion only; (3) the duty of keeping the body upright does not fall entirely on the spine and the muscles of the back, because a certain amount of support, more or less, according to the position assumed, is given to the shoulders through the arms by the hands resting on the handles; (4) practically speaking, there is no expenditure in maintaining balance; during propulsion, balance is entirely automatic.—S. S. Buckman, F.G.S., *Medical Magazine.*

Distribution of Leprosy.—Dr. Ehlers concludes his account of the geographical distribution of leprosy, showing that the disease is spread over the whole earth, respecting neither race nor climate. Asia, however, is its headquarters, a general average of 1 per 1,000 of the inhabitants of the continent being affected. Japan contains more than 20,000 and British India 120,000 lepers, but the chief focus of the disease is Southeast China, whence it has spread to the Malay and Australasian islands. In Java it has greatly increased since the introduction of civilization, anterior to which lepers were killed or driven out by the aborigines. On the Australian continent leprosy occurs in Victoria, New South Wales (40 cases in 1895), and Queensland. It is met with in New Zealand, Samoa, and the New Hebrides, but the islands most affected are New Caledonia, the Marshalls, Tahiti, and the Sandwich Islands, in which from one to six per cent. of the natives are lepers. In Africa, Egypt contains about 3,000 and Cape Colony 800 lepers, while the disease is spread through almost the whole continent except the delta of the Niger and a few other localities. The west coast of South America appears to be free from the disease, but it is met with along the entire north and west coasts and deep into the interior. According to Laure, no less than ten per cent. of the inhabitants of French Guiana are affected. In Central America leprosy is very prevalent, especially in Colombia, where the number is said to have increased in forty years from 1,100 to 27,000. The disease is common and apparently increasing through the West Indies. In the United States 560 cases have been recorded, but it is estimated that not more than 200 are now living. The disease has been imported into Canada (New Brunswick and Manitoba) from Normandy and Iceland, but there are now only 20 or 30 cases in the colony. In Europe leprosy forms, roughly speaking, a ring round the continent. It is at home in the Balkan peninsula, Russia, Scandinavia, Iceland, Spain, the Riviera, and other parts of Italy, Sardinia, and Crete, which distressful island is said to contain 2,000 to 3,000 cases. Dr. Ehlers gives statistics for the various localities, but considers that the numbers are far below the reality, his own careful investigations in Iceland having resulted in correcting the official report from 47 to 158 cases. The most encouraging point in the paper is the rapid decrease of the disease in Norway, from 2,833 cases in 1856 to 681 in 1896, due, Dr. Ehlers considers, to isolation. The vacant leper houses are being converted into phthisical sanatoria.—*Medical Magazine.*

The League of Mercy.—The Prince of Wales has inaugurated a new scheme in order to give an impetus to his hospital fund. The new plan is to establish a League of Mercy in connection with the hospital fund. The object of the League is to open up new ground by interesting those members of the community who have

not hitherto subscribed regularly, if at all, to hospitals. A president will be appointed for each parliamentary division of the metropolis and neighboring counties; each division will be subdivided into thirty small areas, with a vice-president in each; and each vice-president will select twenty members, each of whom will undertake to find twenty subscribers of one shilling a year and upwards. Furthermore, an "Order of Mercy" will be established in connection with the League, which will be conferred as a reward for gratuitous personal services only rendered in relief of sickness, suffering, poverty, or distress, and which will have only one class.—*Sanitary Record.*

Water Supply and Typhoid Fever in Great Britain.—Referring to several outbreaks of typhoid which have occurred of late in towns in Great Britain, *The Sanitary Record* says: "The object lesson of these periodic outbreaks of disease caused by polluted water supplies is a sad one and reflects discreditably on our public-health administration. By a fatuous omission the Public Health Acts are silent in regard to any supervision by sanitary authorities over public water supplies. Our legislature has in its wisdom provided for our protection from adulterated coffee and mustard by prescribing heavy penalties on offenders who vend such accessories to our food in an adulterated form, but in regard to the state of water by corporations or water companies, in an impure, adulterated, or polluted condition, it has provided absolutely no redress, notwithstanding that the sacrifice of human life may directly result from the use of such water. The Public Health Acts, it will scarcely be believed, give the sanitary authorities no power of entry on the premises of a water company to examine the sources or to take samples of water for analysis, nor have they prescribed that inspectors may submit samples of water to a public analyst, but oddly enough they contain specific directions as to how samples of gin or whiskey must be taken and analyzed. A sanitary authority is empowered to prosecute a poor man for keeping his pig too near his cottage, or a factory owner for smoky chimneys, but they cannot prosecute a water company for poisoning a whole district with specifically polluted water. The whole phase would be ludicrous if it were not attended with such painful results, and we think the time has arrived when an act should be passed putting an end to the anomalous state of the law in regard to our public water supplies, and making sanitary and water authorities responsible for insuring their purity."

California Editors will now be required to sign their editorial remarks in which individuals are mentioned. The governor has just signed a bill requiring the true name of the writer to be affixed to all publications mentioning people by name.

The Length of Human Life.—According to M. Holl Schooling there is an old rule for finding the length of a man's life if the present age lies between twelve and eighty-six years. This is the rule: Subtract the present age from 86, and divide the remainder by 2; the result will give the number of years you have yet to live. This old rule was discovered by the mathematician De Moivre, who emigrated to England from France in 1865, and became a member of the Royal Society. The curves given by M. Schooling are interesting to examine. A first diagram shows the chance that every man has of living one year longer than his present age. At birth, this chance is 5 to 1; at five years, 119 to 1; at ten, 512 to 1; at fifteen, 347; at twenty, 207; at twenty-five, 156; at thirty, 120; at thirty-five, 97; at forty, 78, etc. M. Schooling affirms from his calculations that of 1,000 individuals of sixty years 599 will live to be seventy, 120 to be eighty years, and 17 to be ninety; while of 1,000 nonagenarians, 4 will reach their hundredth year. We may add that for men of sixty-five the average expectation of life is 10⅓ years.—*Cosmos*, February 18th.

Objects of Ventilation.—It is to me difficult to resist the impression that an overdose of waste products, whether of one's own or other people's, must generally interfere with the metabolism of nerve tissue. Women as they grow older are apt to live much indoors. I believe the fat, flabby, paunchy woman, whether purple or pale, with feeble, irritable heart and "inadequate" kidneys, is usually the victim of rebreathed air. A "close" room will infallibly give me an abdominal distention and borborygmi within half an hour, and I am inclined to think the purity of the air breathed by the dyspeptic quite as important as his régime or his teeth. It must, I think, sooner or later be recognized that many of the increasing ills which it has been the fashion to charge on the "hurry and brain fag," incidental to the high state of civilization and a large population, are in reality due to the greater contamination of the air we breathe by the waste products of that population, and that toxins excreted by the lungs will in time take high rank among these as both potent and insidious. If this should come to pass, the present ideas anent ventilation must be abandoned as utterly futile, and the need will be felt, not of letting a little air in, but of letting waste products out.—Dr. John Hartley, *The London Lancet.*

Alcoholism in Children.—In *Le Progrès Médical*, February 18th, we see that the authorities of Bonn have investigated the question of alcoholism among the pupils of primary schools. The results are far from satisfactory. Sixteen children out of one hundred absolutely refuse to drink milk, because they say that this beverage lacks flavor. Out of two hundred and forty-seven pupils between the ages of seven and eight years, they did not find one who had not already drunk wine, beer, or spirituous liquors. Twenty-five per cent. had not tasted spirituous liquor, but habitually drank beer or wine. Eight per cent. received daily from the hands of their parents a glass of spirituous liquor to "make them grow strong." Some were habituated to the use of cognac. It was shown that children acccustomed to alcohol were intellectually inactive. Those who had for breakfast a glass of liquor or cognac betrayed the fact by their inattention during the first part of the morning. The singular fact was revealed that more young girls drank cognac or liquor than boys. It is highly probable that investigation of this question in the city of Paris would reveal even a worse state of affairs.

The True Function of the Thymus.—Dr. J. Beard (*London Lancet*, January 21st) says that it has fallen to his lot to show that the first leucocytes arise in the thymus from its epithelial cells, and that thus it is the parent source of the leucocytes of the body.

Murphy's Button.—Dr. Christopher Martin, before the Birmingham and Midland Counties Branch of the British Medical Association, showed a Murphy's button (from a case of enterectomy) which had been in the intestine nearly four months, during which time the patient suffered from persistent nausea and retching. So soon as the button was passed these symptoms ceased.

More or Less Good Advice for Doctors.—"Drink less, breathe more; eat less, chew more; ride less, walk more; clothe less, bathe more; worry less, work more: waste less, give more; write less, read more; preach less, practise more."

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THE UNITED STATES AND FOREIGN ARMY RATIONS COMPARED.

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THIS comparison of rations was written four years ago, but not published. The intervening years have brought no facts to light which can in the least alter the views then expressed, and the paper is now published in its original form. I was somewhat startled, in reading this paper over, to find the remarks about camp-infections written so long before our late disasters. It merely proves that every thinking military man knew what would occur, for the facts herein stated have been perfectly well known for a generation. After reading newspaper accounts of our camps I do not wonder that so many were sick, but I am amazed that in some camps all did not perish—that is, if the accounts of the violations of the sanitary instructions issued by the surgeon-general's office are true.

In the *Army and Navy Register* of May 11, 1895, there appeared an account of the rations of the principal nations of Europe. From these data the following comparisons have been made. After reducing all weights to grams the amounts of the chemical constituents were calculated, and the results are tabulated below. The results are stated somewhat differently from what is usually done in such tables, and a few words of explanation are necessary to avoid erroneous conclusions.

Where a maximum and minimum are given, it means that there are several interchangeable rations, and that the largest amount of protein, fat, or carbohydrates are selected, and put in the table. In the same way the minima are taken, but it never happens that any one ration is large enough to give the maximum of all three. If the fats are very large it is generally due to the substitution of bacon for meat, and of course the protein in that case would be very low. The greatest and least amounts of calories are likewise selected, and as the special ration from which they are taken is not in the table, it will be found that they do not correspond to the amounts calculated from all three maxima of protein, carbohydrates, and fats, or all the minima. In other words, the maxima and minima give the limits within which each form of the ration

Nation.	Ration.		Protein.	Fats.	Carbohydrates.	Calories.	Remarks.
			Gm.	Gm.	Gm.		
1. England	1. Home		93	61	244	1,938	This is starvation diet, and the extra food needed for health is purchased and charged against the soldier (about six cents a day), increasing, perhaps doubling, the food value.
	2. Foreign Station, or under canvas at home		111	80	244	2,175	
	3. March		120	80	327	2,550	
	4. War	Max.	165	128	425	3,634	Can be greatly changed to suit climate.
		Min.	133	92	425	3,204	
	Sometimes 2 oz. rum		....	...	....	175	
2. Spain	1. Peace	Max.	147	87	588	3,729	Sufficient for such a mild climate and very moderate work.
		Min.	100	62	500	3,421	
	2. War, on march or in the field	Max.	131	94	522	3,327	Varies enormously according to class of rations issued. Very many extra allowances of money for food.
		Min.	113	55	485	2,550	
	Sometimes 1.7 oz. brandy		...	....	...	150	
3. Austria	1. Peace		155	125	504	3,865	This is augmented by four cents per day for vegetables, etc. On the march a limited emergency ration is used. The war ration is so insufficient that commanders of armies or smaller forces may change, supplement or even double it.
	2. War		165	130	504	3,952	
4. Italy	1. Garrison		111	130	600	4,129	Allowances of one-fifth cent per day for condiments; occasional extra money allowances for food. Excepting the protein, it is a very liberal diet for such a mild country.
	2. Camp		115	133	600	4,163	
	3. Marching		125	143	600	4,307	
	Usually wine added		...	....	....	250	
5. Germany	1. Small rations and portions in garrison and cantonments	Max	150	40	703	3,947	This is what the government may supply. Usually the soldier feeds himself and is given seven cents a day, or more, to reimburse himself. Food eaten is more than this deficient diet.
		Min.	99	40	502	2,827	
	2. Large rations and portions on march or in manœuvres	Max.	172	62	915	4,961	
		Min.	138	57	644	3,744	
	3. Field	Max.	195	151	703	4,786	
		Min.	78	75	515	3,413	
	Commanding general may add 3½ oz. whiskey		....	...	....	268	
6. United States	1. By law	Max.	183	260	621	5,368	Maxima due to fats if all the bacon is used and no meat. The whole ration is supposed to be supplied and eaten.
		Min.	105	103	500	3,712	
	2. Usually in field (by law)	Max.	106	320	540	5,166	
		Min.	64	240	460	4,722	
		Aver.	85	280	500	5,000	
	3. Food actually eaten in cold climate, moderate work, including all extras from gardens and purchases		155	180	597	4,907	
7. France	War	Max.	183	300	690	5,455	Peace ration not stated. It is purchased as needed and charged against soldier. War ration is subject to great augmentation for increased work or cold climate. The commanding officer can augment ration on the march.
		Min.	146	127	520	4,015	
	Add 2⅓ oz. brandy		....	..	....	184	
8. Russia	1. Peace	Max.	233	114	976	5,884	Also allowed money to buy one-half to one and one-half ounces extra meat and one to one and one-half cents for vegetables, salt, butter, lard, and groceries.
		Min.	165	65	740	4,450	
	Add 3 oz. wine		....	....	....	223	
	2. War	Max.	174	62	805	4,583	Extra meat and spirits may be ordered by the commander in chief.
		Min.	149	50	640	3,307	
	Add 4⅓ oz. wine		...	....	....	362	

will be found. Thus it happens that in the United States, if a combination is selected with enough protein the fats are deficient; and if the fats and calories are in proper amount (bacon) the protein is deficient.

The results are not accurate by any means, because the percentage composition of the various articles is never accurately known, and may vary within quite wide limits. For instance, beef, if fat, as usually supplied in good markets, may contain thirty per cent. of fat, while the very lean beef too often supplied in the field may have but four per cent. Likewise the protein may vary. In all such cases an average was selected, and, as it applies to all the cases, the error is of no significance as far as comparison is concerned. The probable error may be as high as 0.1 per cent. of each of the totals.

An accurate comparison of the above eight rations is quite impossible owing to the vastly different systems in vogue for supplying food. For instance, in the United States, the soldier's ration being fixed by law, there are no means of getting increases except by precarious gardens or "exchange" dividends, and if he wants extras the only way to get them is to sell part of his rations to get funds to buy. In England bread and meat in moderate quantity are supplied, but the soldier must pay for the rest, and as much as twenty-five per cent. of his pay may be deducted. In Germany he is furnished only bread (the "ration") and must find the rest (the "portion"), but if the "portion" is supplied officially, the cost up to three and one-quarter cents is charged up against his pay; anything over this is paid by the government. In France the bread and a trifle of sugar and coffee are supplied in kind, the rest being purchased from a mess fund supplied by the war department, and gardens are an essential part of the scheme. In Italy the food is supplied essentially the same as our clothing allowance—that is, so much money per day is allotted to each soldier, and if he is supplied in kind so much money is deducted from his account just as in the case of clothing drawn in our army. In Austria bread only is supplied in peace, and a daily allowance of money given to purchase the rest, somewhat as in France. In Russia bread and meat are supplied in kind, but a money allowance is given for other things and extra meat. In Spain bread only is supplied as in Germany, and the rest is charged up against his pay as in England. These systems are all very well in Europe where the soldiers live in a thickly settled country and can buy, but are totally unsuitable for our frontier; hence the United States is the only nation compelled to supply the soldier's whole food in kind. The table then does not show what the soldiers actually eat; it only shows what is supplied in kind when purchases are not made officially. In Germany, for instance, the soldier in garrison is expected to piece out his ration by food received from home, and there is no way of finding out how much is really eaten. It might be said that when the cost of part of the ration is deducted from the soldier's pay, the latter has been purposely adjusted to stand that drain. The balance of pay drawn by the soldier may look very small, but when we compare the purchasing power of money here and in Europe, it is quite likely that many a foreign soldier is better paid than ours. For the purchase of little extras the Italian soldier with five cents is far better off than our soldier in the far West with fifty cents, when beer is twenty-five to fifty cents a bottle and other things are in proportion.

The table is arranged in the order of the maxima of calories. According to the actual official supplies, the French and Russian soldier can get far more than the American. In Austria the ration may be doubled in the field, making the most liberal ration in the world. The English ration can be greatly augmented in cold climates, but how much is not known. It must therefore be thrown out of the comparison. Thus the United States ration stands exactly in the middle of the list, three being poorer and three being better, and two of the latter very much more liberal at times.

If the nations are arranged in the order of the minima of calories possible, they are as follows: England, 1,938; Spain, 2,550; Germany, 2,827; Russia, 3,307; United States, 3,712; Austria, 3,865; France, 4,015; Italy, 4,129. That is, if each soldier is given the poorest ration possible, three will fare better than the American soldier and three worse, England being again omitted, as we have no sure data in this case.

So much for the exact pounds and ounces; but this is a false method and gives false results. We must take into consideration climate and work. In order to see whether all these soldiers are properly fed, let us take the amount of food necessary for mere existence in a very mild climate. It is said to be as follows: Protein, 85; fat, 50; carbohydrates, 410; calories, 2,470. Now if he is to do work these amounts must be increased to the following: Protein, 145; fat, 72; carbohydrates, 610; calories, 3,745.

If the soldier lives in a cold climate the fats are invariably and instinctively increased, because fat contains two and one-fourth times as much food energy as an equal weight of carbohydrates. For instance, the writer calculated that the soldiers in only very moderate work in Montana ate the following amounts: Protein, 155; fat, 180; carbohydrates, 597; calories, 4,907.

In order to show that these amounts may be still increased, the following table of actual dietaries is copied from Bulletin No. 7 of Storr's Agricultural Station, Connecticut (Atwater & Wood):

NUTRIENTS AND POTENTIAL ENERGY IN DIETARIES OF DIFFERENT PEOPLE.

European, American, and Japanese Dietaries.	Protein.	Fats.	Carbohydrates.	Potential Energy of Nutrients.
	Gm.	Gm.	Gm.	Cal.
1. Weaver, England—time of scarcity	60	28	398	2,140
2. Under-fed laborers, Lombardy, Italy	82	40	362	2,190
3. Trappist monk in cloister; very little exercise	68	11	469	2,305
4. Students, Japan	97	16	438	2,345
5. Lawyer, Munich	80	125	222	2,400
6. Cabinetmaker, Leipsic	77	57	466	2,755
7. Physician, Munich	131	95	327	2,760
8. "Fully-fed" tailors, England	131	39	525	3,055
9. "Well-paid" mechanic, Munich	151	54	479	3,085
10. Carpenter, Munich, Germany	131	68	494	3,195
11. "Hard-worked" weaver, England	151	43	622	3,570
12. Blacksmith, England	176	71	667	4,115
13. Miners at very severe work, Germany	133	113	634	4,195
14. Brickmakers (Italians at contract work), Munich	187	117	675	4,640
15. Brewery laborers, Munich, very severe work	223	113	909	5,690
16. Mechanics (machinists), Connecticut	105	147	399	3,435
17. Glassblowers, East Cambridge, Mass	95	132	481	3,590
18. French-Canadian working-people in Canada	109	109	527	3,620
19. Factory operators, boarding-house, Mass.	114	150	522	4,000
20. Other factory operatives, mechanics, etc., Mass.	127	186	531	4,430
21. French-Canadians, factory operatives, Mass.	118	204	549	4,630
22. Machinist, Boston, Mass	182	254	617	5,640
23. College football team, food eaten	181	292	557	5,740
24. Teamsters, marble workers, etc., Mass	254	363	826	7,805
25. Brickmakers, Mass	180	365	1,150	8,850

A reference to these tables will, of course, show whether a foreign ration is suitable for a mild or cold climate, or for moderate or heavy work. In order to understand this matter we must keep in mind two stupendous blunders which have for many years been made in America in discussions of food questions. It has been the invariable rule to take, as a foundation for all arguments, the estimate for food necessary for health, copied from the works of such men as Moleschott, Voit, Pettenkofer, and others. These estimates were made from calculations of the dietaries of certain foreign nations who are so notoriously underfed that they are very much afflicted with diseases due in whole or part to defective nutrition. The two diseases, "rickets" and "osteomalacia," so common in

Europe, are almost unknown in America in the severe form we see them abroad. Though very many cases of rickets are found in this country, they are almost all among the underfed degenerates of the "slums" of our big cities. We all know of the wonderful mental and physical improvement which takes place in the children and grandchildren of some of our immigrants, due to this increase of food. They are superb when compared to their stupid cousins in the fatherland. Anthropologists have proved that the stature of nations is a question of food supplies, and mental abilities follow the same rule. America's place in the world of nations is partly due to our liberal national food. In recent years this knowledge has dawned upon scientists, and it is now acknowledged that the estimates of Moleschott and the older writers are all wrong, and modern authorities are increasing the old estimates very materially. The second blunder consists in assuming that what is sufficient in Europe is sufficient in the northern parts of our country. This is a twofold blunder. The severity of the climate should have led us to assume that more fats and food energy were needed, and the dietaries in the table show this fact quite graphically. Without a single exception men in America north of 40° north latitude consume a much greater amount of fats than men in similar circumstances in Europe. Then, again, life in America is at a decidedly higher plane of activity. Men are more active mentally and physically, do more work in a day, and accomplish more in a life-time. Now, of course, we need not complicate this matter by referring to the quality of work, for every one knows that at this high pressure such work as scientific investigation is apt to be poorer than that done abroad. But the quantity of work done necessitates more food than is consumed abroad. Here, then, are the three reasons why our soldier must have more food than any soldier in Europe.

With the above points in view we can imagine that the Spanish ration, though perhaps at times somewhat deficient in protein, is in other respects fairly appropriate for the climate. The enormous number of variations and additions to which it is subject may perhaps make it large enough for all practical demands, and there may be some ground for the statement, probably emanating from Spain, that this ration is more liberal than the larger German ration. It is reported of General Weyler that he pronounces the Spanish soldier the best in the world, one reason being given that he can subsist on less food than any other white man.

The Austrian ration is quite liberal, and, as before stated, when it is enlarged to its fullest it is by far the most liberal in the world, in total energy being larger than the very largest United States ration by nearly one-half.

The Italian ration is also extremely liberal for such a climate. The protein is perhaps the only deficiency, but in their system of allowances the soldier may, and probably does, receive considerably more nitrogen in the field, and also in garrison.

The German system of supplying but part of the food, and the soldiers' mess buying the rest, makes it difficult to draw conclusions as to liberality, but as travellers have invariably reported that the soldier is remarkably well nourished, the system is efficient. The allowances officially given in kind seem to produce a liberal diet for ordinary work, but not for severe work in winter.

The French and Russian rations are remarkably liberal.

The United States ration gives enough energy for moderate work, but is not sufficient for very heavy work in cold weather. It has to be supplemented as will be subsequently mentioned.

In forming conclusions as to the liberality of any ration it must be compared with the habitual diet of the nation, otherwise false conclusions are drawn. This can best be illustrated by taking an extreme case. A ration consisting chiefly of rice with oil, and a trifle of meat once a week, and a little hard bread and bacon daily, would be extremely liberal for an army of Chinese coolies, whose usual diet is far inferior to this. Such a ration would be extremely poor for the Europeans. Likewise the Italian ration, though smaller, is far better than ours. Again, take the Russian peasant, who rarely eats meat, but in the army his ration of meat is one-half to one pound, and it may be even double this—an instance of remarkable liberality. Meats, on account of their high price, are not an important item in any European dietary, the natives getting their nitrogen in the form of bread, peas, cheese, etc. To a certain extent it is immaterial how the nitrogen is obtained, but in America fresh meat is demanded for the stimulation it affords, to keep up the high plane of living previously mentioned. Hence when we see eleven ounces of meat daily in an Italian ration it is an evidence of greater liberality than twenty ounces (including bone and wastes), four times a week in the United States.

When a small amount of meat is found in a foreign ration, it will be found that the bread ration is very large, as for instance in Russia, where it may be over two and one-half pounds per day. Thus, when we compare the rations with the national dietaries, our ration, instead of being the most liberal as is generally supposed, is really one of the least liberal. It would not be safe to say that it is the worst, but it is not far from it. We are the only nation which shows a disposition to official pilfering from the ration. It was once far worse than it is now, and the various band, post, regimental, and other funds took every cent they could squeeze out of the flour "savings." Until recently the cost of cooks and bakers was taken from the food.

Now let us examine the statement that our ration has more variety than any other. The variety stated on paper with us is very delusive. It looks very pretty to see the number of things which can be substituted for beef, but in reality a soldier in the majority of posts sees little except beef and fat bacon or pork. Likewise the substitutes for flour are rarely issued; beans are the chief issues of dried vegetables, and of fresh vegetables, potatoes or onions, or potatoes alone, may be the only supplies. The variety of our ration is in theory, not in practice. The same state of affairs may exist in the practice of foreign nations, but from the character of their systems it is scarcely possible. Spain undoubtedly holds the palm for having the most variety, and really life is too short to try to master the immense variety of rations authorized in that army. In every nation mentioned there is a system of daily purchases for the soldiers' mess, and this of course permits of an immense variety not shown on paper. The United States is the only nation in the list which does not supply funds for such purchases of extras, exept by selling part of the ration. The funds from the post exchange are too precarious to mention here, and the post garden is often a delusion. In addition to this there is an ethical reason, more potent in the United States than anywhere else in the world, why the soldier should not be fed on the profits of the sale of alcoholic beverages. No matter what may be our individual opinions, we are compelled to give heed to the opinion of a very large proportion of the respectable element of our population.

In substituting one item for another, we stand in quite a bad light. With us, meat can be substituted only for meat, one form of bread for another form, one kind of vegetables for another kind, etc. If meats are

absent there is no authority for increasing the bread. In several foreign nations there is much more extended latitude, and tables are prepared showing the values by which an article of one kind may be substituted for an article of an entirely different class. This regulation permits the ration being made very flexible to suit extremes of climate, as in the English and Italian services. It is found a necessity in foreign service, and gives a greater possibility of keeping up the strength of the men, when certain foods are not available. It would be a valuable innovation in our service, for instance, if fresh vegetables are not procurable, to allow the bread and meat to be increased, and even though it may be only to increase the company funds, it would give the company commander greater chances to buy.

A comparison of the various rations shows another direction in which we are much worse off than any nation in the world. The merest tyro in mechanics knows that, other things being equal, the work of a machine depends upon the amount of fuel or energy supplied. Man is a heat engine, and the amount of mechanical work he can give out depends likewise upon the amount of fuel or food. This fundamental rule is recognized in every civilized army in the world except ours, for in every other nation there is ample provision made to increase the ration when greater exertion or exposure is necessary. In the German army the amount of the ration is varied according to the principle that "greater physical exertion necessitates an ampler provisioning of man and horse." In Austria the same principle is at the foundation of the regulations for "The commanders of armies, of detached corps or divisions, or even smaller forces in the field, are authorized to change and supplement the ration, or even double it under certain circumstances." Every cavalryman knows that such a rule applies to his horse, the more work the more oats, yet we do not apply the rule to the men. Though the ration alone in an idle garrison may give enough energy, and though the addition from the gardens and exchange funds may give a good diet, yet in the field it is quite possible for the men to suffer from hunger, as they have suffered on numerous occasions on the frontier. Every company commander knows what a hardship it is to go into the field without a large company fund. The plain, unadorned ration without extras is not sufficient to keep a hard-working man in health, a fact which all know who have given the subject extended thought. It is not possible to supply the needful fresh things in large quantities. What a vast improvement it would be to allow department commanders or inferior commanders in the field to increase the ration when necessary, even doubling it as the Austrians can! Even with its greater liberality, every foreign service finds it necessary to issue spirits in the field from time to time. Part of this is due to the fatigue, part to impossibility of getting supplies, and part to the national habits, so that we, who cannot issue spirits, should give a wider latitude in increasing the food allowance when necessary in the field.

The publication of the foreign rations then places our ration, and our system of managing it, in a very bad light. Instead of being one of the best, it is one of the worst. There is ample justification for the complaints which are constantly coming from the line.

We have long known that a supply department is necessary for furnishing the soldier his food in time of war; every other system has been a gross failure and has brought disaster. Private contractors fail, and the soldiers can neither buy nor forage, yet they must be kept strong and healthy by stores purchased and forwarded from the base. The report of the foreign rations shows the startling fact that, in time of peace, we are the only nation in the world which makes a pretence of supplying the whole ration in kind. Every foreign nation supplies only a part, usually the bread, but makes ample provision for the purchase of the balance by the soldiers' mess. The money is either directly appropriated for this purpose and given to the soldier or his mess fund, or it is appropriated in the form of pay, from which the mess expenses or the official value of the ration supplied in kind is deducted. What method is the most liberal it is impossible to determine without investigating each case separately on the ground, determining how the soldier fares, how much of a money balance he receives at the end of the month, and finally determining the purchasing-power of this money. As previously mentioned, a soldier with a balance of four or five dollars at the end of the month is in many parts of the world far better off than our soldier on the frontier with his thirteen.

The point which it would be wise for us to consider is this: The nations of Europe, standing, as they are, ready at any moment to wage a war of self-preservation, invariably adopt the most efficient method in every detail of their armies. Making due allowances for conservatism and the results of the evolution of centuries, it stands to reason that they find it impracticable in time of peace to supply the whole ration in kind. They have found out what we should have found out long ago, that in peace times small messes can never be efficiently supplied from a distance. The purchaser is too far removed from the consumer, and fresh articles which are necessary, and are now missing, can rarely be purchased in sufficient quantity and forwarded long distances. We have partially recognized this fact since the beginning of our national existence, and have devised all sorts of expedients, gardens, company savings, exchange funds, and what not, so that there might be local purchases of fresh food in small quantity to increase variety and efficiency. Notwithstanding the most economical management of this system, we still hear complaints from the line. The cry is still heard, as it has always been heard, that the soldier is not fed so well as he should be. It is nonsense to claim that the soldier in garrison is in any way starved or underfed. Such is not the case. In peace the system is generally highly efficient. It has always been a source of wonder to me, how quickly a pale, ill-nourished, rather sickly-looking recruit will develop into a straight, ruddy-faced, well-nourished soldier. What then is this peculiar complaint which is constantly heard? Is it based on fact, or are the thinking line officers, who are constantly with the men, so mistaken and prejudiced that they cannot see what is before them?

The reason for this complaint is found in the fact that all our methods of increasing the variety, amount, and efficiency of the ration are unreliable, and frequently fail just when they are most in demand. At one post the soldier may have a table fare approaching luxury, and shortly afterward at another post one of severe plainness. No human being can stand such changes without grumbling, even though he gets all the carbon and nitrogen which Moleschott or any other scientist says is necessary. This is beautifully illustrated in two bills of fare published in the *Journal of the American Medical Association*, December 3, 1892. In one the company was blessed with all the resources of good garden, money from exchange dividends, big company fund, etc., while the other had to depend on the ration alone. The contrast is remarkable. In other words, if the soldier could only get an invariable fund for purchasing necessary extras, it would be better. Of course grumbling will never cease, and, if the soldier was ever so bountifully fed, some idiots would always make complaint, oftentimes demanding pound-cake instead of pie.

Some of the line, perhaps all of them, think it wrong to pilfer from the ration to pay bakers, claim-

ing that these men should be paid as the quartermaster's employees are. Such suggestions have long been considered. Others suggest that the meat allowed by law, twenty ounces, be pure meat, not meat plus bone, and if the meat allowance were thus increased there would be ample savings in other directions. Others suggest that butter or lard be a part of the ration, as in Russia. This is a valuable suggestion, because these articles are almost always purchased from the savings. I have long believed, and a study of the foreign systems of feeding soldiers confirms me in my belief, that the company fund should have an unfailing and constant income, as in every other civilized nation. It should receive a certain amount of cash each month, probably two, three, or four cents for each man per day. This, of course, would increase the appropriation by Congress, and could not be accomplished without united efforts—quite impracticable at present, when so many of our best officers are convinced that the United States soldier is already the best-fed soldier in the world. It might be stated that, situated as many of our soldiers are on the frontier, the European systems, useful in thickly settled communities, are utterly impracticable for us. The above-suggested compromise would fit almost every case, because there are few places so remote that at least some extra purchases cannot be made. Each year we find fewer frontier posts and more posts near cities, and we are quickly approaching the conditions existing in Europe; that is, the soldier will soon be quartered where local purchases are possible, and we are quite likely to find ourselves adopting one of the European peace systems, modified to suit our conditions of service. As the bare ration is not sufficient, we must have a reliable method of making it sufficient at all times. Every company commander wants money, and the bare thought of losing dividends from the canteen or exchange is extremely unpleasant. The loss is a disaster.

The progressive military nations of the world have fully awakened to the necessity of extreme liberality in feeding troops. The greatest efforts are being made to lessen the fearful mortality from preventable camp diseases. Many of the epidemics are due to infections following an unsanitary state of the camp, but it is also known that improper feeding has in many cases weakened the men so that they are more liable to become victims of disease. Now, although our knowledge of this subject is not exact, enough is known to make us quite positive that liberal feeding will prevent many of these epidemics. It is known that liberality to the point of extravagance is far cheaper than the fearful mortality which often results from camp epidemics. We consequently see foreign nations studying and remedying defects in their own rations. Knowing full well that attacks on errors must come from within, for no nation would be so foolish as to strengthen its neighbor's army, it is a patriotic duty to search for and remedy defects in our army, no matter how small they may be or where found.

When the above article was written, I was doubtful as to the wisdom of the strong stand taken, and submitted the paper to a line officer who had given years of study to the management of the ration, requesting him to indicate objectionable matter from the standpoint of the line officer. His remarks are quoted, as they show that a responsive chord was struck: "It takes grounds upon which I have stood for years, though I had less understanding of the matter than I have now. . . . I would not change the dot of an 'i' or the crossing of a 't.'"

Our ration has just been increased by the addition of two ounces of dried fruit, and made more flexible by allowing the issue of fish and ham instead of beef. It is to be hoped that other changes will be permitted, as in foreign armies, such as increase of vegetables or bread when meat is not obtainable, and increases of all things in active warfare. This present increase is what always occurs in war; we hope that when war is over the ration will not be reduced again as it was after the Civil War.

ANÆMIA AS OBSERVED IN A GYNÆCOLOGICAL CLINIC, WITH SOME PRACTICAL SUGGESTIONS ON THE DIAGNOSIS OF OBSCURE CASES AND THEIR TREATMENT.[1]

By W. GILL WYLIE, M.D.,
NEW YORK.

When the president honored me by asking me to prepare a paper on chlorosis for this evening, I frankly told him that I was not prepared to write a scientific account of the subject, and he very kindly allowed me to select my part of the subject for this evening. Naturally, I selected anæmia as observed in gynæcological cases.

Having devoted most of my time for twenty years to clinical gynæcology, and having had the advantage of a private hospital where I have studied and treated under the most favorable conditions many cases of anæmia, especially those cases among the better class of people which the general practitioner had failed to cure by medication, I thought it best for me to give you some suggestions on the diagnosis and treatment of obscure cases of anæmia. I will consider anæmia not as a disease *per se*, but as a condition indicating that, by injury or disease of some organ of the body, blood has been lost, or through disease of, or perversion of, function of some organ, cytogenic tissue has failed to make blood, or that disease has injured the blood in such a manner as to cause the abnormal condition of pallor, etc., which we call anæmia. A gynæcologist, relatively speaking, sees more cases of anæmia than other doctors, for the reason that all his patients are women, and you will readily admit that women are more subject to anæmia than men. To prove this statement it would be sufficient to say that women on an average for half their lives menstruate nearly every month and not infrequently bear children, and that these functions are very liable to be disturbed by abnormal and often repeated hemorrhages; but there are some other reasons why women are especially liable to anæmia, which have interested me very much, and they are, in my opinion, very important factors in the etiology of the abnormal conditions causing anæmia, and, when better understood, may lead to the prevention of many cases.

Up to the age of ten or eleven years, the hygienic surroundings of boys and girls are pretty much the same, but after that age among the better class they are very different. The girls' opportunities and inducements to get into the open air for exercise, fresh air, and sunlight, are not only less than boys', but are in many cases restricted by custom, especially girls living in towns and cities, particularly in boarding-schools, normal schools, and schools preparatory to higher education, etc. These girls are not only bred and trained for future duties in life, but they are actually worked harder, at least mentally, between the ages of twelve and eighteen than during any other period of their lives. The special period from twelve to eighteen is unfortunately the time when our girls are changing from girlhood to womanhood. During this time the generative organs make marked growth and

[1] Read at a stated meeting of the Academy of Medicine, May 4, 1899.

assume important functions. My study of the subject has led me to the conclusion that for the generative organs of a girl fully and normally to develop, there must be a surplus of strength and force above what is needed to develop the brain and other organs of the body which are essential to the life of the individual; that if this surplus is to any marked degree used up by excessive development of the mind and emotions, or if, from bad or insufficient food or bad hygienic environment, strength and force are not developed sufficiently to supply the surplus, the generative organs will remain more or less imperfectly developed and naturally become the easy prey of local disease. The results of this imperfect development are small, anteflexed uteri, granular erosion of the os uteri, what we call chronic catarrhal endometritis, so often resulting in dysmenorrhœa, amenorrhœa, sterility, and frequently what we call fungosities causing menorrhagia and consequent anæmia. Later, when these girls marry, on account of the induration of the cervix and inability of the os uteri to dilate enough to allow the child's head to pass without a laceration, the latter fails to heal and leads to subinvolution, retro-displacement, and abnormal vascularity of the endometrium, with menorrhagia and anæmia.

Besides, this abnormal condition of imperfectly developed organs of generation, resulting in local disease, soon affects the nervous system, and this abnormal condition of the nervous system disturbs and interferes with the functions of other organs, especially the digestive organs. This leads to disease or functional disturbances of the blood-making organs or tissues, and best explains some forms of anæmia, especially what we call chlorosis. Chlorosis is strictly confined to women, and occurs almost entirely during the period of development of the generative organs, the average age of chlorotic patients being seventeen and one-half years. If chlorosis comes on later, the generative organs as a rule are still undeveloped even ten years later. I am satisfied that many cases of chlorosis are in a measure due to abnormal uterine hemorrhage, for, according to some of our best clinical observers, the majority of women with chlorosis observed and studied by them menstruate. Strange to say, these learned clinical students forget that amenorrhœa should exist in all well-marked cases of anæmia and chlorosis, and that when such patients menstruate this flowing is not normal menstruation, but is abnormal, and shows itself at more or less regular intervals only from habit or the natural tendency of even a more or less diseased organ to keep up its function. A free divulsion and curetting rarely fail in such cases to prove beyond a doubt the presence of fungous growth or polypi on the endometrium and make the cure of the chlorosis or anæmia more rapid and certain. In many cases this local treatment may prove to be essential to a complete cure. I first curetted in 1881 in chlorotic patients when apparently they menstruated normally. In January, 1886, I read a paper upon this subject before the Alumni Association of the Woman's Hospital, which was published in the "American System of Gynæcology," volume i., page 114.

As a rule, anæmia due to excessive or prolonged uterine hemorrhage, is readily diagnosed and cured by surgical procedures well known and accepted by almost all of the profession, but there are many cases complicated by serious lesions of other organs which are frequently overlooked and which will account for failures to cure the anæmia even though the uterine hemorrhage is radically stopped. It is also true that most cases of hemorrhage of the intestinal tract are easily diagnosticated; but, again, many of these are obscure and often overlooked.

In the careful study and preparation of gynæcological cases for operations in my private hospital, I first learned the great value of time, special diet, laxatives, and a careful examination of all the organs, toward a correct diagnosis of obscure cases of any kind, and especially those cases of anæmia due to hemorrhage or disease of the digestive tract. When a patient comes to me for a diagnosis and opinion, unless the case is a perfectly plain one, both as to her general and local condition, it is my practice to have the patient's bowels moved and examine her undressed in bed before giving an opinion. If an operation is indicated the patient is put to bed for from two to ten days or more. She is put on a diet of peptonized milk, koumyss, and junket, and her bowels are kept free by the use of a simple mixture of castor oil and glycerin, given three times a day. When put to bed, her heart and lungs are carefully examined and the urine is analyzed. Each movement of the bowels is examined and recorded. When the bowels are well moved and gaseous distention is relieved, all the abdominal organs are carefully examined and then the pelvic organs. If the patient is fat or the parts are sensitive and resisting, I do not commit myself to a positive diagnosis until the patient is etherized. Simple as the above rule may seem, the practical clinical results would amaze those who do not habitually practise it. Many obscure cases treated for years for "nervous prostration," "neurasthenia," "melancholia," "hysteria," "chlorosis," "anæmia," etc., with medicine, rest cures, trips to Europe, etc., without success or only temporary relief, may be made clear by demonstrating beyond doubt that the cause of the trouble, or at least the existing complications which have nullified all this general treatment and medication, may be ascribed to a lesion of some important organ.

Ulcers of Stomach.—When there are the characteristic local pain and vomiting of blood, there is no trouble about making a diagnosis of an ulcer of the stomach when this occurs in a young woman; but the large percentage of old scars found in the stomach on autopsy by Dr. William H. Welch and other pathologists is the best proof as to how very many cases are never diagnosed. By the plan given above of an exclusive diet of peptonized milk for several consecutive days, after completely and effectively emptying the whole digestive canal, it will be found that the stools will in some cases plainly indicate that blood is being lost. If there is loss of blood to any extent from an ulcer, the stools will not be yellow or even pale yellowish-white, as they are in some subjects with relatively healthy digestion, but will be in some degree discolored all the way from a bluish-gray to black, according to the amount of blood passing down the canal. If there is a sufficient loss of blood to cause anæmia, it will almost always show in the change of color in the stools with a pure milk diet. If we find the stools abnormal and have the bowels empty and in a large measure free from all gaseous distention, we can by careful palpation, as a rule, soon find the source of the bleeding along the digestive tract. In this way I have made clear many obscure cases—ulcers of the stomach, the duodenum, about the gall ducts, ulceration of the appendix without associated local peritonitis, cancer at various points, a large number of instances of chronic colitis, proctitis, etc. In ulcer of the stomach, the grayish-blue and black milk stools may show intermittently; but, taken together with decided tenderness over the stomach and the absence of signs at other points, this is a very reliable symptom. The prolonged use of a strictly milk diet, later some iron, and selected, easily digested diet with mild laxatives, as indicated, has given me the best results in cases of anæmia due to ulcers of the stomach.

Lately a patient with so-called neurasthenia and anæmia came to me complaining of a dead feeling and

more or less obscure pain on the right side. She had been treated for several years by eminent doctors in Richmond, Va., and Washington, and was for weeks in the hands of two or more of Baltimore's eminent specialists in medicine and gynæcology, many months in Philadelphia under three or more, and came to me as her fourteenth doctor after a prolonged rest cure and stomach washing, during which she had gained flesh but was no better. Under the above plan of investigation, we found that intermittently she had large quantities of mucus in her movements and that there was always some tenderness over the region of the appendix and right ovary. We could make out no disease of either uterus, tubes, or ovaries. Our diagnosis was an open appendix bound in adhesions and some trouble of the gall bladder, for under ether we made out plainly a gall stone; there was a history of peritonitis but none of jaundice. When we opened the abdomen we found the appendix densely fixed in strong adhesions, with the proximal end dilated and cone-shaped, with thickened mucous membrane; we removed from the gall bladder a stone, oval in shape, the size of an English walnut, that evidently acted as a ball-valve to the duct. The patient made a good recovery.

This plan of careful physical examination and emptying the canal has enabled me to detect the cause of the anæmia in a very interesting class of cases in which the appendix proved to be the chief and in some the only cause of the symptoms simulating gastritis, the most marked symptom being frequent nausea with local pain over the epigastrium and right side. Some of these patients have had local uterine and ovarian disease and symptoms attributed to these organs that complicated or confused the case; some have had fever, simulating in one case typhoid fever, but all that were treated had similar local ulcerations and abnormally shaped appendices. Five of the nine were in women, two in men, one in a boy of fourteen years, and one in a child of seven. All had nausea without assignable cause, with pain over the epigastrium at times, and some local but not well-defined pain on the right side. When properly prepared some tenderness was plainly detected over the appendix, and by repeated examinations could be demonstrated as probable cases of disease of the appendix. In patients who were thin and whose abdomen was lax, the appendix could be felt as enlarged through the abdominal wall. In all of the nine the proximal end of the appendix was open and cone-shaped, so that hardened fecal matter or any of the intestinal contents could easily enter the open-mouthed appendix, as I call it. The mucous membrane was thickened and ulcerated, and in several the appendix was more than two or three times the normal size. In every case so far diagnosed and operated upon, there has been complete recovery, and the characteristic nausea and disturbance to digestion and anæmia have been cured. In only one case, that of the boy, had appendicitis been even suspected. The nausea was the marked subjective symptom.

Ulceration of the large intestine is very much more common in women, especially in women over twenty years old who have suffered from uterine disease, an enforced sedentary life, rest cures, etc., than in men. Nearly all gynæcological patients have different degrees of constipation, and it is in these cases especially that the castor-oil-and-glycerin mixture with peptonized milk diet clears up the diagnosis. I could relate case after case which had been treated for years by competent doctors, in which the oil and glycerin would remove hard, dry, floating balls of fecal matter that had lain glued to the old ulcerated spots in the convolutions of the large intestines, and these would come away days and weeks after I myself had thought the bowels empty. Many of these were called cases of melancholia, hysteria, hypochondria, etc. Of course, of these many had badly balanced nervous systems, and this greatly influenced all the subjective symptoms. These cases are frequently associated with relaxed abdominal organs where there are loose kidneys, ptosis of stomach, with omentum and intestines crowding down in the pelvis on top of a retroverted or flexed uterus, and the patients have been treated indefinitely with pessaries for falling of the womb, etc. Such a case in an imperfectly developed or badly balanced woman requires considerable skill and unlimited patience and perseverance to help, and much more to cure.

Another form of trouble that is readily diagnosed when made evident by the above preparatory treatment, which I will call preparatory treatment for obscure disease in women, is proctitis, especially that form in which examination shows small red granular spots, exquisitely sensitive to the touch, and when the patient is examined for the expected displacement or diseased ovary, and the finger presses against the rectum, the pain caused by the proctitis is readily mistaken for the disease of the uterus and ovaries that the doctor is looking for, and which in some cases may exist to a slight degree. The stools of milk show small streaks of blood, which when not from the anus come from the rectum. Passive and free hemorrhage from rectal or anal ulcerations sometimes gives very little pain and may cause acute anæmia of a severe type, the loss of blood not being noticed by the patient unless the stools are watched.

Anæmia caused directly by uterine hemorrhage after labor and abortions is readily recognized and cured by curetting and proper diet, or when proceeding from fibromata by curetting or by a hysterectomy when necessary; but there are not infrequently cases in which the hemorrhage is internal, as in ectopic gestation, when a diagnosis and prompt action often save life. Hemorrhage may occur rapidly into the peritoneum and cause acute anæmia and exhaustion, or it may take place slowly and form a large hæmatocele and cause local pain and anæmia. In rare cases we find hemorrhage occurring into cystic tumors or old adhesions in which repeated hemorrhages have taken place. In these cases the fluid parts of the blood have been reabsorbed or taken up by the lymphatics, leaving a thick, pasty, almost solid, tarry mass of blood pigment, representing red corpuscles from many pints or quarts of blood. Every now and then I have found these masses of pigment, one or more, as large as an egg or an orange, in the broad ligaments near old uterine fibromata which had been treated by electrolysis.

Certain forms of vascular growths sprouting from old and neglected fibromata may cause internal hemorrhage, or blood may escape from the frail and thin sinuses often found between the lobes of old fibroids of the uterus, and fully account for the unexplained condition of extreme anæmia. As a rule, only opening the abdomen clears up such cases. In this class, many patients have been allowed to die by mistakes in diagnosing these as inoperable cases of cancer; others by operators considering them too far gone to risk an operation. It is in this very class of cases that I have found that the preparatory treatment practised by me for reaching a diagnosis in obscure cases, when followed by large quantities of partly digested milk and meat juice, soon fills up the blood-vessels of these exhausted, fast-fading women, and that almost all of them in from one to two weeks can be made ready for abdominal section. This simple means has enabled me to operate successfully on many cases pronounced by others as inoperable. I am perfectly sure that the old habitual bleeder, or one whose heart and organs have become accustomed to extreme anæmia, stands loss of blood, even in large

quantities, so far as heart failure is concerned, better than those who have never had a hemorrhage, and by forced feeding with easily digested food and plenty of water before the operation, the quantity of the blood in the blood-vessels can be readily brought up to practically the normal standard and the quality at least somewhat improved if not made normal in these cases.

When blood is unavoidably lost during operation, it is a mistake not to make good at once the quantity of fluid lost by hemorrhage, and not to wait until the operation is finished. Sixteen years ago I advocated and practised the use of large saline enemata during operation when needed, and would give from one to three quarts during an abdominal section in extremely anæmic patients, at the same time flushing the abdominal cavity with water at 110° F. for any signs of heart failure, and I also gave from ten to twelve ounces of hot water per rectum after operating, for thirst, instead of water by mouth. To-day the use of subcutaneous and intravenous injections of decinormal saline solution has been added to the above. For several years past I have been giving water freely to patients up to within two hours of the operation, and in this way almost always obviate the troublesome thirst which formerly so frequently tortured our patients. Lately I have discovered that if the patient is made to drink too much water shortly before the operation, the hemorrhage during the operation may be very free and troublesome, especially from small vessels and veins. Now we give all the water they want to drink or what we think is needed to make up for what has been lost by the drain caused by emptying and cleaning out thoroughly the whole intestinal canal before the operation. When a period of several days or a week or more has been taken to prepare and diet these cases, the preparatory purging, etc., can be done practically without exhausting the patient.

There are numerous cases of anæmia seen in connection with the large number of instances of what was once called "chronic cellulitis," which is now acknowledged to be almost always a local peritonitis due to salpingitis and ovaritis, caused, in the majority of patients, by septic infection after labor and abortions, often by gonorrhœa, and sometimes by unclean local treatment. To-day this class of cases is so well understood and so readily operated upon by almost all doctors that there is little new to be said. Still we do find some extreme cases of anæmia caused by old septic abscesses that are imperfectly drained, especially those emptying into the intestines, which keep filling and emptying for months and even years. Acute anæmia complicated by septic infection that has lasted long enough to soften and weaken the important organs, as the heart, etc., is by far the most formidable that the gynæcologist has to face, especially if he opens the abdominal cavity, for a certain amount of the blood goes to the large and numerous blood-vessels of the omentum and intestines, etc., on account of the normal intra-abdominal pressure being removed when the abdomen is opened, thus lessening the amount of blood in other vital organs. The chance of shock is greatly increased, and the softened and weak condition of the tissues prevents normal resistance and accommodation, and we lose our patients more readily from any unavoidable hemorrhage. This is why puerperal peritonitis cannot often be cured by operation unless it is done very promptly. Perforation of the intestines in typhoid is another example. Long-standing cases of old septic infection, in which the tissues have become softened and the blood is watery, are also dangerous to operate upon unless carefully prepared, and in many instances it is best to empty and drain any old or large septic abscess before opening the abdomen, if we wish to avoid risk of death from shock or hemorrhage.

SOME OF THE ESSENTIAL FEATURES IN THE DIAGNOSIS AND TREATMENT OF SO-CALLED IDIOPATHIC EPILEPSY.[1]

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In this brief paper, while I can attempt only to outline the essential features in the general management of this class of patients, I wish to call your attention to several important elements which are frequently overlooked or neglected by the general practitioner. My remarks will be confined to the diagnosis and treatment of that form of epilepsy known as idiopathic epilepsy. This designation is applied to those cases in which it is impossible by clinical methods to discover any evidence of organic disease of the skull or its contents. With our advance in scientific knowledge the term "idiopathic" is becoming more restricted, so that to-day it is estimated that only one in five hundred cases may be classed in this category. It seems to me, however, that we may also include in this discussion all of those cases resulting from injury to the skull, which are or have proved unamenable to surgical measures. To meet all practical requirements, epilepsy may be defined as a periodical recurrence of seizures, attended by momentary or prolonged loss of consciousness, with or without convulsions or localized muscular spasm, and occasionally by mental confusion or excitement.

In view of the accepted theory that the affection is due to an inherent instability of the nerve cells in the cerebral cortex, it must still be regarded as a functional disorder. In organic intracranial disease the accompanying or associated epileptic attacks are symptomatic of the existing lesion. From an experience of over twenty years in the observation of the various forms of nervous disease, I can safely say that there is no class of cases which so often proves a *bête noire* to the neurologist and the despair of the general practitioner. These cases are unquestionably among the most unsatisfactory with which we have to deal. In private practice, where such patients or their relatives are in a position to provide all that is required, the conditions are trying enough. But when we have to deal with them at dispensaries or among the poor in general, the problem becomes perplexing. The results are almost always discouraging. To throttle them with drugs is an easy matter; suitable hygienic management is out of the question. Hence, in a large proportion of cases in which the disease is chronic, the benefit to be derived from our attempts at treatment is unpromising from the very beginning. Something, however, must be done to alleviate the suffering of these unfortunates. We do the best we can under such adverse conditions. They are unable to follow medical advice, owing to circumstances beyond their control, and ultimately many of them become a menace to themselves and their surroundings and a charge upon the county in which they reside. It must also be understood that in many of these cases the disease finally becomes complicated with incurable insanity. Their greatest hope for recovery or amelioration should be centred in our State colony for epileptics. This institution, which has existed only a few years, is deserving of the most liberal support from the State treasury, in order to enlarge its usefulness to the extent of making adequate provision at once for the care of all dependent epileptics in this State. If it receives the annual appropriation asked for, its population will be increased to nine hundred patients as soon as the necessary additional

[1] Read at the meeting of the Medical Society of the County of New York, April 24, 1899.

buildings can be erected. At present there is accommodation for three hundred and twenty-two. There are no vacancies. When we consider that there are on file over six hundred applications for admission, and that there are several thousand eligible epileptics in New York State, the inadequacy of its facilities can be readily conceived. The "Craig colony" is thus far a success, and according to its last report most of the patients, through suitable employment, have been enabled not only to defray a large percentage of the cost of their maintenance, but to lead a happier and useful life. The public will have to be educated to the point of giving their moral support and influence to the development of this institution.

I have thus far found it more difficult to convince this class of patients, as well as their friends, as to the advantage to be derived from such care, than to prevail upon them to enter a general hospital for other illness. Of course, we shall always have with us a large number of epileptics who will require medical treatment.

As a general rule, epilepsy may be diagnosticated without much difficulty. If the attack can be witnessed by the physician the diagnosis is usually clear, but this opportunity rarely occurs. If, at the onset of the affection, several paroxysms occur daily or oftener, they are more likely to be of a purely reflex nature, and are cured by the removal of the exciting cause. Genuine epilepsy, however, usually occurs in the beginning in the form of isolated attacks, and later the number becomes more frequent. Uræmic convulsions may at times be indistinguishable in their character from idiopathic epilepsy. In most cases the pulse is of high tension and the heart hypertrophied. This condition should always be recognized if the heart and urine are carefully examined in every case in which epileptic attacks occur. Usually we are obliged to base our diagnosis upon the description of attacks as given by relatives or friends. Hence, the necessity of a searching inquiry and a most arduous and painstaking interrogation. It is sometimes quite difficult to determine, from the description of the attacks as elicited from the family, whether the patient is suffering from a mild form of epilepsy or hysteria. Indeed, it occasionally happens that hysteria and epilepsy exist in the same individual. I shall never forget the case of a little girl, twelve years of age, who was admitted to the hospital under my care about ten years ago. The history as obtained from her mother was not quite clear, but favored the impression that she was suffering from epilepsy. After she had been in the ward a few days, I witnessed a typical epileptic attack. Subsequently a typical hysterical convulsion was witnessed by one of my colleagues. During her sojourn these conditions would alternate, and at times an epileptic attack would be shortly followed by hysteria, or *vice versa*. While such cases are unusual, they are sufficiently frequent to be borne in mind. It is not at all uncommon, however, for an epileptic attack to be followed by considerable emotional disturbance resembling that of true hysteria. In some instances hysteroid attacks follow upon recovery from the epileptic paroxysm.

The statement of the patient as to the character of the attack is generally unreliable, for it is usually "what he has been told." Nevertheless, he may give information of corroborative value which may be utilized as positive or negative evidence. If he can intelligently describe his sensations and actions occurring during the attack, and the behavior of those about him, we are at once convinced that the seizure was not of the usual epileptic type.

Attacks of syncope or vertigo from disordered digestion are easily diagnosticated by any competent observer. The pallor of the face, the weakness or loss of pulse, possibly followed by vomiting, and the absence of any muscular spasm, etc., with the history of the case, should be sufficient to make the diagnosis clear. Hysterical attacks are often quite difficult to differentiate from epilepsy. In some cases a skilled and experienced observer finds it perplexing. As a rule, in the classical forms the diagnosis is easy. One should be thoroughly familiar, however, with the prominent characteristics of the two conditions, and then study the atypical forms of both, which seem to be of more common occurrence. When hysteria is suspected, we must look for the presence of so-called stigmata (areas of anæsthesia, concentric contraction of the visual field, etc.) during the interval between the attacks. The minor epileptic attacks known as petit mal often pass unnoticed for a long period. It is rare for patients with the severe convulsions to be entirely free from these minor attacks. On the other hand, the mild seizures of petit mal have for a long time remained unaccompanied by the severe attacks. They consist of suddenly staring for a moment into space, or unconsciously performing some act which is strikingly at variance with the surroundings, such as unbuttoning the clothing; a stupid fumbling about the person; suddenly dropping objects held in the hand; incoherent speech or unintelligible mumbling, possibly accompanied by drooling or an involuntary discharge of urine, often terminating with a prolonged inspiration and an apparent awakening. The patient himself is rarely aware of a sudden lapse of consciousness. Such attacks may last from a few seconds to a minute or two. One of my patients, an actor, was obliged to discontinue his work, owing to the fact that during the recitation of his part he would unconsciously omit the usual lines and substitute some unintelligible gibberish for a moment, and then continue to proceed in his natural manner. Upon investigation it was discovered, much to his surprise, that he was subject at times to severe convulsions at night during sleep. Epileptic convulsions occurring during sleep may pass unrecognized for years. It is therefore exceedingly important in suspected cases to make a careful investigation as to such a probability, particularly if the patient sleeps alone. If he is found abed unusually late, breathing stertorously and aroused with difficulty; if he frequently awakes with severe headache, soreness in the limbs, and possibly ecchymoses in the conjunctiva or face; or if his urine or fæces have been discharged in the bed, or if he awakes and finds himself lying on the floor, or if his pillow-case is blood-stained from a laceration of the tongue or buccal mucous membrane, or he has an accountable dislocation of the shoulder-joint—all or several of these conditions point to the probability of epileptic convulsions. With such a history, which can be obtained only by painstaking and judicious inquiry, we must at once direct that some one remain with the patient at night in order to form a positive conclusion.

There are other forms of epilepsy, known as "psychical epilepsy" or "the psychical epileptic equivalent," in which, instead of a fit, the patient unconsciously performs accustomed acts automatically and naturally, or there may occur periodical outbursts of maniacal excitement.

As an erroneous diagnosis may lead to many unpleasant if not serious consequences, I have mentioned several prominent points which may aid the practitioner in reaching a definite and correct conclusion before considering treatment.

The successful management of these patients requires every resource of the skilful physician, in conjunction with the intelligent co-operation of some member of the family or an experienced attendant. The patient as well as the attendant or relative should be made to understand clearly that all directions and

advice must be systematically followed for a long period. Epileptics are as a rule unreliable, and often their memory is defective, as a result either of their disease or of the excessive use of bromides. Hence their statements cannot always be accepted, nor can they be depended upon to carry out any systematic plan of treatment.

The general practitioner rarely gives the necessary time to a careful study of the case when a patient with epilepsy consults him. Possibly he finds nothing tangible or demonstrable in the symptomatology to awaken his interest. He therefore accepts the statement of the patient or his friends that he has "fits" or "spells," and at once prescribes bromide. It is always of prime importance that the real nature of such attacks be determined as soon as possible before any specific plan of treatment is instituted. While the true cause of the disease is not always discoverable by our present methods of examination, the exciting cause of attacks may sometimes be recognized. If we take advantage of this fact, it may lead to greater success in the treatment. It is hardly necessary for me to say to medical practitioners that the treatment of a constitutional disease, whether functional or organic, practically means the treatment of the individual patient, and is to be regulated accordingly. Yet this precept, so carefully observed by most of us, is unfortunately often either neglected or of forgotten by many. Hence the frequent failure of therapeutic measures. Every text-book on therapeutics should have it blazoned in bold type on its introductory page, in order to aid in impressing this fundamental principle on the minds of medical students. On the other hand, another and preponderant source of failure in the treatment of such chronic disorders is the patient's lack of perseverance in following directions, and this is only too well known to us all.

After satisfying ourselves as to the epileptic nature of the attacks, it is of paramount importance to determine the physical and mental status of the patient by a careful study of his general condition. If there is any anomaly of refraction or abnormal action of ocular muscles or diseased condition of the naso-pharynx which seems in any way to interfere with his well-being, such abnormities should be rectified. The same rule holds good in regard to other organs. In other words, we must undertake a veritable reconstruction. Upon general principles, it is advisable to have the eyes carefully examined in every case. Errors of refraction should be corrected, whenever necessary, by a competent ophthalmologist. I have often observed an aggravation of all symptoms, when unsuitable glasses have been worn. Should the patient complain of defective vision or other ocular disturbance, it is absolutely essential that such defect be remedied if possible. You are undoubtedly aware that in recent years there has been much discussion regarding the cure of epilepsy by restoring through surgical operation the ocular muscles to a condition of so-called equilibrium, upon the assumption that the absence of such muscular equilibrium is the cause of the disease. This doctrine was first promulgated by Dr. George T. Stevens, and subsequently by Dr. Ambrose L. Ranney, of this city; but thus far their claims have not received substantiation from other observers, and such causal relationship has not been established. In my experience, there are few apparently healthy individuals in whom the eye muscles are always found to come within the range of any established average standard. Like other muscles, their strength is often influenced by the general nervous tone of the system. They differ essentially, however, from other muscles in being influenced in their action by the refractive condition of the eye. Hence the ophthalmological opponents of the above doctrine asseverate that the correction of refractive errors is the essential factor in the treatment of the majority of muscular "insufficiencies." Why so many persons presenting disturbance in eye-muscle balance remain free from epilepsy or other recognized types of nervous disorder is still inexplicable. My own experience in this matter leads me to the inevitable conclusion that there are exceptional instances in which epileptic attacks do not recur after the correction of ocular defects, in the same manner as occasionally happens after the removal of any other source of peripheral irritation. I have yet to be convinced, however, that such treatment alone ever accomplishes a permanent cure, without the addition of suitable hygienic management and further medical treatment.

It is a well-established fact that the removal of healthy ovaries does not cure epilepsy. The operation may diminish temporarily the frequency of the seizures, just as any accidental injury has been known to be followed for a time by the cessation of the attacks. Despite the universal and vigorous protest of neurologists against the indiscriminate removal of healthy ovaries as a cure for epilepsy, I regret to say that the operation is still done by some surgeons in this city. Only within the last year a patient came under my observation, whose history will speak for itself:

Ellen G——, born in England, twenty-two years of age, single. She was normal at birth, and in good health during childhood. She first menstruated at the age of fifteen, and has always been regular. She has no dysmenorrhœa nor symptoms of uterine disorder. The first attack of epilepsy occurred at the sixteenth year. The convulsive seizures at first occurred twice a month, and within the last three years three or four each month. The time of attack bears no relation to the menstrual period. She applied for treatment at one of our metropolitan hospitals, and both ovaries were promptly removed. The epileptic attacks have been more frequent and more severe ever since.

In a paper entitled "Insanity and Oöphorectomy," published twelve years ago,[1] I have shown the futility of the removal of healthy ovaries as a therapeutic measure in cases of insanity. The following conclusions therein expressed, which have since been accepted by all reliable observers, are applicable, *mutatis mutandis*, in the case of epilepsy:

"If, in any case of insanity, the existence of a pathological condition of the uterus or its appendages can be unequivocally demonstrated, and such morbid state be by logical process and clinical evidence indubitably proved to be either the exciting cause or a preponderating contributory influence in the production of the mental derangement, then, and only under such circumstances, after all other methods of treatment have been exhausted, can surgical intervention such as oöphorectomy be considered a legitimate procedure."

This objectionable method of treatment may not always prove so reprehensible after all. Although such a surgical measure is universally looked upon as irrational from a scientific therapeutic standpoint, it seems to me that in many cases it may serve a conservative sociologic purpose in preventing the propagation of epileptic progeny. The justification of such an attitude as an element in controlling the increase of this class of our undesirable population, while not a novel view, is a subject for future medico-legal consideration and discussion.

The habits of these patients should be strictly regulated, and suitable employment provided. Excesses of any kind must be avoided. Onanism, if practised, is to be prevented by appropriate measures. Most epileptics are in the habit of eating rapidly and consuming large quantities of food. As a result, they often suffer from constipation or other disorders of the

[1] New York Medical Journal, June 25, 1887.

alimentary tract. For many years I have made it a rule to give these patients a purgative every week or ten days, and, furthermore, to secure a daily evacuation of the bowels by other suitable means. A warm cleansing bath once a week, and a cool sponge bath daily, followed by a brisk rub with a coarse towel, is a routine method which is adapted to almost every case. Other hydriatric measures are also of value. There is no special diet for epileptics. The quantity and variety of the food should be regulated and selected in each case according to the judgment of the attending physician.

The more I see of epilepsy, the stronger becomes my conviction that it is frequently the result of faulty metabolism, and the absorption of toxic elements into the circulation, which act periodically in predisposed persons as an exciting cause of individual attacks, by interfering with the normal nutrition of the susceptible cortical nerve cells; in other words, that auto-intoxication plays the most important rôle in the persistence of the disease, many attacks originating in afferent impressions starting either in the internal organs or in the periphery, such irritation being transmitted to the cortical cells which are in a condition of inherent instability.

From a series of elaborate investigations Dr. C. A. Herter, of this city, has clearly shown that intestinal putrefaction is greater just before the paroxysm. Is it not irrational, then, to limit the treatment of epilepsy to the administration of sedative drugs, while the patient is continually absorbing the products or by-products of defective digestion? No doubt every neurologist can duplicate the following:

Not long ago a physician consulted me in regard to one of his patients, who was a chronic epileptic. The young woman had been under his care for more than a year, without any improvement. When questioned as to the treatment pursued, I learned that he had prescribed twenty grains of bromide of potassium t.i.d. Nothing further had been done, the physician seeing the patient only once in three or four weeks, and being in utter ignorance as to her general condition. In this particular case unnecessarily large quantities of food were bolted at each meal, and the bowels rarely acted oftener than twice a week. Under more judicious management the attacks at once decreased in frequency and severity, and permanent improvement was the result. Such careless practice is unfortunately a rather too common occurrence, and is merely referred to in this connection as an apt illustration. The time, character, and frequency of attacks should be recorded on a chart especially provided for that purpose. This will insure reliable data as to the course of the disease.

It is well to bear in mind that acute infectious diseases often result in a temporary suspension of the attacks. The same may be said of traumatism, either surgical or accidental. In exceptional instances, in which a warning occurs, the attacks may be aborted by the inhalation of nitrite of amyl, etc. Such opportunity, however, is not sufficiently common to permit of wide application. The treatment during the attack is very simple, and, being familiar to all, does not require special description. When the convulsion has subsided and sleep follows, the patient should be left undisturbed until he awakes. The principal therapeutic measures consist in modifying and improving the constitutional condition, and the prevention of attacks. The general hygienic management as above outlined is of the first importance. Treatment by drugs must be considered subsidiary. Like many others equally experienced, I find, as years have advanced, that the number of drugs wisely selected for the treatment of disease becomes more and more limited, that much good can be accomplished by remedies that have long been familiar to us all, and that their successful use depends upon their judicious administration. Let us triumph in the knowledge that the trend of the present era is toward greater discrimination and restriction in the use of drugs, and increasing attention to general hygienic principles, hydrotherapy, massage, electricity, medical gymnastics, etc.

It is unnecessary to enumerate the drugs that have been recommended for the cure of this disease. Those which have proved most efficacious and merit our support are the various bromide salts, especially bromide of potassium and bromide of sodium, chloral, atropine, nitroglycerin, and digitalis. "Bromide" is the remedy *par excellence* which is to be depended upon in nearly every case. It may not be amiss to state here that the "bromide treatment," to be carried out successfully, requires the exhibition of good judgment and vigilance on the part of the physician. The patient should be seen at least twice a week during the first month, then once a week, and subsequently once or twice a month for a long period. Not only is an erroneous belief prevalent, that every patient presenting "nervous" symptoms should be dosed with bromide, but that the administration of this drug in epilepsy constitutes the entire treatment. It is unwise to prescribe bromide in every case in which epileptic attacks have occurred. Many instances could be narrated in which the attacks were prevented by hygienic management alone. In my opinion, we are not justified in insisting upon the systematic administration of bromide when a patient has only two or three fits in a year, and when their cause can be directly traced to some error in diet or alcoholic excess. I have never observed any advantage from a combination of the various bromides. Bromide of sodium is the preferable preparation. It should be pure, and given well diluted in doses of gr. x. to xx. three times a day, according to its influence upon the attacks and the tolerance of the patient. When attacks occur only at night during sleep, it has been recommended that one large dose of bromide be given before retiring. In my experience, this method has not always accomplished the desired result, for in several cases the attacks were deferred to the following day. While nocturnal attacks may often be prevented by one large dose in the evening, the drug should always be continued in smaller doses during the day.

It must not be forgotten that children tolerate relatively large doses without discomfort. As a rule, the smallest dose that will control the attacks will prove the most satisfactory. This can be determined only after some weeks or months of observation. In order to prevent acne, it is customary to add a few drops of Fowler's solution to each dose, and this, together with attention to the skin and the regulation of the action of the bowels, is usually successful.

Some patients will not tolerate bromide in sufficient quantity to be of value, without interference with their digestion or the production of bromism. Here we may diminish the quantity and substitute gr. v. to xx. of chloral hydrate. At times, the addition of atropine or digitalis proves more efficacious, especially in patients with petit mal.

The same may be said of nitroglycerin. After bromide has been taken effectively for some time, its sudden withdrawal always proves disastrous. The attacks soon return, and sometimes the "status epilepticus" with its dangers to life may supervene. Hence patients and their friends should invariably be informed of and warned against this, from the very beginning of treatment. In an article entitled "Epilepsy as a Cause of Death," [1] I have shown that epileptics occasionally die as a result of a rapid succession of fits producing what is termed the "status epilepticus." In one of the fatal cases reported, six hundred and

[1] New York Medical Journal, March, 1885.

eighty-eight fits occurred within seventy-five hours. Death is usually due to exhaustion, and at the autopsy we find an intense venous congestion of all the internal organs. Such a possibility must always be considered, especially in those cases in which numerous attacks have occurred within twenty-four hours. If this condition is recognized and proper treatment instituted at once, the patient's life may be saved by the use of the ice cap, large doses of chloral per rectum, with or without the hypodermatic injection of hyoscine hydrobromate, venesection, and nutrition administered by means of the nasal tube. In some mild cases, however, recovery may take place spontaneously, *i.e.*, without treatment. In others, in spite of the best care, the patient succumbs.

The early recurrence of attacks after the sudden discontinuance of bromide is an exceedingly common experience in chronic cases. The following will clearly illustrate this inevitable tendency:[1]

During the year 1879 I had personal charge of a ward for epileptics. All of the patients were females, whose ages ranged from sixteen to sixty years, and numbered in the neighborhood of seventy-eight. One of the duties of the nurse was to record the name of each patient and the number of fits occurring in the ward during the same period. The aggregate number would vary from ten to sixty fits during the twenty-four hours. At this time the patients had received no special treatment for several months. As a matter of experiment and observation, every patient in the ward was given the "bromide mixture" two or three times a day, in doses regulated in accordance with the severity of the case, with the result, after ten days' treatment, of reducing the number of convulsions in the ward to one fit daily. At the end of two weeks from the time that the systematic administration of the medicine was first instituted, there were no attacks in the pavilion for three days. The use of the drug was continued without interruption for nearly six weeks, only an occasional paroxysm occurring to disturb the equanimity of the attendants or to indicate that an abortive attempt had been made to sustain the reputation of the pavilion. Through some accidental delay in the delivery of the "drug supplies," the use of the medicine was abruptly discontinued—when, horrible to relate, on the following day nearly sixty fits occurred in the ward.

After all that has been said, we are forced to admit that under the very best of care and management we fail to cure a large proportion of the cases that present themselves. This may be due to the fact that a thoroughly systematized plan of treatment, as herein described, is not inaugurated and persevered in from the very beginning of the affection. As in all other diseases, these patients are usually first seen by the general practitioner, upon whom this responsibility devolves to a greater or lesser extent. The neurologist rarely sees them until the disease is chronic; hence the greater difficulties to be overcome, and the necessity for discipline and a more rigorous method of treatment.

My former teacher and friend, the late Dr. E. C. Seguin (to whom I am indebted for much of my early neurological training), maintained the opinion that "an interval of at least five years, without the slightest seizure, with a gradual reduction of the medicine, should be the necessary preliminary condition to a report of cure"; and with this conservative view we must all agree.

These patients are still with us, and always will be, and, if we cannot cure them all, much can be accomplished in the direction of suppressing the attacks, improving their general condition, and thus preserving them as useful members of society.

56 East Fifty-eighth Street.

[1] New York Medical Journal, March 21, 1885.

AN OLD PLASTER SPLINT MODIFIED, AND A NEW ONE.[1]

By W. C. HOBDY, M.D.,

United States Marine Hospital Service.

In speaking of so hackneyed a topic as this before this body, the writer is well aware that he may subject himself to criticism, as much on account of the extreme age of his subject as his own youth. But an extensive experience in this particular kind of work in a good hospital makes it one of the very few things he can address you on with interest or profit, and it is this that must secure your pardon for his seeming presumption.

To the writer's mind every splint should possess at least these two cardinal virtues, effectiveness and comfort. That is, it should fulfil the surgeon's desire without giving the patient pain. Finding that many of the old bandages did not meet both these conditions, and that, for this reason or some other, many surgeons were in doubt as to the advisability of using plaster at all, the writer decided, as soon as a hospital gave him opportunity, to work with this material enough to determine whether it possessed much or little value, and whether it was possible or not to make from it a splint that would meet both these requirements. Such a splint would indeed be a boon, and no matter how effective it may be, or otherwise gratifying to you, you may be sure your patient will not look upon it as "good," unless it also has that other characteristic, healing without pain. If to these two distinguishing features a third is added—the ability to look in at will, not only on the seat of fracture, but upon the entire front of the limb as well—it would seem that we have come very near the ideal; and it is the writer's desire to describe briefly to you the results of his striving after this.

Take an old cotton sheet, the older the better, of such length that it will reach from the flexure of the knee (mid-popliteal space) around the heel to the ball of the foot, and wide enough above to embrace the posterior and lateral surfaces of the calf, leaving at least two inches of the anterior surface of the limb uncovered. This sheet may be the same width throughout, but will give a smoother and better fit if it is hollowed out a little and made narrower toward the ankle where the leg gets smaller. Using this as a pattern, cut or tear three others of the same size, and stretching one of them on any board or uncovered table that is at hand spread it with a thin layer of plaster of Paris. The plaster should be thickest along the median line of the cloth, should thin out gradually till it ceases a half inch or more from the edges, and be thinnest of all over the ankles. Directly on top of this lay No. 2, and spread it in the same way, remembering to keep the plaster very thin over a triangular area opposite the ankles. Prepare No. 3 in the same way. With good plaster this is usually heavy enough, but any desired thickness may be obtained by adding more layers. The last piece of cloth, which acts simply as a covering for the last layer of plaster, is then put on. This is all the protection that needs to come between the plaster and skin, and is all the writer ever uses, except a little vaseline to anoint the limb. This facilitates removal and never obscures the outline, as cotton does. The fracture having been reduced and the limb cleansed, the patient is put to bed and the injured member supported on some even, gently resisting surface, as a pillow covered with a rubber sheet or some other protective. The splint, still dry on its table, is now brought to the bedside and there moistened with a little warm water containing a handful of salt. This is best done with a sponge, dabbing it on, but too much

[1] Read at a meeting of the Southern Kentucky Medical Association.

wetting should be avoided, as it delays setting. The assistant now raises the limb, and the surgeon, holding the splint by its four corners, slips it under, letting it rest in the groove which the leg has left. The latter is gently lowered into place, any disturbance in alignment is corrected, the foot is flexed to a right angle, and the splint is then folded in smoothly against the sides of the foot and leg. This causes a corner to stick out over each ankle, where, it will be remembered, the plaster was left thinnest, and these corners are turned back toward the heel exactly as the corners of paper are in wrapping a square box. The leg is lifted by catching the plaster on each side of the fracture, and the assistant with a two-inch bandage, beginning near the toes, quickly catches and binds the entire plaster smoothly to the limb. It is now lowered to the pillow and watched for fifteen or twenty minutes, at the end of which time the plaster is hard enough to be left alone. In five or six hours it is quite dry, and the injured leg can be lifted from the pillow with one hand as carelessly as the sound one and with almost as little danger of giving the patient pain. Remove the bandage (no risk attends it), and there is a strip running from knee to toe along which everything is in plain view. Turn back the edges of cloth along which no plaster was spread, and they widen the strip to three inches and face the otherwise rough edge of plaster as well. Moreover, the toes are warm, devoid of all throbbing pain, free from every sign of congestion or impeded circulation. Better still, by gentle springing open the sides of the splint, at least two-thirds of the entire circumference will come into view, so that any fault in the setting can be carefully and accurately corrected.

In its favor we can say without hesitation that it meets the three requirements named, more nearly than any splint we have ever seen. It is far easier to apply than the old plaster splint and at the same time is far less liable to disturb the parts. No splint adapts itself so readily to changes in the limb; for any swelling of the patient's foot or other indication of constriction is absolutely relieved by simply loosening the old bandage, or removing it altogether, and applying a new one. When the reverse is true and the leg becomes smaller, shrinking in the third week from the atrophy of disuse, the splint is just as practical as before, for an increase in the tension of the roller keeps it as snug as ever.

The writer wishes to state that this is not his idea. It was suggested to him by Dr. Marsh, one of his visiting surgeons, while in the General Hospital, Paterson, N. J.

The writer wishes now to describe to you another plaster splint, one of more recent date than the former at any rate, and something more of a novelty. It is the ambulatory splint, adapted only to the various fractures at the ankle joint and those of the middle and lower thirds of the leg, and so called because, after it is applied, the patient immediately begins walking on the injured member, and in a week moves all about the house, in some instances using a crutch or cane, more often not.

Suppose, for illustration, that you are called to a patient who has a fracture involving one or both bones and situated anywhere in the lower third of the leg. After it has been reduced flex the foot to a right angle and take two measurements, one the length of the foot and the other to extend from the tuberosity of the tibia over the internal malleolus, down to the bottom of the heel. Take now a piece of board—a half-inch thick will be heavy enough; saw it four inches longer than the foot measurement and cut it down till it is only a half-inch wider than the ankle. Using the other measurement, procure two strips of wood, each one and one-half inches wide and three-quarters of an inch thick, and long enough to extend two inches below the level of the sole of the foot. Bevel the upper extremity of each so that it fits in against the shoulder made by the tibia as it expands at the knee. These directions may seem complex, but in reality they are not. We have simply procured a piece of board long enough to support the foot and extend two inches beyond both heel and toe, and wide enough to prevent the other two strips, which run along the side of the leg, from touching the malleoli at the ankle. The limb should now be bandaged from toe to knee with a two-inch gauze or muslin bandage, and, if the surgeon desires it, a very light plaster bandage may be applied over the seat of fracture. It will retain the bones in apposition during the subsequent manipulations, but the writer has never found it necessary.

Having at hand a bountiful supply of plaster bandages and ordinary cotton, we are now ready to apply the splint. This is done as follows: Begin at the knee and pad the bony prominences of both tibia and fibula with a light layer of cotton, letting the cotton extend three or four inches down the leg. Catch this with a few turns of plaster bandage. Then as the bandage rolls around the knee, add successively thin layers of cotton, being careful to preserve, or even increase, the shoulder or swell made by the bones where they expand to enter the knee-joint. This padding must be thoroughly done and must extend down the leg on the calf far enough, and be so completely incorporated with the plaster, that it can slip neither up nor down.

The next step is to bind the foot-piece to the bottom of the foot. After padding its superior surface very lightly, it is made fast with plaster also, and here the bandages may be three inches wide. The roller starts on the front of the knee at the upper edge of the circular turns already put on, runs in a straight line to the anterior extremity of the foot-piece, around which it turns, then along the bottom of the board to its posterior extremity, and, turning around this, runs up the posterior surface of the leg to the upper edge of the circular turns behind. The bandage is now reversed, and retraces its course to the starting-point, where it is again reversed, and so on three or four times till the desired thickness is obtained. It is then caught and held in place by circular turns at the knee. It is nothing more than a plaster sling supporting the foot at a right angle and fastened by its two ends above.

Let the surgeon now take a final look at the position of the limb, for it can still be easily seen, and he is ready for the third step, putting on the lateral splints. These, by means of their bevelled upper ends, fit snugly against the shoulders of plaster at the knee, run along the side of the leg over the malleoli, and extend an inch and a half below the foot-piece. They press very lightly on the upper part of the limb, should not touch it at all below the seat of fracture, and cannot touch the ankle because of the width of the foot-piece. Resting as they do against the hard collar of plaster above and the foot-piece below, they cannot compress the limb, and the plaster bandage which holds them in place may be applied as snugly as the surgeon desires. The upper ends should be bandaged very snugly to prevent their spreading and slipping up, and the lower to prevent any motion in an antero-posterior direction. This is done with a narrow roller plaster bandage which begins above with simple turns, but at the ankle should be of the figure-of-eight variety, passing between the projecting ends of the lateral splints, and over the ankle from behind forward and *vice versa*, first from right to left and then from left to right till these ends are bound firmly in position against the foot-piece. This completes the operation, and the plaster is left to set. It drys slowly because of its bulk, but at the end of twelve hours it is usually hard, and the

patient is then given crutches and told to walk. This is at first an awkward procedure, due alike to the timidity of the patient and to the extra weight and length of the injured member. As he becomes accustomed to this, however, and finds, contrary to every expectation, that walking does not give him pain, he throws away first one crutch and then the other and steps out boldly on the broken leg, sometimes using simply a cane, sometimes nothing at all. It is better than three weeks in bed.

The rationale of its action is simple, being exactly the same as that of a brace in hip-joint disease, in which the patient walks on his perineum. The lateral splints transmit the weight from the knee to the ground, at the same time preventing any displacement in their direction, while the foot-piece supports the foot, and, with the bandage which holds it in position, any angular deformity in an antero-posterior direction is prevented.

The objections to the splint are its weight and bulk, which are considerable, owing to the material used. The writer has applied it, using only the inside lateral splint, but even then it was heavy, and the trousers leg, before it could be drawn on, had to be split. It is limited in its field also, not being applicable to fractures above the middle third. It would also seem advisable to wait till the initial swelling has subsided before applying it.

In its favor the writer can say that it has always proven satisfactory, not only to himself but to the patients, and not only in results but while these results were being obtained. He has used it in only a limited number of cases, and of these only two will be cited, the first and the last.

Case I.—An Italian wine-dealer, aged about forty-five years, had dropped a cask on his leg, and came into the hospital with a compound comminuted fracture of the tibia at the middle of the lower third, and a simple fracture of the fibula at the same level. The wound was dressed, a number of pieces of bone were removed, and a moulded splint was applied. Other pieces of bone were removed from time to time, and when finally the wound, after five or six weeks, healed and the splint was removed, it was found that bony union had not taken place. The ambulatory splint was then applied, using, however, only one lateral splint, that on the inside. Then much to the patient's surprise, and possibly chagrin, he was given a pair of crutches and discharged, but was told to return at the end of a week for observation. At the time appointed he walked, unannounced, into the office carrying both crutches on his shoulder and wearing such a smile as would seem to indicate he had been sampling his wares. In reply to a question as to the condition of his leg, he spun around on that wooden peg after the fashion of a top and in a manner that left no doubt as to the splint's effectiveness. He returned home, leaving the crutches, at his own request, behind him, and at the end of four weeks the splint was removed. The result was perfect—no deformity, and absolute immobility.

Case II.—A boy came into the hospital at night with a simple fracture of the tibia at the junction of the middle and lower thirds. A moulded splint was applied and worn for a week. But the weather was so warm, and the little fellow begged so hard to sit up, that this was removed and the ambulatory applied, using in his case two lateral pieces of wood. This was in the afternoon. He began walking the next morning, using at first a crutch and a cane. In less than a week he had discarded the crutch, the cane went a few days later, and from that time he helped to serve meals to the bedridden patients, or distributed clinical charts, just as any boy with two good legs would have done. At the end of the fourth week the splint was removed and showed a perfect result. It might be well to add that in both these cases the initial swelling had subsided, and in the writer's opinion the splint will give better satisfaction if it is applied only after this has taken place.

In conclusion the writer desires to state that he claims no originality in this article except the description. For, though he has never seen any such splints except those which he himself has applied, the idea and possibility were first suggested to him by an article in one of the medical journals some months ago in which the salient points were briefly outlined.

Clinical Department.

STRANGULATION OF THE INTESTINE WITH FEW SYMPTOMS.

By R. CADWALLADER, M.D.,
FALL RIVER MILLS, CAL.

The following case seems sufficiently peculiar to be worth reporting. Thursday afternoon, January 5, 1899, Mr. A—— drove into Bieber, California, the location of my classmate, Dr. A. F. Bradshaw. While attending to some items of business he was taken with a violent pain in the abdomen. Dr. Bradshaw gave him a mixture containing about ten drops of the tincture of opium, which promptly checked the pain. His bowels had been irregular for some time, and an injection of warm water and Epsom salts was administered, which worked freely. While no further symptoms appeared, he passed a restless night, and Dr. Bradshaw felt certain that there was something more than indiscretion of diet as the cause. He sent for me at daylight. I arrived at 1 P.M., at which time we examined the patient together very carefully. His pulse and temperature were normal. There was no pain or tenderness of the abdomen, no vomiting or retching, but a loss of desire for food. Several free movements from the bowels had taken place.

He had an old stab wound of the abdomen, beginning half-way from the ensiform cartilage to the navel and running down obliquely two inches. Quite a large hernia was present, but was easily reducible, and painless. Deep down at the splenic flexure of the colon a mass could be felt which was not tender. I, too, had a sense of danger, but could not tell why. From the mildness of the symptoms we thought of colon impaction, and gave a high enema which brought away hardened fæces, and our tumor disappeared.

We decided to wait for something diagnostic. An ounce each of olive oil and castor oil was given. At midnight he suddenly vomited. The contents of the vessel were fecal in odor. Our symptom had at last appeared.

The patient had been prepared for an operation before this. As soon after daylight as possible, I opened the abdomen and found in the protruding gut a deep mahogany color. Search was made for the trouble and a knuckle of gut was found adhering to the old scar at its upper angle. Over this about six feet of the ileum had run from below forward, while some two feet had gone over behind. These two, tightening down and twisting, had strangulated some six feet of gut. The adhesion was ligated and cut, and the natural position restored.

While suturing the abdomen I had difficulty in replacing the now inflated intestine, which was filled with gas, but I noticed with pleasure that circulation was being restored.

The shock was great, and we put the patient to bed collapsed, livid, with pulse up to 130. He slowly

recovered from this. At 5 P.M. he was conversing with his family; temperature, 99°; pulse, 85. Much flatus had passed. In every way he bade fair to recover. Thirst was counteracted by hot-water injections and sips of hot water.

At 7:30 P.M. the picture was different. He was in collapse, pulse thready and weak at 140, and he died at midnight Saturday, with portions of the gut nearest the wound a brownish, purple black.

Now strangulation is not so rare, nor that the patient should die under such circumstances other than the rule. But it is peculiar that no symptoms of any sort should show themselves until operation was too late. The opium given could not have masked all pain for thirty hours, had there been any, for it caused no drowsiness nor contraction of the pupils by the time I saw him. I know this, for my first question was, how much opium had been given him.

The gut must have been so completely strangulated that the major portion of it was past repair, and painless within a few hours from the onset. We had both anticipated operation and were watching for the first symptom to justify it. Under such care the classical symptoms could not have escaped us had they been present.

A CASE OF TRANSITORY INSANITY.[1]

By THEODORE DILLER, M.D.,

NEUROLOGIST TO ALLEGHENY GENERAL HOSPITAL, PITTSBURG, PA.

SUMMARY: A man aged forty-one years, who had been ailing and somewhat low-spirited for two weeks, became, while at work one morning, suddenly and violently insane with constant motor activity and muttering delirium. The attack terminated abruptly in eighteen hours. J. H——, a laborer, aged forty-one years, single, was admitted to the Allegheny General Hospital, November 4, 1898, in a condition of furious delirium, where he was first seen by Dr. Price, the house physician, who obtained the following history. His mother died of phthisis. There was no family history of any nervous trouble. He had had rheumatism and "chills and fever." He had been addicted to the excessive use of alcohol, especially recently. For about two weeks before admission it had been noted that he was low-spirited. He complained of general bodily aches, headaches, burning of eyes. He supposed that he had "chills and fever," and took large quantities of whiskey and quinine to remedy it.

He had a scar on the left temple, the result of an old injury. In cold weather or after excessive alcoholic indulgence or a cold he has throbbing and burning in the scar. He had never previously been insane. He had been working steadily and was at work on the morning of November 4th, when he became suddenly and violently insane, just after feeling dizzy and chilly. He was at once taken to the Allegheny General Hospital. The delirium was at first wild and furious, and later became muttering and incoherent. Along with the constant muttering of words and phrases, thoroughly incoherent, there was ceaseless motor activity. There were sordes on the teeth and the tongue was dry. An attempt to pass the stomach tube caused a violent convulsive attack. Examination failed to reveal disease of heart, lungs, or kidneys. The temperature was 99°, pulse 100.

About 4 A.M. the next morning the patient's mind cleared up quite suddenly. He complained of feeling sore and stiff, but had only a very indistinct recollection of his conduct during the attack. After the attack, the patient was kept in bed ten days. He complained some of dizziness. His reaction time to mental stimuli was slow for a few days, but subsequently became normal.

On November 13th, the patient had some restlessness and delirium lasting several hours. He was subsequently discharged from the hospital apparently feeling quite well. There was no rise of temperature above 99° at any time.

Remarks: The attack of insanity began suddenly, lasted about eighteen hours, terminated suddenly, and presented the symptoms of acute delirious mania (typhomania) except that there was no rise of temperature.

Cases of this kind have always some interest from the medico-legal point of view. Suppose this patient at the outbreak of his insanity had committed murder. Could it have been shown that the murder was the act of an insane man; or would it have been argued that the crime produced the insanity?

WESTINGHOUSE BUILDING.

[1] Reported at the Pittsburg Academy of Medicine, January 23, 1899.

A RARE OMENTAL TUMOR.

By G. G. EITEL, M.D.,

SURGEON TO ASBURY HOSPITAL, AND CONSULTING SURGEON TO NORTHWESTERN HOSPITAL, MINNEAPOLIS.

THOMAS B——, American, miner, aged forty-four years, five feet eight and one-half inches in height, weight about one hundred and ninety-five pounds. Family history excellent; never had occasion to consult a physician until his present illness. On December 6, 1892, he consulted Dr. T. G. Heine, of Philipsburg, Mont., regarding the enormous size of his abdomen. Examination revealed the presence of fluid in the peritoneal cavity. A trocar was inserted and about three gallons of fluid drawn off.

On the 30th of December, the same year, I saw the patient in consultation with Dr. Heine. His abdomen was again greatly distended with fluid. After a second tapping two and one-half gallons more of light amber-colored fluid was withdrawn. A tumor, situated mainly in the hypogastrium, about seven inches long, four inches broad, and four inches thick, could now be outlined on palpation. It was somewhat movable, of a pulpy or doughy consistency, similar to that of an omental hernia. There was no tenderness, neither was any pain experienced as a result of manipulation. The tumor could be mapped out very easily immediately after the withdrawal of the fluid from the peritoneal cavity, owing to the relaxed condition of the abdominal parietes.

Three days after the second tapping, an operation having been decided upon, an abdominal incision in the median line, five inches in length, was made, directly over the tumor, bringing it into easy view and revealing the following condition: A tumor, approximately in dimensions as above given, consisting of omental tissue, was found. The omentum was rolled inward and upward, producing constriction and partial obstruction to the return circulation, as was evidenced by the enormously distended veins throughout the tumor. In other words, a passive congestion of a greater portion of the omentum was present.

The tumor was unravelled without any difficulty, the omentum spread out over the intestines, after which the enlarged veins at once disappeared from view and the omentum rapidly assumed a normal appearance. A careful examination of the other abdominal viscera failed to reveal any abnormal conditions. The abdominal incision was closed, and it healed by first intention, the patient leaving the hospital for his home ten days after the operation. Three weeks later he resumed his work, and pursued the same without discomfort of any kind. There has been no recurrence

of the trouble after a lapse of four years, during which time the patient has been more or less constantly under observation.

My purpose in reporting the above case is to draw attention to the extreme rarity of the condition, this being the first of its kind in my experience. I have searched the literature treating of omental tumors as extensively as my opportunities allowed, and have failed to find a case parallel to the above.

To those familiar with the pathological conditions occurring within the abdominal cavity, it is generally accepted that, among omental tumors at least, those of tuberculous origin are the most frequently encountered.

In this case I was for some time at a loss to account for the condition. The character of the work performed by the patient, however, gave me a clew to the probable cause of the trouble. His work required him to carry a large and heavily laden wooden box, filled with a certain product, from one part of the quartz-reduction mill to another. In carrying the box, the pressure was inward and upward, always against the abdominal wall, below the transverse colon, bringing the pressure always practically at the same point. Upon returning to work after the operation, he used a wheelbarrow instead of the box in transporting the mill product.

Progress of Medical Science.

The Absorption of Iron.—As the outcome of careful experimental observations, Austin (*Boston Medical and Surgical Journal*, March 2, 1899, p. 201) concludes that iron is being constantly eliminated both in the urine and in the fæces, even during fasting; that raw meat apparently furnishes an available form of iron for absorption under normal conditions; that inorganic iron, as represented by ferrous sulphate, is non-absorbable; that albuminates and peptonates of iron are absorbable but to a limited extent; and that organic iron, of which hæmatin and hæmoglobin are representatives, furnishes the most easily absorbable and the most valuable of all iron preparations.

Venesection and Intravenous Infusion in Eclampsia.—In a report of two cases successfully treated by the above method Dr. Charles N. Cutler says (*Boston Medical and Surgical Journal*, March 30), that a careful search of current literature fails to disclose any detailed reports of cases thus managed. "Assuming that eclampsia is caused by irritation of the nerve centres from retained elements in the blood, it becomes evident that any effort of nature or art which will lessen this irritation will in some degree bring about the desired results. The rapid abstraction of a quantity of this surcharged blood partly accomplishes this end, the introduction of a large quantity of decinormal salt solution dilutes the remaining portion and at the same time, by overloading the vessels, becomes an active and prompt diuretic."

Antistreptococcic Serum in Cerebrospinal Meningitis.—Dr. Charles P. McNabb (*New York Medical Journal*, February 25th) concludes as follows: "(1) The antistreptococcic serum has a decided stimulant effect on the nerve centres in meningitic coma, but the same results might follow a warm saline hypodermoclyster. (2) It probably increases phagocytosis, and in this way has some antidotal effect on the diplococcus intracellularis. (3) It probably prevents purulent infection of the exudate, and thus lessens the danger in all cases in which the patients survive the first three or four days. (4) From observation of these cases it is hoped that an antidiplococcus intracellularis meningitidis serum can be produced which will have a decided effect in controlling the terrible toxæmia of meningitis, and that the associated effect of antistreptococcic serum after the second day will assist in preventing streptococcic infection of the exudate. (5) I am well aware of the fact that the improvement which I saw in these cases may have been a coincidence and not due to the use of the serum, but if it was it was entirely unlike anything I ever saw before in such cases."

The Use of Adrenal Extract as a Hæmostatic.—It has been demonstrated physiologically that extract of the suprarenal body is capable of causing contraction of the smaller arteries and increasing the vascular tension, and such a glandular extract has been employed therapeutically in the treatment of a number of morbid states attended with vasomotor ataxia. The extract has also been applied topically in ophthalmic and nasal practice for the reduction of hyperæmia, and it has been found to control primary and secondary hemorrhage and to increase the anæsthetic effect of cocaine. Lermitte (*British Medical Journal*, February 25, 1899, p. 467) reports its successful employment in a case of persistent intermittent epistaxis of long standing in a boy of six, following diphtheria. On examination of the nasal cavities the only abnormity found was a dilated and angiomatous condition of the vessels. Pledgets of cottonwool saturated with a five-per-cent. solution of cocaine were introduced into each nostril and left *in situ* for five minutes. On withdrawal of these, similar pledgets soaked in a saturated solution of boric acid, containing five grains of adrenal extract to the ounce, were inserted and left for the same time. The applications were made on alternate days for three weeks, then every fourth day for three weeks more. The immediate effect upon the mucous membrane was to produce a condition of ischæmia, and the epistaxis ceased.

Successful Operation for Strangulated Inguinal Hernia in a Boy Two and One-Half Years Old.—Parsons (*British Medical Journal*, April 1, 1899, p. 788) reports the case of a boy, two and one-half years old, who presented an irreducible tumor in the right groin, which had been noticed for three weeks, although there had been abdominal pain for some months. For twenty-four hours there had been pain in the groin, the tumor could not be reduced, and there had been some vomiting, although the bowels had moved. The swelling, smooth and oval and about as large as a plover's egg, was fairly tense and could be displaced somewhat in a lateral direction. It was tender on palpation, and there was no impulse on coughing. Reduction under chloroform narcosis failing, an incision was made over the swelling, and an inguinal hernia found. The sac contained small intestine only, and it was nipped at the ring. The constriction was fairly tight and was relieved by gently insinuating the point of an aneurism needle along the inguinal canal between the gut and the external abdominal ring. The anterior wall of the canal was gently lifted up, and the gut readily returned into the abdominal cavity, without division of the constriction. The sac was ligated as high up as possible, the free ends of the ligature being then threaded on curved needles and passed through the muscular structures of the abdominal wall, one on either side of the ring, and tied. Then deep sutures also were inserted, completely closing the ring, and finally the skin incision was approximated with a continuous catgut suture. Firm union had taken place by the tenth day.

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THE INFECTION PROBLEM OF CANCER.

To the laity bright particular stars appear in the firmament about once in so often, and herald the coming of the new salvation—a cure for consumption, a cure for cholera, a cure for cancer; and some modest, hard-working, dryly scientific man wakes up to find himself a medical Messiah; but with the multitude in the market-place there stand scoffers, even among his own brethren, who point the critical finger at him and prove to one another how inadequate is his theory to account for the unaccountable.

And yet the march of progress in all of the positive sciences has been by steps that did not attain. In fact, all great discoveries have been brought about as much by the men whose theories failed as by those whose theories held, for by the method of elimination the path was narrowed to the point of discovery. As men's hopes lead them to belief, and then let them fall back into doubt, we cannot be too sanguine as to the outcome of this particular phase of the cancer problem that is at present exciting attention, but we believe that for many reasons researches are converging to the truth. The reasons are more philosophic than dogmatic, and are based on broad generalities which express the tendency of modern methods of investigation to enter allied fields of research.

When bacteria were found to be the cause of one infectious disease after another, it was thought that cancer might be included in the list, and several enthusiastic scientists isolated a bacterium which they dedicated to the use of this disease; but the flood of experiments that followed proved that it was quite incapable of causing cancer in animals or man, and it was relegated to the uninteresting position of a non-pathogenic germ.

The bacterial theory appearing untenable, they thought themselves a little nearer when they advanced the idea of a protozoan, which name they held as being sufficiently wide to include any organism of the animal world that might be found as an exciting cause. The closer study of parasitic diseases of lower animals, which has accompanied medical studies of the past few years, added a certain plausibility to this idea.

But the present aspect of the cancer problem, as presented by Sanfelice, Roncali, Bra, and Plimmer, seems to have by analogy something more of truth than what has gone before. That the germ of infection is a vegetable parasite of the class known as yeasts, or moulds, in a wider sense, may be possible, for the nature of the irritative process following infection is analogous to certain forms of new growths that are prevalent throughout the vegetable kingdom. There is a large class of fungoid parasitic diseases in plants that have tumorous excrescences developed. These are known to be caused by abnormal development of adjacent tissues, and slowly affect the life processes of the plant. The organisms that are the exciting cause of these diseases are of the same general class of fungi that are now being held to be the cause of carcinoma, and the gradual impairment of nutrition and spread of the growths are strikingly similar in both classes.

Just what the outcome may be is still a matter of uncertainty. We await further confirmation with hopeful expectancy.

INFANT MORTALITY IN MASSACHUSETTS.

GOOD sanitary measures, in those cities and districts in which they have been efficiently carried out, have greatly decreased the death rate from many diseases. Notwithstanding this fact, the general death rate in many States of this country has but slightly decreased, while in other States it has been for the past forty years virtually at a standstill. The explanation of this seeming anomaly, according to Dr. Samuel W. Abbott, must be sought in the increase of infant mortality, and in a paper printed in the *Journal* of the Massachusetts Association of Boards of Health, December, 1898, the whole question is ably discussed by him. A comparison of infantile mortality in Massachusetts and of several European countries reads as follows:

Ireland, 1884–88, infant mortality per 1,000 births, 94. Sweden, 1881–90, infant mortality per 1,000 births, 97. Scotland, 1885–90, infant mortality per 1,000 births, 120. England, 1885–91, infant mortality per 1,000 births, 144. Belgium, 1881–91, infant mortality per 1,000 births, 159. France, 1885–90, infant mortality per 1,000 births, 165. Holland, 1885–90, infant mortality per 1,000 births, 179. Italy, 1884–91, infant mortality per 1,000 births, 192. Prussia, 1886–92, infant mortality per 1,000 births, 207. Hungary, 1884–97, infant mortality per 1,000 births, 212. Austria, 1886–87, infant mortality per 1,000 births, 246. Saxony, 1886–92, infant mortality per 1,000 births, 281. Bavaria, 1879–88, infant mortality per 1,000 births, 287. Massachusetts, infant mortality per 1,000 births, 161.

The causes of death among infants in Massachusetts from 1892 to 1896 were: from whooping-cough—under one year, 942; one to two years, 339. Cholera infantum—under one year, 11,708; one to two years, 1,663. Diarrhœa—under one year, 1,467; one to two years, 198. Enteritis—under one year, 3,005; one to two years, 502. Diphtheria and croup—under one year, 562; one to two years, 1,276. Tuberculous diseases:

Tabes mesenterica—under one year, 4,344; one to two years, 444. Phthisis—under one year, 624; one to two years, 311. Hydrocephalus—under one year, 1,090; one to two years, 563. Pneumonia—under one year, 3,741; one to two years, 1,720. Bronchitis—under one year, 2,826; one to two years, 819. Cephalitis—under one year, 2,831; one to two years, 1,284. Convulsions—under one year, 2,754; one to two years, 683. Heart disease—under one year, 741; one to two years, 42. Infantile diseases—under one year, 843; one to two years, 5. Premature birth—under one year, 5,064; one to two years, 2. Atrophy and debility—under one year, 5,493; one to two years, 149. From suffocation—under one year, 628; one to two years, 9. Unknown—under one year, 589; one to two years, 57. All other causes—under one year, 5,438; one to two years, 1,675. Making a total under one year of 54,867; one to two years, 11,938.

The diarrhœal diseases of infants were responsible for 18,543 deaths in the five years, or nearly twenty-eight per cent. of the infantile mortality. Dr. Abbott concludes his paper with these words: "That, while very marked improvement has taken place in Massachusetts, in most directions as a result of direct sanitary work on the part of the health authorities of cities and towns, very little progress appears to have been made in limiting the death rate of infants. That an open door in this direction presents itself to boards of health for earnest sanitary work—an opening, too, which presents an encouraging outlook—I have not the least doubt. Beyond all question the one factor in diminishing the infantile death rate lies in the direction of the food supply of this helpless class. Further improvement of the milk supply of our cities is needed; the co-operation of women's sanitary associations, whose organizations should be encouraged; the intimate control by boards of health of the methods of feeding among the laboring classes; the establishment of day nurseries, or crèches, in manufacturing cities under careful sanitary control; and the circulation of literature generally aimed at improvement in this line of sanitary work."

AN ADVERTISING HOSPITAL IN MICHIGAN.

THIS is in verity the age of advertising. The belief appears to be current that if one does not puff one's self, one must either go to the wall or stagnate. In matters commercial no fault can be found with this tendency; in fact, it is a necessity of successful trade and a fundamental principle of business men to commend in exaggerated terms their own wares and incidentally to depreciate those of their rivals. While, however, freely granting that the present is no time "to hide one's light under a bushel," yet at the same time it must be allowed that in the case of professional men there should be a limit to this practice. Of course to contend that a physician has no right to place himself as prominently as possible in the eye of the public would be absurd. But the methods used should be legitimate, and, above all, should not conflict with the unwritten law of medical ethics.

Unhappily of late there have been many conspicuous instances where medical men, unmindful of the dignity of the profession to which they belong, have shown themselves as eager to advertise as the keenest trader. Our notice has recently been drawn to an especially glaring example of this reprehensible conduct on the part of certain members of the medical profession. In Niles, Mich., is a hospital by name St. Luke's. The authorities of this institution have been sending far and wide letters to medical men requesting them to join its staff. The inducements offered will be best understood by copying the application form inclosed in the letters. It is as follows:

"Attention is called to the fact that the list of names of the staff of visiting physicians and surgeons will be printed on our prospectus and widely distributed, which will be an excellent advertisement for all concerned. Patients seeing your name upon our staff will probably send for you. Should you have a specialty, we shall take pleasure in recommending your name to the patient."

Then follows the application form itself, and the remainder of the sheet reads thus:

"Physicians who are in good professional standing will be appointed upon our medical staff. We shall be pleased to enroll your name as such upon our record book. It will bring you prominently before the general public to belong to the staff of St. Luke's Hospital. Our object is to obtain a large and increasing membership to our present staff of physicians and surgeons. This membership is selected from the most successful and skilled practitioners, whose mode of treatment is attracting the general attention of the medical profession. The list of members will be closed shortly. Please fill in this application form, returning it to us by early mail, and we shall take pleasure in placing your name in good standing upon the medical staff of our hospital, entitling you to all the privileges of membership."

The description of the certificates and their price is in a high degree interesting. It appears that these certificates are artistically lithographed, and set forth that "the holder has been regularly appointed to the honorable ranks of visiting and consulting physician of St. Luke's Hospital. These certificates are a great attraction to any physician's office. All the members of our staff are delighted with them, and say that they impart confidence to their visitors and patients. They are truly a most beautiful illustration of the higher art of the lithographer, and any physician ought to be proud to have one hung in his reception room. It is something that increases the practice of the physician and wins him many dollars during the course of the year. These certificates will be delivered free in tubes, by mail or express, and furnished as follows, viz.: Heavy royal linen paper, $3. Imitation of parchment, $4.50. Genuine sheepskin, only $6. We send out all our certificates with your name handsomely engrossed thereon, in an old round-hand style of letters, with dark blue ribbon and a large corporate gold seal affixed thereto, giving it the general appearance of a regular medical college diploma."

The *Oklahoma Medical Journal* has an eloquent edi-

torial panegyric on St. Luke's Hospital, Niles, Mich., further explaining the methods resorted to by its managers:

"Now here comes St. Luke's Hospital, Niles, Mich., and says to the medical profession: 'Send us your surgical cases, and we will pay you in cash one-half of our fee we get from your patient, fifty per cent., and we will take care of your patients and return them to you, and you will not lose them.' It is a good thing for physicians to be associated with such a hospital, and it will certainly be a financial benefit for them. There are thousands of people who come from the extreme Eastern States to visit our country, and the same is true from this point. There are thousands who go East, and it seems to us that St. Luke's Hospital, of Niles, Mich., which is just ninety-four miles from Chicago on the Michigan Central Railroad, is a convenient midway stopping-place for the sick. Any way it is a nice thing to be associated with progressive medical men, and to have the evidence of your connection with them in the shape of their handsome sheepskin hanging on the walls of your reception room. It shows your visitor that you are up to the times and keep pace with advanced and liberal-minded practitioners; and again you never know just when you are going to want the conveniences of just such a hospital as St. Luke's is."

These remarkable effusions have been quoted at length, with the fear of wearying our readers ever before our eyes, merely with the object of showing up the barefaced schemes to gull the public, to procure money and advertisement adopted by St. Luke's Hospital, Niles, and by other institutions conducted on similar lines. Further comment is needless, as "he who runs may read."

A LADY DOCTOR ON THE GIRL OF TO-DAY.

Dr. Arabella Kenealy, in the April number of *The Nineteenth Century*, writes in an interesting manner on the physical development of the present-day girl, contrasting her, not altogether to her advantage, with the girl of a generation or two back. While admitting that the out-of-door life she now leads, and her indulgence in most of the sports and games which at one time were regarded as peculiar to the male sex, have exerted a very beneficial effect upon her physique and health, Dr. Kenealy still thinks that in many respects the girl of the period is inferior to her sister of fifty years ago. The writer, referring to an up-to-date girl, concludes an able article as follows: "She no longer preserves and brews. She no longer weaves and fashions. Her children are nursed, fed, clothed, taught, and trained by hirelings; her sick are tended by the professional nurse, her guests are entertained by paid performers. What truly remains which may be called her duties? What is left to her indeed but boredom? Let me not be regarded as merely bringing a grave indictment against the sex with which I have every sympathy by virtue of belonging to it, and least of all let me be understood to deprecate the right of every woman to be educated and self-supporting. All that I urge is that what she does she shall do in a womanly way, striving against disability to preserve her womanhood as being the best of her possessions. All that I would warn her against is the error into which she has been temporarily led, the error of supposing there is any nobler sphere than that of bearing and training fine types of humanity, seeing that this is the sole business wherewith the mightiest forces of the universe and evolution are concerned. But these things to be wholly worthy must be intelligently done. The reign of mere instinctive motherhood is waning; the era of intelligent motherhood approaches. And the first care of intelligent motherhood will be to see that none of these powers which belong to her highest development, and through her to the highest development of the race, shall be impoverished, debased, or misapplied. And in that day she will have ceased from regarding muscle as her worthiest possession."

THE DELETERIOUS EFFECTS OF EXPOSURE TO COMPRESSED AIR.

The human organism is capable of adapting itself to the most varied physical conditions, and it bears changes between extremes with remarkable equanimity, provided the transition be not too sudden. It is quite extraordinary to what extreme degrees both of rarefaction and of condensation of atmosphere men may accommodate themselves. Those made to breathe rarefied air, either at considerable elevations above sea-level or in an experimental chamber, exhibit dyspnœa and palpitation of the heart, with acceleration of breathing and of heart-action, lowering of vascular tension, vertigo, nausea, a sense of mental exhilaration, and increase in the number of red blood-corpuscles and the hæmoglobin, all of which appear in intensity and duration in proportion to the rapidity and degree of the change in amospheric pressure.

Exposure to increased atmospheric pressure, on the other hand, causes primarily acceleration of pulse with heightening of vascular tension, slowing of respiration, discomfort in the ears, and a sense of exhilaration. This condition has been most carefully studied by a number of observers in the workers in caissons sunk for the erection of the foundations for bridges and the like, and a good account of the attendant phenomena, together with a consideration of their mode of production, is given by Oliver in *The Lancet* for February 11, 1899, page 354. The men are usually exposed to a pressure of two or three times the normal, the transition in each direction being made gradually. The directly resulting symptoms are generally of little consequence, although the operators can safely work only from two to four hours at a time. The most marked disturbances are usually observed on the return to normal air-pressure; and they are comparable in a magnified degree to those caused by change from the normal to a rarefied atmosphere.

Oliver reports the case of a man, thirty-five years old, who had been working in a caisson at a depth of seventy-seven feet and under a pressure of from thirty-

one to thirty-five pounds to the square inch, and who while returning to his home was suddenly seized with numbness and tingling in the legs, nausea, vomiting, vertigo, and loss of consciousness. After twelve hours consciousness returned, and pain and muscular soreness and stiffness all over the body were complained of. The legs appeared powerless. There was considerable headache, with buzzing in the ears and rather profuse perspiration. On the patient's arising the next morning the nose began to bleed and consciousness was lost again. When consciousness was restored the arms also were found powerless; agonizing muscular pain was present, together with rigidity; breathing was difficult; there were nausea, throbbing in the head, and oppression of the chest; the patient was cold, collapsed, and perspiring freely; the pupils were normal; the pulse was slow and disturbed. On the following day the muscular rigidity had disappeared, the knee jerks were exaggerated, sensation was unimpaired, and the dyspnœa was less. The urine and the function of the bladder were normal. Vomiting occurred, and somewhat noisy delirium set in. The patient began in a little while to improve, and slowly progressed to recovery.

The symptoms observed in those compelled to work under great atmospheric pressure have been attributed to three factors: carbon-dioxide poisoning, mechanical congestion of the viscera, and increased solution by the blood of the atmospheric gases, with their liberation on returning to normal pressure. It is not impossible that the first and second play some small part at least in the etiology, but the greatest importance is to be attached to the third. The gases absorbed during compression are so quickly set free at ordinary air-pressure, but not given off, that they act as emboli in the blood-vessels, particularly of the brain and the spinal cord.

The evil effects of exposure to compressed air are to be prevented by avoiding abrupt changes in air pressure—one minute for every three pounds of pressure being considered not too much. The purity of the atmosphere should be maintained in as high a degree as possible. Only healthy men should be employed, and they should engage in the work for not more than from two to four hours at a time. When symptoms have developed morphine may be used to relieve pain; heat be applied to the extremities, and stimulants carefully administered, to overcome collapse; strychnine be injected hypodermically when the breathing is impaired; and ergot be given to relieve internal congestion.

A Hospital at Bay Ridge.—A movement is under way for the establishment of a hospital, dispensary, and training-school for nurses in the Bay Ridge section of Brooklyn, and the State board of charities has been requested to approve of its incorporation. The institution would be known as the Bay Ridge Hospital. If the incorporation is approved, the hospital will probably be built on Second Avenue, near Sixty-fifth Street, Bay Ridge.

News of the Week.

The Sad Mistake of an Ophthalmologist. — The Montreal papers report the case of a lad who had lost the sight of one eye through having accidentally wounded it with a penknife. The other eye having recently shown sympathetic trouble, the removal of the sightless organ was advised and consented to. Through some inexplicable error the operator removed the sound eye, and so the total blindness which the operation was designed to prevent was produced.

Coney Island to be Cleaned.—The health authorities of the Borough of Brooklyn have begun a campaign against unsanitary methods prevailing in a part of Coney Island. West End proprietors have made a practice of dumping garbage and other refuse about the sands surrounding their resorts, but this year the health laws will be strictly enforced, and all violators will be arrested and punished. The reformation will, however, be strictly physical and material, and the moral condition will, according to all signs, remain as emphatically negative as before.

The Multifarious Duties of a Health-Board Doctor.—According to reports in the daily papers, Dr. M. B. Feeney, chief sanitary superintendent of the Borough of Manhattan, is about to present a report to the board of health declaring that some of the pillars supporting the Manhattan Railway Company's elevated structure in Greenwich Street and in Battery Park are in a precarious state of health, their pedal extremities especially having suffered greatly in consequence of holes and fissures in their metal shoes. In fact, he reports that the entire elevated structure is threatened with astasia. It is given to few medical men to be able to diagnose railway diseases by auscultation and percussion of metal columns. Indeed, New York has many reasons to be proud of its unique health board.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending May 13, 1899. May 5th.—Passed Assistant Surgeon J. C. Rosenbleuth, orders assigning to *Newport* moderated; ordered to the *Vermont.* May 8th. Medical Inspector J. E. Wise detached from the Asiatic station and ordered to the naval hospital, Yokohama, Japan, for treatment; thence home to wait orders. Passed Assistant Surgeon L. L. Young, sick leave extended two months. May 9th.—Surgeon F. Rogers detached from the *Buffalo,* directed to be examined for promotion May 15th, and ordered home to wait orders. Passed Assistant Surgeon J. C. Rosenbleuth detached from the *Vermont* and ordered to the *Buffalo.* Assistant Surgeon R. S. Blakeman detached from the *Buffalo* and ordered home to wait orders. May 10th. —Passed Assistant Surgeon C. M. De Valin detached from the *Brooklyn* and ordered home to wait orders. Assistant Surgeon W. B. Grove detached from the *Vicksburg* when put out of commission, and ordered to the *Brooklyn.* May 11th.—Assistant Surgeon F. M.

Furlong detached from the *Scindia* when put out of commission, and ordered to the *Independence* temporarily.

The American Laryngological Association will hold its twentieth annual meeting in Chicago on May 22d, 23d, and 24th. Dr. W. E. Casselberry, of Chicago, is president, and Dr. H. L. Swain, of New Haven, secretary. All interested in laryngology are invited to attend.

Meeting of Proctologists at Columbus.—The following are titles of the papers promised for the first meeting of rectal specialists, to be held at Columbus, Ohio, during the meeting of the American Medical Association, June 6–9, 1899: "The Importance of Giving Rectal Diseases Special Study," by Dr. Joseph M. Mathews, Louisville; "Pruritus Ani," by Dr. James P. Tuttle, New York City; "Surgical Treatment of Non-Malignant Stricture of the Rectum," by Dr. Joseph B. Bacon, Chicago; "A Modification of Whitehead's Operation for Hemorrhoids," by Dr. Samuel T. Earle, Jr., Baltimore; "The Proctoscope as a Factor in the Diagnosis and Treatment of Simple Ulceration of the Rectum," by Dr. Leon Straus, St. Louis; "A Consideration of the Various Forms of Ulceration of the Rectum," by Dr. Lewis H. Adler, Jr., Philadelphia; "Rectal Carcinoma—Excision and Subsequent Colotomy," by Dr. B. Merrill Ricketts, Cincinnati; "The Limitations of the Kraske Operation," by Dr. Charles C. Allison, Omaha; "The Act of Defecation," by Dr. Thomas Charles Martin, Cleveland; "Constipation Considered from the Standpoint of the Proctologist," by Dr. A. Bennett Cooke, Nashville; "Paper and Exhibition of New Instruments," by Dr. S. G. Gant, Kansas City; and "Rectal Adenomata," by Dr. William M. Beach, Pittsburg.

International Temperance Congress.—The seventh international congress for the prevention of the abuse of alcoholic drinks was held in Paris during the first week in April. The number of members was one thousand, about one-half of whom were foreigners. The president was Dr. Legrain. The number of communications read was about one hundred and fifty. Total abstinence was not favored by all the French members, who believed that the fight should be made, for the present at least, against the consumption of spirits rather than against wine or beer or cider. The reasons given were that these drinks are not so dangerous as spirits, and a campaign for the promotion of abstinence from them would, in a wine- and cider-making country like France, or in a beer-consuming country like Germany, be foredoomed to failure. On one of the days the Paris Municipal Council gave a reception at the Hôtel de Ville, where, in addition to milk, coffee, tea, and other temperance drinks, champagne was offered to the members of the congress.

New York County Medical Association.—The committee on transportation of the New York County Medical Association is arranging for rates, train service, etc., for the Columbus meeting of the American Medical Association to be held on June 6th, 7th, 8th, and 9th. Those intending to go, and desiring to take advantage of such arrangements as may be made, will kindly address as soon as possible Dr. Parker Syms, chairman of committee, No. 50 West Forty-seventh Street.

Prof. J. C. Webster, of McGill University, Montreal, formerly of the University of Edinburgh, has accepted the chair of obstetrics and gynæcology in Rush Medical College.

New Hampshire Medical Society.—The one hundred and eighth anniversary meeting of this society will be held Thursday and Friday, May 25 and 26, 1899, in Concord. The president of the society is Dr. George H. Saltmarsh, of Lakeport, and the secretary Dr. Granville P. Conn, of Concord.

Nicholas Senn, M.D., LL.D.—The honorary degree of doctor of laws was conferred upon Dr. Nicholas Senn by the trustees of Jefferson Medical College at the commencement held May 15th.

The Army Medical Service is likely to receive some attention at the forthcoming meeting of the American Medical Association. A committee has been appointed by the Philadelphia local delegates to bring up the matter of political appointments among other questions to be discussed.

The Third Annual Meeting of the Maryland Public Health Association was held in Baltimore on Thursday and Friday, May 11th and 12th, in the hall of the medical and chirurgical faculty. Dr. Edward M. Schaeffer, the president, made the opening address, in which he appealed for a physical education in the schools on an equal plane with the mental. He also paid a tribute to the late Dr. George H. Rohé. Dr. C. F. Langworthy, of the Department of Agriculture in Washington, then read a paper on "Foods, their Nutrition and Economic Value," in which he spoke of experiments conducted in his department under Professor Atwater to determine the effects of various foods and record their nutritive power, heat and energy productions. The apparatus used was called a "respiration calorimeter." In the afternoon papers were read on "The Cumulative Power of Infection in Neglected Barnyards," "The State Inspection of Cattle as regards the Consumption of Milk," "The Right of the State to Enforce Vaccination," and the "Need of a Municipal Hospital for Infectious Diseases." The subjects discussed on Friday were cigarette smoking among growing boys, and rural sanitation. Dr. A. K. Bond also read a paper on "Some Causes of Ill-health among City Children," in which various municipal reforms were urged, and papers on "The Janitor in the Public Schools" and "Voice Training and Hygiene" were read and discussed. The officers elected for the ensuing year were: *President*, Mr. Charles R. Hartshorne, of Brighton; *Vice-Presidents*, Dr. Howard Bratton, of Elkton; Dr. T. M. Cheney, of Dunkirk; Dr. John F. Hancock, Mrs. Daniel Miller, and Miss Eliza Ridgely, of Baltimore; *Secretary*, Dr. John S. Fulton; *Assistant Secretary*, Dr. Samuel J. Fort, of Ellicott City; *Treasurer*, Dr. L. Gibbons Smart, of Roland Park.

St. John's Guild.—Dr. Henry Koplik has been appointed visiting physician to the hospitals of this society.

Dr. Henry M. Silver has been transferred from the medical to the surgical visiting staff of Gouverneurs Hospital.

"Dr." Eddy claims to have "educated" four thousand pupils in her school of science. The course extends over a period of three weeks and the fee is $300. The exorbitant fees charged by graduates for their "cures" are not to be wondered at.

New York State Medical Association.—The fifteenth annual meeting of the third district branch of the New York State Medical Association will be held at Elmira, Thursday, June 1, 1899, in the rooms of the Elmira Academy of Medicine, corner of Baldwin and Carroll streets. The president of the third district branch is Dr. F. D. Reese, and the secretary Dr. F. W. Higgins, of Cortland.

American Gynæcological Society, Programme of the Next Meeting.—The twenty-fourth annual meeting will be held at Philadelphia, May 23d, 24th, and 25th. The sessions will be held in the hall of the College of Physicians, corner of Thirteenth and Locust streets. The profession is cordially invited to attend.

Philadelphia Wakes Up.—After an epidemic of typhoid fever of shameful proportions and duration, in the course of which some thousand lives have been sacrificed, the authorities of Philadelphia have decided to see what can be done. About the first of this month the city council passed a bill authorizing the appointment of three expert engineers to investigate and report as to the best method of improving the quality of the water, and in accordance with the provisions of the measure Mayor Ashbridge has appointed Rudolph Hering, of New York, Samuel Gray, of Providence, R. I., and Joseph M. Wilson, of Philadelphia, to make the investigation and report. They are required to make a preliminary report in not more than sixty days and a final report in not more than three months. An appropriation of $25,000 was made to meet the expenses of the investigation.

Illegal Practitioners, Christian and Other.—The board of health, aroused by several deaths among the clientèle of various Christian Scientists, faith healers, and other fake practitioners, has instructed the sanitary superintendent to direct the assistant sanitary superintendents of the various boroughs of this city to use all means in their power to discover and locate persons practising medicine without diplomas. In his letter of instruction the president of the board writes: "Recent events have shown this department that uneducated, ignorant, and those whom I believe to be evil-minded persons go from house to house and take advantage of their more ignorant neighbors, professing that they are endowed with wonderful healing faculties. If this system is allowed to proceed great evil will result. In your endeavors to suppress the practice I would suggest that you immediately communicate with the medical societies of the several counties comprising the entire greater city, and either make an engagement to meet in consultation to advise what is the best method to adopt, or receive their communications in writing and afterward adopt some broad system that the object in view may be accomplished."

Dr. Henry M. Weeks, of Trenton, has been appointed superintendent of the New Jersey State village of epileptics. He is now second assistant physician and pathologist at the State Hospital for the Insane near Trenton, and there will soon be a competitive examination of candidates to fill the vacancy.

Address on Cancer at the Baltimore Centennial Meeting.—At the centennial meeting of the medical and chirurgical faculty of the State of Maryland, Dr. Roswell Park, of Buffalo, N. Y., delivered an address on "Cancer as a Parasitic Disease." In our report of the meeting, in the issue of May 6th, this address was incorrectly attributed to Dr. J. C. Edgar, instead of to Dr. Park.

The New York State Board of Health, at its annual meeting in Albany, on May 11th, re-elected Dr. Daniel Lewis, of New York City, as its president. Dr. F. W. Smith, of Syracuse, and Dr. S. Case Jones, of Rochester, were re-elected on the tuberculosis commission.

Cancer Home Opened.—The "Servants of Relief" have moved into the new Home for Incurable Cancer at 426 Water Street. Mrs. Rose Hawthorne Lathrop reports that $9,500 was paid for the new home, leaving a mortgage of $5,000.

The Alleged Overpayment to the Post-Graduate.—One of the directors of the Post-Graduate School and Hospital writes that the commissioners of accounts were incorrect in their report concerning overpayment made to this institution. He says: "We do not receive money except in the babies' wards on the per capita basis, and there in the babies' wards no charge is made against us. We are allowed $25,000 annually for 'the charitable uses and purposes of the New York Post-Graduate Medical School and Hospital,' and we are not asked to give any statement as to how many free patients we treat, nor are we ordered by law to do so, except for the babies, when we turn in an exact statement every three months, receiving 38 cents a day for each pauper baby."

The Cancer Microbes.—Dr. Roux, of the Pasteur Institute in Paris, disclaims all knowledge of Dr. Bra, the discoverer of an alleged microbe of cancer, and affirms his disbelief in the authenticity of the discovery.

Another cancer microbe has been described by Dr. Plimmer, of London. He claims to have isolated certain micro-organisms which, he believes, stand in causal relationship to cancerous growths. These organisms possess great vitality, and multiply under conditions which prove fatal to most other pathogenic microbes. They are capable of cultivation, and inoculation of animals with these cultures, Dr. Plimmer

says, is followed by the production of carcinoma. The organism differs *in toto* from the one described by Dr. Bra, of Paris.

Delegates to the Tuberculosis Congress.—The daily papers report that Dr. de Schweinitz, of Washington, and Dr. J. C. Boyd, of the medical corps of the navy, have been appointed as delegates to the congress for the study of tuberculosis, to be held in Berlin during the coming week.

Shorter Hours for Drug Clerks.—The testimony given at the recent hearing for and against the bill passed by the legislature to shorten the hours of labor of New York City drug clerks was so conflicting and puzzling that the governor is at a loss whether to veto or approve it, and he has, therefore, sent a delegate to visit the pharmacists and drug clerks in this city and ascertain their views. If the delegate reports that a majority of these clerks favor the bill it is said the governor will sign it.

Horwitz Medal of the Johns Hopkins University.—By the will of Benjamin F. Horwitz, of Baltimore, $5,000 is bequeathed to Johns Hopkins University, the income to be used annually in bestowing a medal upon such member of the medical profession, either in this country or abroad, who has accomplished most during the preceding year in ameliorating the sufferings of mankind in the way of medical discoveries. This bequest is in honor of the memory of Dr. Eugene Horwitz, son of the testator.

A Police Diagnosis.—A woman was arrested last week and arraigned in one of the police courts on a charge of intoxication. The magistrate saw that she answered his questions incoherently and seemed to be on the verge of a collapse. Without having her examined by a doctor or having any other investigation made, he committed her to an institution for the custody of fallen women. When she arrived there the house surgeon saw "alcoholism" written on the court papers that accompanied her, and so entered the case on his books, also without making an investigation. Early the following morning the woman died, and an autopsy showed that the cause of death was pneumonia. This is but one more instance of what is being demonstrated almost daily, that it is unsafe for a magistrate to accept the diagnosis of a police officer, and inexcusable for a physician to accept the diagnosis of a magistrate.

The Long Island College Hospital.—The following changes in the faculty are announced: Prof. A. J. C. Skene has been appointed Emeritus professor of gynæcology. The chairs of obstetrics and gynæcology have been combined under Prof. Charles Jewett, as professor of obstetrics and gynæcology. The department of bacteriology has been added to that of pathology under Prof. J. M. Van Cott, as professor of pathology and bacteriology. The department of histology has been assigned to Prof. W. W. Browning, professor of anatomy. The following appointments have been made: Henry H. Morton, clinical professor of genito-urinary diseases; Robert L. Dickinson, assistant professor of obstetrics; Gordon R. Hall, assistant professor of the practice of medicine; George McNaughton and Ernest Palmer, lecturers on gynæcology; Wilbur H. Seymour, lecturer on histology and instructor in pathology; C. E. Gunther, instructor in clinical medicine; Clarence R. Hyde, H. P. de Forest, and Jarvis S. Wight, Jr., instructors in obstetric manikin; Homer E. Fraser, assistant to the chair of genito-urinary diseases; Briton H. Richardson, assistant to the chair of anatomy; Walter Truslow, William S. Hubbard, and Joseph O. Kilgarriff, assistants to the chair of orthopædics; John C. Cardwell, demonstrator of physiology; Sewall Matheson and Daniel C. Mangan, assistants to the chair of chemistry and toxicology. A summer course has been established, to begin May 18th and to close about August 1st. This will consist of recitations and hospital clinics.

Philadelphia Hospital.—Mayor Ashbridge has issued an order decreeing that hereafter resident physicians in the Philadelphia Hospital must be actual residents of the city.

Medico-Legal Society of Philadelphia.—At the regular quarterly meeting, Dr. W. M. L. Coplin presented a communication on various medico-legal topics.

A Pure-Food Bill.—The Illinois legislature recently passed an act to provide for the appointment of a State food commissioner and to prevent adulteration, fraud, and deception in the manufacture and sale of articles of food. Under this act it will be the duty of the commissioner to enforce all laws that now exist or that may hereafter be enacted in the State regarding the production, manufacture, or sale of dairy products, or the adulteration of any article of food, and to inspect any article of food made or offered for sale within the State, which he may have reason to believe to be unhealthful or adulterated, and to prosecute any person or corporation engaged in the manufacture or sale of such articles of food.

An International Congress of Women will be held in London from June 26th to July 4th. The programme is divided into five sections, under the headings of Education, Professions for Women, Legislative and Industrial Questions, Political and Social Work. In the "Professional Section" the following subjects are proposed for treatment and discussion:—Professions: (*a*) Professions open to women; (*b*) effect upon domestic life of the admission of women to the professions. Medicine: (*a*) Training and qualifications of medical women; (*b*) women's work as physicians in private practice and under Government. Nursing: (*a*) The professional training and status of nurses; (*b*) the organization of trained nurses; alumnæ associations; (*c*) the future organization of the nursing profession.

Tuberculosis among the Queen's Cows.—A tuberculin test was recently made at Windsor of a herd of forty short-horn and Jersey cows belonging to the Queen, and most of them were found to react to the test. The cows were all apparently in good condition,

but as a result of the test thirty-two cows appeared to be tuberculous, their temperature rising to 104° F. or more; five cows appeared to be healthy, and three were doubtful. The whole herd was killed and the carcasses were examined at the Royal Veterinary College. Of thirty-four animals whose temperature had risen above 104° F., thirty-three were found to be tuberculous. The remaining animal was not tuberculous, but had a diseased uterus. The rise in this case was sudden, and did not occur until after the twelfth hour. Of four cows which did not react, three were found to be free from tubercle, and the fourth had one small caseous gland in which tubercle bacilli were found. The two remaining cows which were classed as doubtful were both found to be tuberculous. In the formation of the new dairy herd at Windsor, all animals purchased for it will be tested, and admitted only when they do not react.

Dr. Winslow W. Skinner, formerly of this city, is now practising in Florence, Italy.

Philadelphia Hospital.—The rule requiring resident physicians in the Philadelphia Hospital to be chosen from residents of Philadelphia has been rescinded.

Deputy Quarantine Physician.—Dr. Louis T. Kennedy, of Pottsville, Pa., has been appointed by Governor Stone deputy quarantine physician at Philadelphia.

Bucks County (Pa.) Medical Society.—At the annual meeting held at Doylestown on May 3d Dr. H. A. Hare read a paper on "The Complications of Typhoid Fever," and Dr. J. M. Baldy one on a gynæcological subject.

Pathological Society of Philadelphia.—At the annual conversational meeting, held April 27th, Dr. Russell H. Chittenden, of Yale and Columbia universities, delivered an address on auto-intoxication, in which he pointed out the complexity of the process and its dependence essentially upon cellular metabolism.

Associated Health Authorities of New Jersey.—At a meeting held at Woodbury on May 1st Dr. M. P. Ravenel, of Philadelphia, read a paper entitled "Some Health Problems," dwelling more especially upon typhoid fever and tuberculosis. Dr. Luther M. Halsey read a paper on "Compulsory Vaccination." Mr. Warner Underwood presented a communication entitled "Good Health." Dr. T. E. Parker presented interesting statistics bearing upon reduction in the death rate.

Healthy Cities.—Not long since Dr. Benjafield, of Hobart, Tasmania, made a claim in *The Lancet* that that town was "the healthiest city in the world," because it had a death rate of only 14 per 1,000. In reply to this, Dr. Willoughby, the medical officer of health of Eastbourne, England, says that the death rate of that place, the population of which is five thousand larger than that of Hobart, was only 10.8 in 1898, and less than 10 per 1,000 in 1897. We can beat Dr. Benjafield's figures in many towns in this country. In Toledo, Ohio, for example, a city of nearly one hundred and fifty thousand inhabitants, the death rate last year, according to the report of Dr. J. T. Woods, health officer, was 10.3. In Erie, Pa., during the past three years the rate has varied from 10.53 to 10.94.

Gilding Refined Gold.—Some estimable citizens of Philadelphia are not satisfied with the normal stillness of that quiet town, and recently presented to the mayor a petition for a "quiet Sabbath"!

A Government Monopoly of Quinine.—The Italian government has intimated its intention of taking into its own hands the manufacture of quinine, from which certain factories in Genoa and Milan are making large profits.

Typhus Fever has been mildly epidemic in South London during the past winter. It is only recently that the existence of the disease was discovered, the cases having been diagnosed as typhoid fever, pneumonia, or influenza.

Increase in Female Inebriety.—A London magistrate recently stated that when he became a stipendiary, fourteen years ago, half the charges in which drunkenness was involved were against men. Now, in Marylebone, and he believed at the other metropolitan police courts, three-fourths of the charges of drunkenness were against women.

Famine in Russia.—Letters to the English papers from the famine provinces of Russia tell a harrowing story of distress. In the province of Kazan, the centre of the famine district, the Red Cross Society alone is feeding 132,000 people. The relief delegate in the province of Ufa reports that peasants ran after him and begged for food, on their knees in the snow.

Restricted Kissing in Florida.—The Florida legislature received a memorial recently from the Florida Medical Association, calling attention to the rapid spread of tuberculosis, and asking legislation to prevent its spread. Among the measures advocated were the prohibition of indiscriminate kissing and a law against spitting in public places.

Medical Press Club of the Mississippi Valley.—An association of medical journalists has been formed with this title, in St. Louis, the immediate object being to further in every way possible the success of the proposed world's fair in 1903. The fair is to be held in St. Louis to celebrate the centennial of the Louisiana purchase. The charter members of the club and the journals they represent are as follows: Dr. C. H. Hughes, *Alienist and Neurologist;* Dr. C. H. Powell, *North American Journal of Diagnosis and Practice;* Dr. John Punton, *Kansas City Medical Index*, Kansas City; Dr. S. C. Martin, Jr., *Medical Era;* Dr. H. M. Whelpley, *Meyer Brothers' Druggist;* Dr. Frank P. Norbury and Dr. T. A. Hopkins, *Medical Fortnightly;* Dr. Heber Robarts, *American X-Ray Journal;* Dr. I. N. Love, *Medical Mirror;* Dr. O. F. Ball, *Tri-State Medical Journal;* Dr. C. W. Lillie, *St. Louis Clinique;* Charles Wood Fassett, *Medical Herald;* Dr. L. T. Riesmeyer, *Medical Review.*

Dr. J. H. Jackson, of Fall River, Mass., has been elected registrar of the College of Physicians and Surgeons, Boston, to succeed the late Dr. Edward P. Hurd.

Dr. Owen Copp, superintendent of the Massachusetts Hospital for Epileptics, has been appointed executive officer for the Massachusetts State board of insanity.

A Society of Rectal Specialists.—At the time of the meeting of the American Medical Association at Columbus, June 6th to 9th, there will be a meeting of the medical men engaged in the practice of proctology, for the purpose of organizing a permanent society for the study of their speciality. Physicians interested in the project are requested to address Dr. William M. Beach, 515 Penn Avenue, Pittsburg, Pa.

Psychic Study Club is the name of a society recently organized in this city, the aims of which are announced to be "to collect and sustain a library containing all literature of importance that is germane to the subject; to establish headquarters; to organize branch psychic study clubs throughout the country; to hold regular meetings for scientific study and inspection of so-called psychics or mediums; and for public lectures."

The Cause of Blindness in Children.—Dr. Förster, director of the Ophthalmological Clinic at Breslau, has recently published some instructive statistics regarding the causes, other than ophthalmia neonatorum, of blindness in children. According to these, injury to the eyesight, with consequent blindness, is mostly occasioned by carelessness, more than twenty per cent. of these cases being caused by playing with sharp instruments, and twelve per cent. by malicious injury, such as blows, stone-throwing, whipping, and unsuitable means of correction. Similar results are shown by the statistics of most other ophthalmological clinics. Boissoneau, of Paris, reports that of nine hundred and thirty-nine children who were blind in one or both eyes, more than three hundred and fifty were injured by shooting and by the explosion of percussion caps.

State and Federal Quarantine at San Francisco.—For a long time there has been a clash of authority between the Federal and the State quarantine officials at the port of San Francisco, and in despair of settlement in any other way the question was recently submitted to the superior court. The judges decided that both the State of California and the United States have constitutional authority to establish quarantine, but that in this specific instance the authority of the Federal government was paramount. The President had issued a proclamation stating that the State quarantine was ineffective, and had therefore appointed an officer to establish new regulations sufficiently stringent to meet the necessities of the case. The court decided that this action was entirely within the authority of the President in an emergency of the sort that existed, and that therefore his appointee had supreme authority to the exclusion of the State official. An appeal has been taken to the supreme court of the State of California.

Dr. Max Durand-Fardël, author of "Maladies des Vieillards" and president of the French Société d'Hydrologie, died recently at Vichy.

Dr. Henry P. Newman, of Chicago, treasurer of the American Medical Association, has been elected to succeed the late Dr. Etheridge as professor of gynæcology in the Chicago Policlinic.

Quarantine Physician for the Port of Philadelphia.—The governor of Pennsylvania has appointed Dr. Henry D. Heller, of Hellerstown, formerly State senator, quarantine physician for the port of Philadelphia, in place of Dr. Henry C. Boenning.

The Lycoming County (Pa.) Medical Society.—The fiftieth anniversary meeting of this society was held on April 14th in Williamsport. The retiring president, Dr. Sidney Davis, of Milton, delivered an address with the title, "How to Retain Your Grip on the Practice of Medicine."

Additions to German Hospital, Philadelphia.—An enlarged and improved laundry plant, a completely equipped hydrotherapeutic establishment, a new mortuary chamber and pathological institute, and additions and improvements to the fourth, fifth, and sixth stories were, on April 12th, formally transferred as a gift to the trustees of the German Hospital of Philadelphia, by its president, Mr. John D. Lankenau.

Death of Dr. W. H. McEnroe.—Dr. William Hale McEnroe, of this city, died May 16th, of heart disease, at his home, 145 West Eighty-second street. He had been suffering from cardiac trouble for several years. On Tuesday night he partook of a late supper, and retired to rest apparently in the best of health, but at 1:30 o'clock in the morning his wife was aroused from her sleep by her husband's heavy breathing. She sent a messenger for Dr. Alfred R. Crain, but when he reached the house Dr. McEnroe was dead. Dr. McEnroe was born in Virginia, and was graduated from the Medical School of New York University in the class of 1883. Later he was chosen assistant professor of materia medica in the same institution. He was one of the organizers of the free dispensary at Bellevue Hospital, and devoted much of his time to it. His recent work on materia medica was the crowning labor of his life.

The Beth Israel Hospital.—The trustees of this institution have decided to erect a new building on the corner of Jefferson and Cherry streets which is expected to be one of the most perfectly equipped hospitals in this city. The wards will have large circular ends, exposed on all sides, with no interior courts or shafts of any description. The building provides for one hundred and twenty-one beds for patients and sixty-five for the staff and servants. There will be wards with twenty beds in each on the second and third floors; twelve consultation rooms, a children's ward of sixteen beds, twenty-five private rooms, laboratories, apothecary shops, lavatories, an operating-theatre, a mortuary chamber, isolation rooms, an acci-

dent ward, and a synagogue. The seventh or roof floor will be devoted to the convalescent patients. Filtered fresh air will be introduced to the wards.

Opposition to Female Medical Students in Germany.—Medical students in Berlin are actively opposed to the entrance of female medical students into the university and hospitals. They have formulated an appeal which has been placarded on the notice boards of the Berlin University and the clinical hospitals.

Medical Stock Companies.—A bill has been introduced into the British Parliament making it "unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife," and providing that "if any company contravenes this enactment it shall be liable on summary conviction to a fine not exceeding $5 for every day during which the contravention happens."

Reclaiming Malarial Regions in Italy.—It is reported that some American capitalists have offered to provide the money for the development of some nine million acres of land in Italy, the cultivation of which has been abandoned because of malaria. Lack of capital has hitherto prevented the institution of the sanitary works necessary for the reclamation of the land.

The Lenval Prize.—The regulations for its award which were passed at the fifth international otological congress, held at Florence in 1895, are as follows: In connection with the international congresses of otology, the sum of 3,000 francs has been given by Baron Léon de Lenval, of Nice, to found a prize, bearing the name of "The Lenval Prize." The interest of this sum, which has accumulated between one international otological congress and the next, shall be awarded to the author of the most marked progress bearing on the practical treatment of affections of hearing during that time, or to the inventor of any new apparatus, which is readily portable and improves considerably the hearing-power of deaf persons. The sum of 3,000 francs will be deposited in a public bank in the hands of the president of the jury. The International Otological Congress will elect a jury each time, consisting of seven members. The jury will pronounce its decision at the closing meeting of each congress. The first award of this prize will be announced at the International Otological Congress to be held in London, from August 8 to 11, 1899. The members of the jury, as at present constituted, are Drs. Politzer, of Vienna, Benni, of Warsaw, Gellé, of Paris, Pritchard, of London, St. John Roosa, of New York, Kirchner, of Würzburg, and Grazzi, of Florence. All persons desirous of competing for the prize are requested to communicate without delay with Mr. Cresswell Baber, secretary of the congress, 46 Brunswick Square, Brighton, England, stating the facts on which their claim is based.

Bequest to the Johns Hopkins.—A horse dealer in Maryland, who was recently a patient in the Johns Hopkins Hospital in Baltimore, was so pleased with the care he received that he has bequeathed his body to the university authorities for the benefit of science.

Dr. D. Llewellyn Beaver died at Reading, Pa., on May 2d, at the age of eighty-four years. He was graduated from the Pennsylvania Medical College in 1841.

The Late Dr. Charles Mason.—The following minutes were adopted at a meeting of the medical staff of the Peekskill Hospital, held on May 9, 1899:

"Dr. Charles Mason, who, for nearly a quarter of a century, lived and practised his profession for the benefit of the residents of Peekskill and vicinity, is now no more. Stricken in robust health, while performing his duty, he passed quietly over to the silent majority, April 19, 1899.

"We, the members of the medical staff of the Peekskill Hospital, in commemoration of the fact that he was one of the original board, and that his work as such was of the type of recognized ability, desire to lay this, a tribute of worth, upon his tomb, and to convey to his family an expression of our sincere sympathy.

"CHARLES C. KNIGHT, *President;* ALEXANDER O. SNOWDEN, *Vice-President;* PERLEY H. MASON, E. DE MOTTE LYON, P. W. O'BRIEN, STEPHEN F. HORTON, WILLIAM M. CARHART, CHARLES A. KNIGHT; CHARLES R. F. GREENE, *Secretary.*"

Obituary Notes.—DR. S. W. BUDD, of Petersburg, Va., died on May 13th at the Johns Hopkins Hospital in Baltimore. He was born in Dinwiddie County, Va., in 1852, and had practised medicine in Petersburg since 1877. He graduated from Bellevue Medical College in 1875, and was house surgeon in Roosevelt Hospital, New York, in 1875 and 1876.—DR. JOHN H. MURFEE, of Okolona, Miss., was killed on May 9th, by a lawyer with whom he had an altercation over the amount of a bill. The lawyer plunged a knife into Dr. Murfee's throat and killed him. The doctor's son then shot the lawyer, killing him instantly, and was in turn attacked by the lawyer's brother. The two fired simultaneously, and both dropped dead. Dr. Murfee was a graduate of the College of Physicians and Surgeons in this city in the class of 1867. He had practised since graduation in Okolona, and was one of the best-known physicians in that part of Mississippi.—DR. ROBERT S. TRACY was drowned in the Saranac River on April 1st. He was an inmate of the sanatorium at Saranac Lake, where he had gone to recover his health, being threatened with pulmonary trouble. On the night of his disappearance he attended a social gathering and at midnight he set out to walk alone to the hospital. He was not again seen alive. It was thought that he had fallen into the river, as a recent break was seen in the ice. A net was therefore stretched across the river below the village to catch the body in case it floated down when the ice broke up, and it was found on Wednesday of last week. Dr. Tracy was twenty-seven years old and was graduated from the College of Physicians and Surgeons in the class of 1896. He served as interne at the New York Hospital and afterward at the Sloane Maternity Hospital.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 4, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

Anæmia as Observed in Gynæcological Practice, with Some Practical Suggestions as to Diagnosis and Treatment.—DR. W. GILL WYLIE read a paper with this title (see page 705).

The Present Status of Our Knowledge of Chlorosis.—DR. THOMAS S. SOUTHWORTH read this paper. He said that in the present state of our knowledge it was still convenient to adopt the clinical division of anæmias into primary and secondary. The term "splenic anæmia," though convenient, had no status, being really a mixed class. The hæmatologists had discarded the old term "simple anæmia." He advocated the division of anæmias into (1) primary and (2) secondary, or symptomatic, subdividing the first class into (*a*) pernicious anæmia and (*b*) chlorosis. The anæmias associated with rickets, carcinoma, tuberculosis, and syphilis were conveniently described as "chloro-anæmia." Chlorosis was now looked upon as a primary anæmia, characterized by a marked diminution in the percentage of hæmoglobin, and occurring almost exclusively in quite young women. This affection most commonly made its appearance in the eighteenth year, and could not be said to be very closely connected with menstruation. It was a matter of general absorption that relief of constipation favored recovery in chlorosis, but this did not warrant the acceptance of Sir Andrew Clark's theory of fecal anæmia. Moreover, it had been shown that urobilin, which was invariably increased in the urine when the red blood cells were extensively destroyed, was actually decreased in the urine of chlorotics. The suggestion that chlorosis was an infectious disease rested chiefly upon the occurrence of thrombosis in exceptional cases, and the occasional occurrence of fever. The effect of poor cooking, poor or coarse food, hurried meals, long hours of work in close rooms, and change of climate should not be lost sight of, and it was well to remember that even among the better classes some of these factors might exist.

Symptoms.—In the early stage of chlorosis there might be only a disinclination to engage in the usual pursuits or recreations, or there might be only headache. The subcutaneous fat was often increased rather than decreased. It was usually not long before the digestion was affected, and often the appetite was perverted. Some cases of chlorosis were accompanied by a mild febrile movement, but the existence of such fever should lead the physician to exclude very carefully other diseases, particularly tuberculosis, before accepting this view. The venous hum in the vessels of the neck was more commonly heard on the right side, and vascular murmurs were audible over various parts of the heart. The more diffused the murmur, the greater the probability that the heart was dilated. Dyspnœa was usually a troublesome symptom, and it increased in severity as the hæmoglobin diminished. According to the researches of Thayer and Cabot it appeared that in chlorosis there was about half the normal quantity of hæmoglobin for each blood cell present. In uncomplicated cases there was no leucocytosis. Although there was no increase in the total number of the white corpuscles, there was, at times, a relative increase in the mononuclear form—the so-called lymphocytes. The water in the blood plasma was increased, while the quantity of albumin was diminished.

Treatment.—The treatment of chlorosis was something more than the haphazard administration of iron. When fatigue had been contributory, rest in bed might be imperative. Change of environment and stimulation of the skin by baths and massage were excellent adjuvants. The digestion would require attention in accordance with well-known principles. The diet should be simple; milk could usually be given freely. Raw meat and eggs were also useful. The question as to whether inorganic iron was directly absorbed into the blood was still an open one, but the efficacy of the inorganic salts of iron could not be denied. Nearly all the iron given by the mouth could be recovered in the stools. The weight of opinion seemed to be in favor of the use of inorganic preparations in massive doses. An excellent combination was betanaphthol and Blaud's pills. Relief of constipation was imperative, and for this purpose cascara and the usual saline purgatives were appropriate. Arsenic had little effect alone on chlorosis, but seemed to assist the action of the iron. Strychnine and digitalis would promptly increase the patient's feeling of well-being. The treatment should not be abandoned as soon as the subjective symptoms had been relieved, but should be persisted in until the hæmoglobin reached or approximated the normal.

The Stomach in Chlorosis.—DR. M. MANGES said that in chlorosis there was almost always not only a hyperacidity, but also a hyperchlorhydria. The motility of the stomach was usually normal. This showed that forced feeding need not be feared unless it was impossible to exclude gastric ulcer. Meynert had claimed that chlorosis was due to a disturbance of the sympathetic system resulting from a downward displacement of the stomach and a reflex influence on the spleen. His statement had apparently been supported at the time by a series of clinical proofs, but further investigation had shown that his observations had been vitiated by overdistending the stomach with his effervescent mixtures. Oliver had shown that in a resting person from twenty-five to one hundred per cent. more blood circulated through the arteries, and this fact, together with the increased nutrition obtainable while resting, would fully account for the benefit to be derived from its use in chlorosis.

Chlorosis not a Secondary Anæmia.—DR. JAMES EWING said that there was often much difficulty in distinguishing chlorosis from secondary anæmia by an examination of the blood, yet it should be differentiated from the secondary anæmias. The chief feature of chlorosis was the loss of the hæmoglobin, while it was only rather exceptionally an important feature in secondary anæmias. The changes in the blood in chlorosis were quite different from those in secondary anæmias. From a clinical standpoint chlorosis was also a distinct entity. The anæmia of chlorosis was entirely out of proportion to any cause which might be found; on the other hand, the anæmia of malignant disease and of the infectious disorders was in proportion to the condition present. In considering the etiology of chlorosis one must look for some agent which would specially attack and destroy the hæmoglobin. It was probable that this cause would be found in some disorder of the intestinal tract, but the fact that chlorosis occurred at that period of life immediately following the establishment of menstruation should not be forgotten.

DR. LEONARD WEBER said that many of the cases of chlorosis occurring in his practice had been among the poor. If a case of supposed chlorosis did not recover promptly under the general plan of treatment laid down in the papers, one could rest assured that the diagnosis was incorrect. The treatment could not

be expected to be successful if continued for only a month—it was more often necessary to keep it up for several months. The best remedy was the Blaud pill, but if on breaking one of these pills open the freshly exposed surface appeared reddish the iron had already become oxidized, and the preparation was inert. The next best preparation was Valette's mass—oxide of iron and sugar. The Blaud's pills should never be taken on an empty stomach because of the liability of causing gastric irritation by the action of the contained potassium salt. He had been pleased to hear the remarks of Dr. Wylie on the important aid to diagnosis rendered by evacuating the intestinal tract, for, while we all knew this to be true, we sometimes neglected it, and then were apt to go astray.

Dr. Eugene Coleman Savidge said he thought that the president had gone to the root of the matter when he had invited an eminent gynæcologist to open the discussion upon these subjects. He believed that the subjects belonged to gynæcology, considered broadly as the science of all the female diseases. He had the temerity to hold the view that there was in these cases a factor that he had called "the feminine element," which when rightly understood would yield the secret of causation. In support of this view he called attention to the frequent association of infantile uterus with troubles like Graves' disease, leucocythæmia, obscure primary anæmias, and chlorosis, which were largely female troubles. His tentative theory was that pelvic irritation lay at the bottom of the trouble. For example, many girls had breasts as sore as boils at menstrual epochs, and would avoid jostling on account of the pain. He accented this mammary tenderness because there could be no question of sepsis to obscure the significance; it was a physiological engorgement of the reproductive organs, in which the pelvic organs undoubtedly participated to a greater or less extent. Now, what was the result of this call for function, this chronic pelvic tenderness? Just as a perineal tenderness in the male would bring prompt inhibition of intestinal peristalsis, so would this pelvic congestion in the female bring an analogous inhibition—the difference being that in the female this grew into an almost permanent state. From this resulted the almost invariable constipation in these cases. This, filling the sigmoid flexure with hardened fæces, became a mechanical obstruction to the return venous circulation from the left appendages, and thus reacted to aggravate its own condition—establishing the reciprocal relation between the local and general conditions so often seen in women. Thus the entire gastro-intestinal tract was turned into a toxin factory, from which blood destroyers pervaded the system. Aloes and iron cured these patients; the aloes by unloading the accumulations, and the iron by enriching the blood, feeding the muscular system, and thus relieving the stasis. As Lawson Tait and others had reported, these cases of infantile uterus developed almost invariably into an inflammatory condition of the uterine appendages; the pathology of the change was obscure, but the fact had been frequently noted. The speaker used local measures in connection with general treatment in these cases, and when patients suffered from the menstrual blood-loss he would tampon at the period, so that hardly a drop of blood was lost. This would frequently bring up the blood count quicker than any plan of medication.

Chlorosis Occurs in Males.—Dr. Southworth, in closing, said that he believed that chlorosis was due to something which prevented the formation of hæmoglobin rather than which caused its destruction. There were on record some cases of distinct chlorosis occurring in the male about the age of puberty.

SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Stated Meeting, April 27, 1899.

Brooks H. Wells, M.D., Chairman.

Successful Operation for Carcinoma of the Uterus.—Dr. H. J. Boldt presented a woman, seventy years of age, as a typical example of an excellent result obtained after operation for carcinoma of the uterus. The operation had consisted in resecting the upper portion of the vagina, uniting the mucous membrane of the vagina on either side, and then removing the uterus. The operation had been done last November, and at the present time the woman was enjoying better health than she had done for years previously. The speaker said that the more advanced in years the patient was the better the result of such operations. He could not recall a single case in his experience in which there had been a recurrence after operation on a patient over sixty-five years old.

Hysterectomy for Suppurative Disease.—Dr. Boldt then presented a uterus removed from a woman whom he had first seen about ten days after confinement. At that time she had been quite septic. Two or three weeks later she had become worse, and although pus had not been found through the vagina, abdominal section had revealed an extensive peritonitis, and pus in the broad ligament, in the Fallopian tubes, and between the uterus and bladder. During the operation one of the ureters had been injured.

A Small Fibroma Causes Profuse Hemorrhages.—Dr. Boldt also presented a small fibroma that had been removed from a woman who had been bleeding over a year, and during which time she had been curetted several times. Various drugs had been administered with the object of controlling the bleeding, but without effect. At the time of operation the hæmoglobin had been reduced to thirty per cent., and the patient's condition had been wretched. The uterus had been removed, leaving the ovaries behind for physiological reasons.

Total Ablation for Bilateral Disease of the Adnexa.—Dr. Boldt presented a specimen from a case upon which abdominal section had been performed by some other physician several years before. At the second operation he had found the intestines firmly adherent to the pelvic contents. The adnexa on both sides being diseased, he had elected to perform total ablation of the uterus and appendages.

Pyosalpinx and Ovarian Cystoma.—Dr. Boldt exhibited a pyosalpinx and a small ovarian cystoma which he had removed from a patient who had received minor gynæcological treatment for a long time with the object of relieving a retroflexed and adherent uterus.

Rupture of a Colloid Cyst into the Peritoneal Cavity.—The last specimen exhibited was one that had been removed by operation three days before from a patient in which the only diagnosis had been ovarian cystoma. On abdominal section it had been found that a large colloid tumor had ruptured, and that its contents had escaped into the peritoneal cavity. How long before the operation this had occurred was not known, but from the history it had apparently been at least several weeks. The sac wall had evidently been partially absorbed by the action of the peritoneum. In several portions of the tumor the appearance was suspicious of malignant degeneration. All the foregoing patients recovered.

Dr. S. Marx said that he had examined the woman operated upon by Dr. Boldt for carcinoma, and had been surprised at the excellence of the result, and the almost insignificant shortening of the vagina.

Dr. Grace Peckham-Murray, having also examined the patient, concurred in this opinion. She

stated that in 1890 she had seen an old lady with carcinoma of the uterus and vagina, and had removed the diseased portion with the curette. The patient had died four years afterward of pneumonia, without having known that she had had carcinoma, as there had not been a recurrence. The speaker thought it well to operate in all these cases unless the disease was very far advanced.

DR. MARX said that the remark made by Dr. Boldt, regarding the tolerance of the peritoneum to rupture of cysts and the pouring out of their contents, reminded him of a case of rupture of an enormous ovarian cyst which had been discovered only by the merest accident after the abdomen had been opened for an acute appendicitis. The patient had been seized with the ordinary symptoms of an acute appendicitis, and after two or three weeks the attack had subsided, yet she had not felt quite well. Shortly afterward the symptoms had returned, and the abdomen had then been opened. The appendix had been found violently inflamed, but in addition there had been a large quantity of ovarian fluid. Lying in the cul-de-sac was the collapsed ovarian cyst. After closing the cavity the wound had been closed, and recovery had been uneventful. It seemed to him quite strange that there had been so little reaction in view of the coexistence of a violent acute inflammation in the abdominal cavity.

DR. BROOKS H. WELLS said that a number of cases were on record in which ovarian cysts had ruptured into the abdominal cavity and the fluid had been absorbed without giving rise to a peritonitis. This was, of course, not the case if the cyst was a colloid or papillomatous cyst, for then there would usually be a malignant inflammation. In removing a cyst that was suspected of being papillomatous the operator should be excessively cautious to avoid rupture into the abdominal cavity, for such an accident would probably result, after a time, in general papillomatous degeneration.

Some of the other specimens presented by Dr. Boldt, he said, were interesting as emphasizing some of the bad results of too much minor gynæcology. An illustrative case was cited in which a uterus had been curetted and packed with gauze last September in a sanatorium. Three or four weeks ago the case had come under his observation, and he had discovered a long strip of gauze still in the uterus. As a result of this negligent gynæcological treatment the woman had become bedridden, and the pelvis filled with exudates.

DR. A. ERNEST GALLANT said that in connection with the absorbent action of the peritoneum it was interesting to recall what occurred in the way of the disappearance of tuberculous nodules in cases of tuberculous peritonitis. He had seen three cases in which the peritoneum had been thickly studded with these tubercles, and fluid had been present, and yet they had been diagnosed as examples of ovarian cyst.

Characteristics of Syphilitic Endometritis.—He had been impressed with the fact that a peculiar softened condition of the uterus, associated with severe hemorrhages, was not uncommonly dependent upon syphilis, and therefore he would always give such patients a course of anti-syphilitic treatment. It was difficult to describe the feeling of such a uterus; it was fairly comparable to the sensation imparted on compressing a moist sponge.

DR. WELLS said that the point just made by the last speaker was an excellent one to remember in practice, as in syphilitic endometritis the endometrium was usually quite succulent, and curetting gave only very temporary relief. If such an endometrium was reproduced very quickly one should suspect syphilis. In cases in which it was justifiable to remove the uterus because of severe hemorrhage, the curette would bring away very little material, and had no marked effect on the hemorrhages.

Baneful Effects of Curettage.—DR. BOLDT said he did not know of another minor gynæcological procedure that did more harm than curettage. It was at the present time resorted to for all sorts of conditions, and naturally with disastrous results. The trouble was that the profession at large had been taught to believe that curettage was an operation that could be undertaken with but little risk. He had seen more women made sterile and become invalids by the use of the curette than perhaps by any other operation. Curettage was a simple and safe operation when done by an expert and under proper precautions, but not otherwise. Intrauterine applications had their sphere of usefulness, but they should be strictly limited and carefully guarded.

The Formative Period of Uterine Fibroids.—DR. GRACE PECKHAM-MURRAY read a paper with this title. She said that writers on this subject seemed inclined to exaggerate the frequency of uterine fibroids. The three principal theories regarding the origin of fibroids were: (1) Cohnheim's theory that they were developed from the mesoblast; (2) that they were the result of a disturbance in the nutritive supply of the part; and (3) that they were of microbic origin. The literature was full of suggestions as to the treatment of the symptoms, but it was almost silent concerning the formative period of fibroids. In all her cases of fibroids extensive inflammatory conditions had been present, notably endometritis. Long-continued inflammation of the endometrium, extending into the uterus, seemed to be an important factor in producing that disturbance in the blood supply which appeared to be the starting-point of fibroids. The speaker was a believer in the vascular theory of their origin. The size of the tumor, she thought, was dependent upon the size of the vessel supplying it, which, in turn, was determined by the location of the original nidus. She believed it was a fallacy to suppose that these tumors commonly ceased to grow at the menopause. In her experience patients with uterine fibroids had usually been excessively nervous. Attention was called to the view held by some, that curettage was not only not beneficial, but often seemed so to modify the blood supply as actually to favor the development of fibroids.

DR. BOLDT said that some years ago he had spent several months in studying this subject with the aid of his friend Dr. Carl Heitzmann, and he had then come to the conclusion that uterine fibromata were developed from the walls of the blood-vessels. Physicians commonly looked upon the endometritis as a result of the presence of the fibroids, *i.e.*, just the opposite of the view enunciated in the paper. His own observations regarding the influence of pregnancy on fibroid tumors had convinced him that the rule was that the coincident increase in the vascularity of the parts exerted a very decided accelerating influence on the growth of such tumors.

DR. WELLS said that only a few years ago it had been commonly taught that the majority of fibroids shrank up after the menopause, but now it was generally admitted that a not inconsiderable number would go on growing, often more rapidly, after the menopause. They seemed to be very erratic in their growth, irrespective of this period of life, yet with the atrophy of the genital organs which occurred at that time many of these tumors became smaller. A case was cited in which he had followed the growth of a fibroid during a period of fifteen years, from the size of a small nodule to that of a tumor of enormous size. A year ago these fibroids had been growing very rapidly, but at that time the woman had reached the menopause, and since then the fibroids had shrunk to a comparatively small mass.

DR. MURRAY, in closing the discussion, described with somewhat greater detail the disturbance of the

blood supply which was supposed to be the starting-point of fibroids. One object of her paper, she said, was to contribute testimony as to the probability of endometritis being an antecedent and not a resultant of fibroid formation. She was convinced that the truly formative period extended over only a few weeks, and it was probably because of this that so little was known regarding it.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 24, 1899.

S. O. VANDER POEL, M.D., PRESIDENT.

Some Auxiliaries to the Climatic Treatment of Phthisis.—DR. J. E. STUBBERT, of Liberty, N. Y., read a paper with this title. The flattering results obtained in sanatorium practice, as compared with those in private practice in the same climate, he attributed largely to the greater individualization of the treatment in sanatoria.

Disease of Upper Air Passages.—He had been astounded at the large number of patients with even incipient pulmonary tuberculosis who also suffered from lesion of the nasal passages, pharynx, or larynx. According to the statistics at Liberty, not less than thirty-eight per cent. of persons suffering from pulmonary tuberculosis presented congestion or infiltration of the arytenoid cartilages, inter-arytenoid space, ventricular bands, or vocal cords; thirty-two per cent. showed ulceration in one or more of these places, and thirty per cent. had some abnormal condition of the naso-pharynx. Careful routine examination and treatment of the upper air passages had yielded better results than when the physician's whole attention had been given to the lungs. Of the cases with infiltration and ulceration, nine had been healed, four had improved, three had remained stationary, and three had become worse. Of the thirty naso-pharyngeal cases, fifteen had improved. Anæmia was another complicating condition of incipient tuberculosis. In forty-one cases during the past year, static electricity had been used daily, and these patients had improved more rapidly than the others. For instance, patients who had received the electrical treatment in addition to the administration of iron had improved more rapidly than when the iron alone had been used. The practice had been to take ten patients at a time, and treat them electrically, keeping them for one hour in a room heavily charged with ozone.

Dietetic Treatment.—As regards the diet, he would say that in ninety per cent. of the cases of incipient tuberculosis nothing was better than three good meals a day, and this should be borne in mind, for it was exceedingly common to see patients stuffed and overfed until the whole digestive apparatus was disordered. Most cases suffering from gastric disorder and dilatation of the stomach could be relieved by washing out the stomach.

Serum Treatment.—Most of the serum used at Liberty had been procured from the biochemical laboratory of the United States Government. In a few advanced cases it had seemed temporarily to retard the progress of the disease, but, generally speaking, the use of the serum had seemed to be contraindicated in the third stage of pulmonary tuberculosis, in those presenting rapid heart action and feeble arterial pressure, and in cases of marked mixed infection. The advantages of the serum treatment were : (1) It did not tax the functions of digestion; (2) in cases under this treatment in which the bacilli had disappeared, they had done so while the sputa were still present, whereas in the creosote cases a few bacilli had remained to the last; (3) no relapses occurred. It seemed fairly certain that a certain immunity was established by the serum treatment, but it was impossible to say how long this would last. Of the ninety patients that had received this treatment, twenty-four per cent. had been apparently cured, thirty-six per cent. had been improved, eight per cent. had remained stationary, and thirty-two per cent. had grown worse.

Ichthyol.—Of the drugs employed at the sanatorium, ichthyol had yielded the best results, but to secure these it must be administered in large doses and in such a form as to be passed through the stomach undissolved. In this way, thirty grains could be given three times daily without untoward effects, except an occasional and fleeting attack of diarrhœa or vomiting. The improvement was rapid, and in one month, in individual cases, there had been a gain of eight or ten pounds in persons whose weight had remained stationary for a long time previously. Under its influence the sputum was more easily brought up, it became more scanty and changed from a yellow to a mucoid appearance. In some instances the expectoration had been too quickly reduced, and the patients had experienced difficulty in expectorating. It changed fetid sputum into mucoid and frothy sputum, and ameliorated the chills, sweats, and fever—in other words, it practically accomplished drainage and tended to convert the functions of a pyogenic membrane into one of secreting mucus instead of pus. Ichthyol had been used in fifty-one patients. Of this number, fourteen per cent. had been apparently cured; fifty-five per cent. had been improved; nineteen per cent. had remained stationary, and twelve per cent. had grown worse.

Kalagna.—During the past year a new remedy, called kalagna, had been tried at the sanatorium. It was an extract from a plant originally growing in Japan, but it had been transplanted to South America. Its medicinal properties were said to have been first discovered by the fact that cattle who ate the leaves of this plant were not only cured of tuberculosis, but rendered immune to it. It had been alleged that satisfactory experiments had been made by mixing tubercle bacilli with the food of cattle, and by inoculation, the injections being made under the skin of the thigh. The drug was preferably administered to human beings by the mouth, and it seemed better to use the same method with animals, as unfortunate sequelæ had been reported from cases in which it had been given hypodermically. As much as two drachms had been administered to dogs and rabbits without unpleasant results. Two points regarding this drug had been conceded, viz.: (1) That it was non-toxic to dogs, rabbits, and horses, and (2) that in tuberculosis it manifested an antiseptic power which was worthy of attention. The advantages claimed for it were: (1) That it exerted no deleterious effect on the alimentary canal, and (2) that in small doses it soon produced saturation of the patient, and communicated an odor to the breath and perspiration. The speaker had used it in twenty-nine cases, five of them so far advanced that there was no reasonable ground for supposing that they would improve. Two of the patients had a cavity in one lung and almost complete consolidation at the base; a third had a cavity of considerable extent in the upper lobe and a fibroid condition in the remainder of the lobe. There was some congestion at the apex in each case. All had a high septic fever, with rapid pulse. After two months' treatment, two of the patients had a normal temperature for twelve weeks; one had only a few tubercle bacilli in the sputum; two could walk considerable distances, and still another could walk between the buildings constituting the sanatorium. One of these patients had had a tuberculous infiltration of the larynx which had completely healed, although it

should be said in this connection that she had also received local treatment. These patients had received, in addition to the kalagna, electrical, dietetic, and hygienic treatment. One patient who had been benefited by the kalagna had not shown improvement during a period of two years and a half in which cinnamon, ichthyol, creosote, and antitubercle serum had been employed. In this case, the expectoration had been excessive, and the sputum had contained numerous tubercle bacilli. Under the use of kalagna for fourteen weeks the bacilli had disappeared; the body-weight had increased, and the expectoration had been reduced to only a little every third or fourth morning. The sputum was now free from bacilli. Another case was that of a private patient, sent by Dr. Janeway. There was a large cavity on the left side, and some involvement of the upper portion of the lower lobe. The physical signs had remained unchanged, but the cough had diminished, the bacilli had become less numerous, and the general condition was now such that no one would suspect that she was suffering from tuberculosis. When first seen, she had been unable to leave her bed.

On the other hand, kalagna had been used in a number of cases with no apparent advantage. It had no deleterious effect on the stomach in small doses such as were required, *i.e.*, four grains a day. These cases served to indicate some of the beneficial effects of kalagna. The most that could be said at present was, that it was worthy to rank equally with ichthyol, creosote, or any other drug which was entitled to the name of a semi-specific. Twenty-nine patients had been treated with this remedy, of which five had been incipient, nineteen moderately advanced, and five far advanced. Of this number, twenty-four per cent. had been apparently cured, thirty-eight per cent. improved, while eighteen per cent. had not improved and twenty per cent. had grown worse.

Creosote and Guaiacol.—Another well-known auxiliary to the climatic treatment was creosote. This drug and guaicol carbonate had been used in seventy-one cases. They had been found to rank between kalagna and ichthyol in the percentage of good results, although at the present time only five per cent. were under treatment because of the many disadvantages attendant upon the use of the crude forms of these drugs. The increase in weight and the improvement had been comparatively transitory, and the disagreeable odor imparted to the breath and sputa of such persons made them objects of comment and aversion. Of the seventy-one patienst treated by this method, twenty-two had been incipient, thirty-four moderately advanced, and fifteen far advanced. Of this number, sixteen per cent. had been apparently cured, forty per cent. improved, seventeen per cent. had remained stationary, and twenty-seven per cent. had grown worse.

Hot-Air Inhalations and Cold Sprays.—Another auxiliary treatment—hot-air inhalations and cold sprays from a multiple comminuter—had been found useful, and had served in a minor degree as lung gymnastics.

Various Auxiliary Methods Compared.—Under the serum treatment, twenty-four per cent. had been apparently cured, and an equal percentage under the use of kalagna, but preference should be given to kalagna because all the serum cases had been picked cases, whereas he had not felt justified in selecting very favorable ones for experimentation with a drug like kalagna, about which he had known nothing. The largest percentage of cases that had been improved had been with ichthyol, *i.e.*, fifty-five per cent., creosote having given forty per cent., kalagna thirty-eight per cent., and serum thirty-six per cent. With the serum thirty-two per cent. had remained stationary, with creosote twenty-seven per cent., with kalagna twenty per cent., and with ichthyol twelve per cent. From these figures he concluded that ichthyol was indicated more especially in cases of mixed infection, and that it did not apparently have much effect on the tubercle bacilli, although it did have on the other germs. Under treatment with ichthyol nineteen per cent. had grown worse, under kalagna eighteen per cent., under creosote seventeen per cent., and under the serum treatment eighteen per cent.

Dr. Egbert Le Fevre said that previous to the discovery of the tubercle bacillus it had been supposed that there were many varieties of tuberculosis; since then the profession had gone to the other extreme, and had inclined to the view that all cases of tuberculosis should be treated by one plan. This was certainly a mistake, for it was exceedingly important in this, as in most other diseases, that our treatment of disease should be individualized. Under the irritation of the tubercle bacillus there was one class of cases which tended to recovery by increase in connective tissue, and to recover without much ulceration. On the other hand, in another class there were excessive reaction and marked destruction of the lung tissue. The paper just presented certainly afforded some encouragement concerning the medicinal treatment of pulmonary tuberculosis. It was nothing short of cruelty to send phthisical cases into the wilds of the country, far removed from medical care. Climatic treatment was useful and important, but medical supervision was very essential. In many cases of nasal obstruction one would find a peculiar respiratory murmur in the border of the lung, without histological changes in the lung indicative of tuberculosis. The great danger was from mixed or septic infection. The healthy nasal mucous membrane ordinarily afforded an excellent barrier against the entrance of these septic organisms, but if the mucous membrane was not healthy the liability to both septic and tuberculous infection was proportionately increased. It was very rare at autopsy to find primary infection of the mucous membrane of the bronchi. The tubercle bacilli were carried into the lung, and were then taken up and conveyed to the lymphatics, and, being removed from the germicidal action of the blood current, were free to set up secondary changes in the lung. For this reason, in selecting inhalations one should choose substances which did not merely act upon the mucous membrane, but, by absorption, acted upon the lymph. Very recently a good deal had been claimed for inhalations of formalin, and in a few cases in which he had tried them they had seemed to exert a distinct germicidal effect on the tubercle bacilli and on the septic organisms. In his opinion, the serum treatment should be restricted to sanatoria, because only in such places could the proper supervision be secured. Unless the dose was most carefully graduated, the serum was likely to do more harm than good. He had always been very sceptical regarding the possibility of conferring immunity to tuberculosis upon human beings. He had had no experience with kalagna. Ichthyol he had used with varying success. In the early stages it had seemed to have no advantage over other well-known remedies. On the other hand, when there was mixed infection, it had acted well. At the present time, he still relied very largely upon creosote.

Experience with the Serum Treatment.—Dr. S. S. Jones said that he had treated three cases with the serum. One was a hopeless case in the third stage, with high temperature, and a large cavity in one lung and involvement of the other. The patient's condition had, however, improved marvellously for a time, and his life had been undoubtedly prolonged many months, while at the same time he had been rendered much more comfortable. The second case had been one in which the pulmonary tuberculosis had been recognized by the speaker about one year previously.

The patient had done fairly well, and had remained in New York City all last summer and winter. He had been in apparently very fair health, although a few tubercle bacilli were present in the sputum. In this case other remedies had been excluded. The patient had apparently been doing well, until one day, without warning, he had had a severe hemorrhage, and had died in the street. It had seemed that death in this case probably resulted from rupture of an aneurism, as there had been a peculiar and suspicious murmur heard for some time previously. No autopsy had been allowed. In the third case there had been a great deal of involvement of the pleura, with copious expectoration. The patient had had the serum treatment for about eight months. The expectoration had become less, the bacilli were reduced in number, and the patient had gained strength and weight and was in much better health than one year ago.

DR. EMIL MAYER referred to two cases of marked nasal abnormality which had seemed to him to have an indirect bearing on tuberculosis. He thought it exceedingly important to examine the anterior and posterior nares, and even the ears, for abnormalities in these localities were capable of giving rise to obstinate and distressing cough. He had used the serum in only one case, and with an unfavorable result.

Experience with Kalagna.—DR. J. DARWIN NAGLE said that he had been the first physician in this country to use kalagna. In 1895 a Belgian consul had been a patient at the French Hospital, and from him he had first learned of a plant used in South America to cure pleuro-pneumonia in cattle. This gentleman, being an expert botanist himself, had been sufficiently interested to take some of the leaves and prepare an extract from them. The speaker said that some time afterward he had received a semi-solid extract from this gentleman, with the request that he should try it in some case of pulmonary tuberculosis. The remedy had been promptly tried upon a man over forty years of age, who had been temporarily benefited by it. A year later, another supply of the extract having been procured, it had been tested on a young woman with pulmonary tuberculosis. After about six weeks of treatment, there having been no benefit, it had been discontinued. Last year, having obtained further information regarding the drug, he had again tried it in nine cases, four of them being at the French Hospital. Of the latter, two were advanced cases and the other incipient. Of the milder cases, one only had been improved while under treatment. In all the cases in which he had tested the remedy no other drug had been used along with the kalagna. He had finally abandoned its use, partly because the results had been poor, but largely because he had been unable to obtain any accurate information concerning the exact plant from which the extract had been prepared.

Two Other Valuable Auxiliaries.—DR. S. A. KNOPF expressed the belief that in judicious respiratory exercises one would find a most valuable adjuvant to other treatment for consumptives. He had tried the serum treatment in a few cases, but with no positive results, and he did not believe that this treatment could be expected to be of much benefit in any chronic disease. Creosote, guaiacol, and similar remedies were certainly useful, but not because of any specific action; they were simply general tonics. No mention had been made in the paper of an exceedingly valuable auxiliary—hydrotherapy—one which was used in all the large sanatoria. He had had an opportunity personally to observe the effect of this method of treatment, and had been repeatedly surprised at the prompt and decided relief afforded in cases of extensive pleuritic adhesions by lateral douches of cold water directed against the thorax.

No Relapses after Serum Treatment.—DR. STUBBERT, in closing the discussion, said that kalagna was being critically investigated in the United States Government Laboratory. He was not an advocate of the serum treatment, although he favored careful and impartial investigation of every plan of treatment that held out any hope of success in the management of pulmonary tuberculosis. He had been greatly impressed with the fact that he had never known one of his patients that had been treated by serum to suffer a relapse. Another interesting point was that patients treated with the serum would continue to expectorate for months, or even suffer from intercurrent diseases, such as the grippe, without a reappearance of the tubercle bacilli in the sputum. He also believed in the value of respiratory exercises, but had found that this was best carried out at Liberty by allowing the patients to take exercise in the open air, walking up and down the hills.

Some of the Essential Features in the Diagnosis and Treatment of So-called Idiopathic Epilepsy.—DR. WILLIAM M. LESZYNSKY read a paper with this title (see page 708).

Relation of the Toxicity of the Urine and Blood to Epilepsy.—DR. C. A. HERTER said that Haig had claimed that uric acid was the actual poison which caused the epileptic paroxysms, but certainly this view was a very extreme one. In the first place, it had never been shown that uric acid, in the quantity in which it existed in the body, was a poison, and although the quantity of uric acid in the urine was almost always increased after the seizure, it was probably to be attributed to some central change in the intestinal secretion. The French had made much of the toxicity of the urine in connection with the subject of epilepsy. Their experiments had been based on the introduction of urine into rabbits, but this method was exceedingly inaccurate because the toxicity of the urine depended very largely upon the quantity of mineral salts present, and unless the quantity of these substances present was known, nothing definite could be said about the toxicity of the urine. He had personally never advocated the doctrine that there was a specific relationship between the increase in the ethereal sulphates and the occurrence of epilepsy, as this increase was observed in a great many cases in which intestinal indigestion was present. Perhaps the most interesting phase of the subject was that dealing with the toxicity of the blood, and its relation to epileptic seizures. It was only by the greatest care that reliable results could be obtained from the experimental injection of serum into rabbits. He had examined the blood from eighteen cases of epilepsy, and he could say that in fifteen of these there had not appeared to be any special toxicity of the blood. It was quite possible that the increase in the toxic properties of the serum might result from disturbance of digestion.

Epilepsy and Insufficiency of the Eye Muscles.—DR. DAVID WEBSTER said that a number of years ago he had been appointed on a committee to investigate the claims of Dr. George T. Stevens regarding the causation of epilepsy by insufficiencies of the ocular muscles. In the presence of the committee Dr. Stevens had examined and operated upon the muscles of several epileptics. In most of the cases there had been at least temporary improvement. The neurologists on the committee believed that none of these cases had been cured, and, if he recollected correctly, the report of the committee had been to that effect. It should be said, however, that Dr. Ranney had published a book in which he had cited a great many cases that had been cured in this way. Personally, he had never seen in his own practice a cure of this kind. He had met with many patients upon whom these tenotomies had been done, and who had been far from well. When there was a tendency to devia-

tion of the eyes it should be corrected as nearly as possible, but exact correction was impossible, even in the hands of the most expert.

Epilepsy and Oöphorectomy.—Dr. Egbert H. Grandin expressed his surprise that the reader of the paper had been able to find a gynæcologist in New York City who had been guilty of ablating the normal ovaries in recent times. There could be no question that fifteen years ago, when gynæcology had been in the formative stage, many apparently healthy ovaries had been extirpated, but he did not believe any gynæcologist of repute at the present day would do such a thing. Ovarian disease could influence only idiopathic epilepsy by aggravating the condition. The speaker cited two cases in which the diagnosis of epilepsy had been made by experts. One of these cases was that of a young girl, whose intellect had been developed entirely out of proportion to her body. The attacks had been very violent, and had been very much worse at the menstrual periods. For this reason he had consented to remove the ovaries at the urgent request of the parents. He had found infantile and cirrhotic ovaries, and had extirpated them. For about eighteen months she had had scarcely any seizures, and since then there had no longer been any exacerbation each month. The other case was the wife of a clergyman, and she had had pyosalpinx on both sides and a degenerated ovary on one side. He had operated upon her because of the disease of the appendages, but her epileptic attacks had been in no way benefited thereby.

A New Urethroscope.—Dr. Ferdinand C. Valentine demonstrated his modification of the Oberländer urethroscope.

Therapeutic Hints.

Neuralgia.—

℞ Ichthyoli,
Ungt. hydrargyri ..... āā 2.5
Chloroformi,
Spir. camphoræ ..... āā 15.0
M. S. Shake well before applying.

—Eulenberg.

Sea-Sickness.—

℞ Menthol 0.1
Cocain. hydrochlor. 0.15
Syr. simplicis 30.0
Alcohol 60.0
M. S. A teaspoonful every half-hour.

—*Bulletin Médical.*

An Electuary for Habitual Constipation.—

℞ Washed sulphur,
Cream of tartar ..... āā 4 parts.
Senna leaves ..... 2 "
Powdered cardamom ..... 1 part.
Syrup of rhamnus, q.s. to give the right consistency.
M. S. A teaspoonful to be taken morning and evening.

—*Jour. de Méd. de Paris.*

In Post-Partum Hemorrhage due to Uterine Atony.—

℞ Quinin. sulphatis 2.5
Ergotin 1.25
Strychnin. sulphat. 0.03
M. ft. pil. No. xx. S. One pill three times a day.

—Palmer.

In Malarial Fever.—

℞ Quininæ hydrochlor. ..... ʒ ij.
Ac. hydrochlor. dil. ..... ʒ iv.
Ac. hydrobrom. dil. ..... ʒ i.
Syr. limonis ..... ʒ iv.
Aquæ ..... ʒ i.
M. S. One teaspoonful three times a day.

—Eshner.

Arrhythmia Cordis.—

℞ Ferri valerianat.,
Zinci valerianat. ..... āā gr. xxx.
Strych. sulphat. ..... gr. i.
Pulv. digitalis ..... gr. viij.
M. ft. caps. No. xxx. S. One after each meal.

—Anders.

Prolapse of the Funis.—Abrahams finds the Trendelenburg position decidedly superior to the knee-chest position, and less repulsive to the patient in overcoming prolapse of the umbilical cord. The suggestion, first made by Brothers, has also been found available in the performance of version.

For Smoker's Stomatitis.—

℞ Salol ..... gr. xv.
Catechu ..... gr. xxx.
Spirits of peppermint ..... ʒ iss.
M. A teaspoonful in a tumblerful of hot water for a collutory.

—*Riforma Medica*, December 16, 1898.

Pertussis.—

℞ Tinct. belladon. ..... ʒ ij.
Phenacetin ..... ʒ i.
Brandy ..... ʒ iij.
Fl. extract chestnut leaves ..... ʒ xij.
M. S. Ten drops every two to six hours for a child one year old; a child ten years old may be given as much as a teaspoonful.

—Lancaster.

Goitre.—

℞ Iodoformi ..... grs. xv.
Ætheris ..... ♏ lxxx.
Olei amygdalæ dulcis ..... ʒ iiss.
M. S. Twenty to forty minims for injection into the parenchyma of the gland.

—Frey.

Depilatory.—

℞ Tinct. iodi 0.5
Olei terebinth 1.0
Olei ricini 1.5
Alcohol 10.0
Collodii 40.0
M. S. Apply twice daily. As the layer of collodion is peeled off the hairs come out with it.

—*Münchner med. Wochenschrift.*

For Preserving Cocaine.—

℞ Cocain. hydrochl. 0.25
Aquæ destill. 10.0
Acidi salicyli, seu
Acidi carbolici 0.01

—*Münchner med. Woch.*

Blepharitis.—

℞ Bals. peruviani 2
Lanolin. anhydr 6

Or:

℞ Bals. peruviani 2
Lanolini 4
Olei amyg. dulc. 2
M. S. Apply twice daily.

—*Klin. Monatsbl. f. Augenheilk.*

Treatment of Angina Pectoris.—The best remedy during the attack is the inhalation of amyl nitrite. This should be administered in glass capsules, to be crushed in a handkerchief held to the nose. The beginning dose is four minims, which must later be increased up to eight. If the attack is prolonged trinitrin should be given per os or subcutaneously, as in the following formula:

℞ Sol. trinitrini (one per cent.) ..... gtt. xi.
Aq. laurocerasi 10.0

One or more syringes full may be injected, or three drops of trinitrin in water, increased to six drops.

Between the attacks regulate the diet and forbid alcoholic drinks. White meats, eggs, vegetables, and as drink milk, mineral-water, and tea should form the chief diet. For medication digitalis, caffeine, and especially the iodine preparations are important. Potassium iodide should be administered for one month, followed by sodium iodide given for two months as in the following formula:

℞ Potass. iodid,..... 10.0–20.0
Extr. thebaic 0.2
Aq. destill..... 300.0
M. S. Tablespoonful three times a day. Continue course for two to four years.

℞ Sodii iodidi..... 5.0–10.0
Sodii arsenitis..... 0.05
Aq. destill..... 130.0
M. S. A tablespoonful three times a day.

—HUGUENIN.

Prophylactic Treatment of Yellow Fever.—

℞ Quininæ sulph..... gr. c.
Cinchonidinæ sulph ..... gr. c.
Pulv. lactopeptin..... gr. l.
Pulv. sacchari lactis..... gr. l.
M. ft. capsulæ No. c. S. One three times a day, one hour before or after meals.

For children under five years:

℞ Tincture xanthoxyli ..... 3 ss.
Glycerin ..... 3 ss.
Batley's liquor cinchonæ..... 3 vij.
M. S. 3 i. t.i.d.

—H. TEBAULT.

Sciatica.—

℞ Orthoformi..... 0.70
Guaiacol crystal 13.50
Chloroform (c. p.)..... 17.20

To be used in the same dose and with the same precautions, hypodermatically, as simple chloroformized guaiacol. Originally recommended by Colleville. (*Gazette Hebdomadaire de Méd. et de Chir.*, February 9th).

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PARLIAMENTARY—MR. CHAPLIN ON THE VACCINATION QUESTION—LIVERPOOL SCHOOL OF TROPICAL MEDICINE—PATHOLOGICAL SOCIETY; GASTRECTOMY, ETC. —ANÆSTHESIA BY MIXED GASES—COMPLICATED APPENDICITIS—DEATHS OF MR. JABEZ HOGG, MR. CARTE, AND DR. NEDLEY.

LONDON, April 28, 1899.

SEVERAL matters of medical interest have turned up in Parliament, but not much has been accomplished. A protest was made against establishing a dairy on the sewage farm at Aldershot, and it was urged that as the civil population refused to partake of the milk it ought not to be supplied to the soldiers. Dr. Farquharson suggested that the milk should be sterilized to meet the suspicion that exists. It was agreed to submit the matter to inquiry by experts. The state of Edinburgh Barracks was discussed, a sum of £100,000 being about to be spent on them. Points about nursing in the Soudan campaign were also raised. The notification extension bill has passed the Commons and will probably be accepted by the Lords. In reply to a question it was stated that seventeen hundred and sixty-seven recruits were rejected last year on account of "loss or decay of many teeth." The lunacy bill, the administration of the vaccination act, and inebriate asylums were also mentioned.

On Saturday, at the annual dinner of the Press Club, Mr. Chaplin, president of the local government board, made a speech which looks like an appeal to journalists to regard the vaccination act more kindly. He said that there were indications that the resort to the preventive is increasing, and in some unions where the practice was almost at a standstill the increase is considerable. Mr. Chaplin himself was against the conscience clause at the time, but was overruled by his colleagues to prevent a defeat of the Government, and in the Lords just for the same reason Lord Lister was induced to support the bill by the virtual promise of a revaccination bill this session. Now half the session is over and there is no sign of such a bill. Lord Lister was evidently made a catspaw and can scarcely feel that he has been fairly treated.

The Liverpool Tropical School was formally inaugurated on Saturday by Lord Lister, and a great banquet terminated the day's proceedings. It is not yet six months since Mr. A. L. Jones offered £350 a year for the purpose, and already a sum of £2,000 a year is secured. Well done, Liverpool! is a common exclamation. Her school will be second to none, and has secured the services of Major Ronald Ross and Professor Boyce. Lord Lister sympathized with those who thought her pupils ought not to be required to follow up their curriculum by a term in London. He announced that he had seen Mr. Chamberlain, who told him the regulation was made for only one year, at the end of which he would reconsider. As the London school is not yet complete it seems the more unreasonable to make such a rule against the Liverpool establishment, but I suppose we must be content to let Mr. Chamberlain down easily.

At the Pathological Society last week Mr. Chavasse reported a case of gastrectomy by the method employed by Schlatter. On account of the friability of its walls the œsophagus could not be united to the duodenum. Accordingly a duodenal fistula was made and food passed through it. The patient died forty hours later.

Dr. B. Hunt reported two cases of splenic anæmia in infants, distinguished from ordinary cases of rickety anæmia by multiple hemorrhages, great size of spleen, and fibrosis of the Malpighian corpuscles. Syphilis, scurvy, and infantile pseudo-leukæmia could also be excluded.

Dr. J. H. Drysdale showed specimens of three cases of sprue of long standing. In one the pancreas was cirrhotic, a condition sometimes noticed by others. Dr. Rolleston mentioned Dr. Walker's view—the necessity of pancreatic secretion for forming the normal pigment of fæces.

Dr. Stacey Wilson exhibited casts of hearts in which there was dilatation of the upper part of the right ventricle causing increase in its size upward and to the left. This dilatation—not an infrequent one—he said must cause shortening of the pulmonary artery with relaxation of the walls, which then yielded to the blood pressure, producing an aneurismal dilatation, and this he thought would acccount for the aneurismal murmur heard over the artery. This rather novel view was talked over, but scarcely accepted, and by some members rejected.

Drs. A. E. Russell and F. Buzzard showed a liver containing cysts in which living paramœcia coli were found. Though often found in the intestines, these parasites have not been previously met with in the liver. Probably they found their way through the common bile duct; the contents of the cysts were bile-stained. The specimen was from a man who died of cancer of the pylorus.

In a recent letter I gave you some account of a discussion at the Medico-Chirurgical Society on anæsthesia by mixed gases. Since then the Society of Anæsthetists has devoted a meeting to this subject, at which an unfortunate fatality was reported—not due

to the mixed gases, though probably they contributed somewhat to the result. An apparently healthy young man of seventeen took the gases for some twenty minutes, when the supply ran short and he recovered consciousness. As the operation was not finished chloroform was given. In four or five minutes the pulse became imperceptible, the chloroform was stopped, and every effort made to restore him, but without success. The respiration was deep and regular for about five minutes after the pulse failed. The reporter blamed the gases as accessories before the fact, thinking that during their administration the heart had become dilated, and that the chloroform, though given only in small quantity, still further dilated and then inhibited it.

Dr. Silk said the after-effects of mixed gases were more varied than with nitrous oxide alone, and the physiological effects might persist when the patient resumed consciousness, so that it might well be that the explanation suggested by the reporter was correct. Another speaker said he had found evidence of dilatation during the administration of nitrous oxide diluted with air, and had had similar experience when diluted with oxygen.

Mr. Gardner read a paper in which he attempted to fix the position of the mixed gases in surgical and dental operations. He found the anæsthesia less profound than that of ether or chloroform. Consequently there is greater liability to reflexes. It must, therefore, be confined to short operations and is unsuitable for children.

The president deprecated extravagant conceptions of the possibilities by any who were not aware of the limitations of this method of anæsthesia.

On Monday Mr. Betham Robinson read a paper at the Medical Society on "Some Complicated Cases of Appendicitis," in which the abscess in relation to the appendix was followed by suppuration in the neighborhood of the liver. The infection of the peritoneum, he considered, had a tendency to spread along the ascending colon when the adhesions were defective, and this tendency was perhaps aided by the recumbent position and the natural curve of the lumbar region. He related four cases in illustration of this sequence of events, and Mr. Morgan congratulated him on the results he had obtained in a series of such unusual cases. Mr. Battle said these collections track up along the peritoneal surface of the bowel. Mr. Eccles agreed to this and suggested that imperfect drainage might be one cause, and in some cases a counter-incision might be made in the loin.

The annual report of the Medical Defence Union shows continued prosperity, but suggests that wider support is desirable. It is true there are over four thousand members, but that number ought to be at least trebled. There is, too, a guarantee fund which I should be glad to see protected by a reserve fund, for the Union is doing good work. The London and Counties Protection Society has also had a year's good work according to the report presented to the annual meeting last week. There is a reserve fund of nearly £700. During the year several charges of malpractice were successfully fought out in the courts.

Mr. Jabez Hogg died on Sunday in his eighty-third year. This genial and venerable gentleman was for many years surgeon to the Westminster Ophthalmic Hopsital and eventually consulting surgeon. His private practice was in this specialty, on which he contributed during his long career a number of papers to the journals and societies. He published a "Manual of Ophthalmic Surgery" in 1863. He had been vice-president of the Medical Society and was the first president of the Medical Microscopical Society. Of this last he was one of the founders, and the honor fell naturally to him as one who had been distinguished for his work on "The Microscope," perhaps the most popular book on the subject ever published and of which only a short time since the fifteenth edition appeared. Mr. Hogg wrote several other works. He was for some time on the staff of *The Illustrated London News*.

Dublin has just lost two medical men who enjoyed great popularity with their brethren for their social qualities. Mr. William Carte, surgeon to Kilmainham for about forty years, died on Monday, at the age of seventy. He had been a vice-president of the Royal College of Surgeons of Ireland, and had great administrative and business talents. He had served in the army, and wrote "The Climate and Zoölogy of the Crimea during the Campaign of 1854–56."

Dr. Thomas Nedley died the next day, aged seventy-nine years. He had been surgeon to the Dublin police, the Education Board, and the lord-lieutenant's household. But it was for his musical talent, wit, and social qualities that he was generally admired as one of the most genial and brilliant gentlemen in Dublin society.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 13, 1899:

	Cases.	Deaths.
Tuberculosis	199	161
Typhoid fever	26	6
Scarlet fever	171	14
Measles	377	18
Diphtheria	175	26
Laryngeal diphtheria (croup)	12	6
Cerebro-spinal meningitis	0	9
Chicken-pox	37	0
Smallpox	1	0

Qualifications of a Professor.—What the student wants in a professor is a man who shall stand between him and the infinite diversity and variety of human knowledge, and who shall gather all that together and extract from it that which is capable of being assimilated by the mind.—Huxley.

Dietetic Cause of Inebriety.—Dr. T. D. Crothers (*Journal of the American Medical Association*, vol. xxxi., No. 25, p. 1,458) concludes an article on this topic as follows: (1) Inebriety is a most complex neurosis. The causes are equally complex, and include all the various states of degeneration which influence and disturb nutrition. (2) Obscure indigestion begins, and for this drugs and bitters containing alcohol are used. The narcotism which follows is so grateful that it is continued. (3) Dietetic delusions are fostered in the minds of parents and children, and from this many different forms of inebriety begin. (4) Often the most maniacal and chronic inebriates are from these delusional dyspeptics. (5) Starvation is present in many of these cases. The quality and variety of foods are deficient, and defective nourishment follows. (6) The uniformity of taking foods and the quality and variety are essential. This and nutritional rest and mental anxiety are important factors. (7) The inebriety following these conditions is successfully treated by elimination of the toxins and special correction of the nutrition. (8) Nutrition is a very active cause in the production of inebriety, and should receive a careful study in all cases.

What is the Secret of the Beneficial Action of Purgatives in Peritonitis?—(1) They withdraw fluid from the congested portal veins, and so promote absorption of intra-peritoneal effusions. (2) They probably modify the functions of the liver in such a way that it is enabled better to cope with and destroy the poison absorbed from the peritoneum. One function of the liver seems to be to prevent the passage into the general circulation of toxins absorbed either from the intestine or peritoneum; the liver cells either destroy these toxins or excrete them in the bile. (3) Purgatives mechanically remove these excreted toxins from the intestinal canal. (4) Calomel probably acts in some degree as an intestinal disinfectant, inhibits the formation of flatus, and possibly exerts a restraining influence on the development of micro-organisms in the peritoneum. (5) Purgatives by stimulating peristaltic movements combat the tendency to paralysis of the bowel, diminish the tendency to intestinal adhesions, and mechanically remove flatus.—DR. CHRISTOPHER MARTIN, *The Scalpel*, vol. iii., No. 36, p. 375.

Medical Instruction.—Any one who is familiar with the existing methods of medical instruction is aware that in nearly every department many things are taught which are subsequently found to be of use to only a fraction of those receiving the instruction. Thus the surgical anatomy of hernia is taught to men who will subsequently devote themselves to dermatology; future obstetricians are required to master the details of physiological optics, and the microscopical anatomy of tumors forms a part of the instruction of men destined to a career as alienists. Now, no one can question the propriety of including instruction on all these subjects in the curriculum of a medical school, but it may be questioned whether every student should be forced to take instruction in them all. It may, perhaps, be urged that no choice of studies can be made without determining, to some extent, the direction in which the work of the future practitioner is to be specialized, and that such specialization cannot be properly and safely permitted until the student has completed his medical studies. To this it may be answered that, whatever may be the dangers of too early specialization, the dangers of crowding the medical course with instruction of which many students do not feel the need, and of thus encouraging perfunctory and superficial work, are certainly no less serious. Moreover, it will, doubtless, be found perfectly possible to establish such a relation between the required and the elective courses that the requirements in each department will be in no way lowered, while a certain freedom of choice is permitted with regard to the direction in which the work is pursued.—*Science*, December 30th.

Professor Mosso on Mountain Life.—Prof. Angelo Mosso, of Turin, has recently written a book relating to life in the mountains. Certain notable effects of a curious kind are to be found recorded in Dr. Mosso's pages. Thus it is shown that in mountain climbing certain marked alterations are apt to occur, not merely in the functional discharge of the heart's duties, but likewise in its position. Engorgement of the left side of the heart is noted, and the apex showed marked displacement. Dr. Mosso also says that at great heights "Cheyne-Stokes breathing" occurs. Another observation of interest made by Mosso is to the effect that at ordinary levels we take in more oxygen than is demanded to keep us alive, and he also remarks that at great heights there is no increase in the rate of breathing, explaining this fact on the assumption that we are then inhaling exactly the required amount of oxygen.

Health Reports.—The following cases of smallpox, yellow fever, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ending May 13, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Mobile	May 5th	2	
Dist. of Columbia, Washington		No new cases.	
Florida, Jacksonville	April 29th to May 6th	7	
Georgia, Savannah	May 9th	4	
Illinois, Chicago	April 29th to May 6th	1	
Indiana, Evansville	April 29th to May 6th	9	
Kansas, Emporia	May 6th	4	
Garnet	May 6th	1	
Kansas City	May 8th	32	8
Louisiana, New Orleans	April 29th to May 6th	5	
Shreveport	May 8th	1	
Maryland, Baltimore	April 29th to May 6th	2	
Massachusetts, Boston	April 29th to May 6th	1	
Michigan, Benton Harbor	April 29th	Present.	
Kalamazoo Township	April 29th	"	
Minnesota, St. Paul	April 29th	1	
Ohio, Cincinnati	April 28th to May 5th	15	1
Cleveland	April 29th to May 6th	26	
Pennsylvania, Erie	May 2d	1	
Johnstown	April 29th to May 6th	1	
Steelton	April 22d to 29th	1	
Rhode Island, Providence	May 10th	1 seaman.	
Tennessee, Nashville	April 28th to May 6th	1	
Texas, Galveston	April 22d to 29th	5	
"	April 29th to May 6th	7	
Laredo	April 15th to 22d	3	1
Virginia, Newport News	May 6th to 8th	2	
Norfolk	May 5th to 11th	20	
Portsmouth	May 5th to 11th	10	
Washington, Spokane	May 6th	5	
Wisconsin, Milwaukee	April 29th to May 6th	1	

SMALLPOX—FOREIGN.

Belgium, Antwerp	April 15th to 22d	4	2
Brazil, Bahia	April 8th to 15th	2	1
Rio de Janeiro	March 24th to 31st	6	4
China, Hongkong	March 25th to April 1st	4	1
Colombia, Barranquilla	April 8th to 15th	4	
Egypt, Cairo	April 1st to 8th	..	1
Greece, Athens	April 15th to 22d	15	4
Mexico, Chihuahua	April 29th to May 6th	..	3
Mexico	April 23d to 30th	10	2
Vera Cruz	April 20th to 27th	..	1
Russia, Moscow	April 1st to 15th	18	7
Odessa	April 15th to 22d	6	1
Warsaw	April 1st to 15th	..	8

YELLOW FEVER.

Mexico, Vera Cruz	April 21st to 27th	..	2
" "	April 27th to May 3d	..	10

PLAGUE.

Arabia, Aden	April 7th. One case of plague on steamship "Caledonia," from Bombay.		
China, Hong Kong	March 11th to April 25th	9	7
" "	March 25th to April 1st	7	9
India, Bombay	March 27th to April 4th	..	891
Calcutta	March 18th to 25th	..	138

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

AN EPITOME OF THE HISTORY OF MEDICINE. By Dr. R. Park. Second edition. 8vo, 370 pages. Illustrated. The F. A. Davis Company, Philadelphia.

ATLAS OF THE EXTERNAL DISEASES OF THE EYE. By Dr. O. Haab. Edited by Dr. G. E. de Schweinitz. 8vo, 228 pages. Illustrated. W. B. Saunders, Philadelphia. Price, $3.00 net.

PRACTICAL MATERIA MEDICA FOR NURSES. By E. A. M. Stoney. 8vo, 306 pages. W. B. Saunders, Philadelphia. Price, $1.50 net.

CHIRURGIE DE L'ESTOMAC. Par F. Terrier et H. Hartmann. Royal 8vo, 368 pages. Illustrated. G. Steinheil, Paris.

BACTERIOLOGY. By Dr. F. G. Novy. Second edition. 8vo, 563 pages. Illustrated. George Wahr, Ann Arbor. Price, $3.00 net.

CARDIAC FAILURE AND ITS TREATMENT. By Dr. A. Morison. 8vo, 256 pages. Illustrated. The Rebman Publishing Company, Ltd., London.

TREATISE ON HUMAN PHYSIOLOGY. By Dr. Henry C. Chapman. Second edition. 8vo, 924 pages. Illustrated. Lea Brothers & Co., Philadelphia.

URINARY ANALYSIS AND DIAGNOSIS. By Dr. Louis Heitzmann. 8vo, 253 pages. Illustrated. William Wood & Co., New York.

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Original Articles.

MOSQUITOES CONSIDERED AS TRANSMITTERS OF YELLOW FEVER AND MALARIA.

BY CHARLES J. FINLAY, M.D.,

HAVANA.

THE despised mosquito, denounced by me since 1881 as the agent of transmission of yellow fever, is now attracting considerable attention among distinguished and sagacious observers who attribute to that insect an important rôle in the etiology and propagation of the malaria infection. To those who are familiar with the biological conditions and the habits of the mosquito this will not be a matter for surprise; rather should we wonder how, considering the special aptitudes of the insect, other inoculable diseases are not equally transmitted by it, especially such as are due to germs in the blood or in the tissues that lie within reach of its sting. Much light, however, has been thrown upon this singular eclecticism by modern ideas concerning the process by which some blood-sucking insects convey certain diseases to warm-blooded animals. We are induced by them to regard as one of the essential conditions that the transmitting insect should itself experience a true infection, which may not endanger its life nor greatly disturb its physiological functions, but must always require, on the part of the insect, pathogenous susceptibility for the specific germs which it is called upon to transmit. It will thus be readily understood why the same insect may transmit only certain germs and not others, as also that, among insects of the same kind, some species may possess that faculty while others do not.

Among the publications that have appeared concerning the transmission of malaria by mosquitoes, the most important one, and that which has caused most sensation, has been the lecture delivered, a few months ago, by Robert Koch, in which he declares himself decidedly in favor of the mosquito theory as the one which most plausibly accounts for the propagation of the said disease. In support of his idea he cites a very appropriate precedent, the Texas fever, a cattle disease the etiology and propagation of which were so ably cleared up, in 1892, by Dr. Theobald Smith, chief of the division of animal pathology in the Bureau of Animal Industry, United States of America. Dr. Smith proved that the germ of the disease is a blood-parasite, and that it is propagated by the cattle tick. The germs sucked in with the blood of diseased cattle reach the eggs of the tick, and the new generation of ticks, developed from the infected eggs, convey the Texas fever to the sound cattle upon which they are applied. His experiments were repeated and confirmed in Eastern Africa by Koch, who, in view of the relations which seem to connect the presence of mosquitoes with the transmissibility of malaria, does not hesitate to make those insects responsible for the propagation of the malaria infection. He does not think, however, that the latter can be communicated by so simple a process as that of a mosquito first stinging a malaria patient and afterward a sound person, such as I have, in my theory, considered capable of causing the transmission of yellow fever. The grounds for this distinction, however, are not very apparent. In the case of the tick, which is supposed not to attack a second animal after parting from its first host, the exclusive transmission by the second generation, infected through the eggs, may be considered a necessity; but it is otherwise with mosquitoes, at any rate with those which I have observed in Havana. After an interval of two or more days, which they require to digest the blood and empty themselves, they are ready to sting the next victim that offers, and may do so as many as ten or twelve times, during the thirty or more days that I have been able to keep them alive. It is, therefore, quite admissible that, when the mosquito becomes contaminated, not only its eggs but also its salivary and venom glands may be invaded by the pathogenous germs, so that the latter may be discharged with the secretion of those glands along the track of the wound and into the capillary vessel entered by the sting when the insect attacks its next victim. Indeed, on some rare occasions I have seen mosquitoes die within twenty-four hours after they had stung a patient with severe yellow fever, without assignable cause, for they still retained some of the blood which they had sucked; whence it might be surmised that the yellow-fever germ is pathogenic for the Havana mosquitoes, though the infection seldom proves fatal for those insects.

In August last, during my stay in the field hospitals on the hills near Santiago, I witnessed a fact which, as far as it went, agreed with my theory about yellow fever, inasmuch as there were neither mosquitoes, mosquito eggs, nor larvæ to be found in my encampments, and not a single case of yellow fever occurred among the one hundred and fifty men who came under my observation, notwithstanding the daily communications with the city. It was otherwise, however, in regard to malaria, for this constituted the prevalent cause of sickness in all those camps. It assumed various types: the quotidian or tertian intermittent, the remittent, irregular, or subcontinuous; but in most of the cases it was accompanied by diarrhœa (sometimes mixed with blood). This instance, at any rate, shows that Koch's assertion, that "where there are no mosquitoes there is no malaria," is altogether too absolute. In those camps, I believe the propagation must have been effected through the flies (of which there was a great abundance). These insects, in spite of all precautions, had ample opportunities of picking up, from the discharges of the malaria patients, not only the malaria parasites contained in the extravasated blood, but also some infectious intestinal germ, with both of which organisms they may have contaminated the food and beverages used by the men who subsequently showed signs of the double infection. A yellow-fever epidemic occurring under similar circumstances, in the absence of yellow-fever mosquitoes, might not be so readily reconciled with my theory about that disease, which is founded upon more definite and more exclusive arguments than those recorded in connection with the malaria infection. The following instance may serve to illustrate my meaning. In the capital of Mexico, and in other districts of similar

altitude above the sea level, Mexicans who never have visited the lowlands have no immunity whatsoever against yellow fever, a sure proof that no epidemics of that disease ever occur in that part of the country. It sometimes happens, however, that a resident of the capital takes the infection by going to Vera Cruz, though the disease may not declare itself until his return to the capital. In such cases, the yellow fever will run its usual course, with the same symptoms and prognosis as if the patient had remained at Vera Cruz; with this difference only: that in Vera Cruz other susceptible persons might readily have caught the infection from him, whereas in Mexico the disease is never propagated. If the infection could be transmitted through contact with the patient or his secretions, by inhaling his emanations in the sick-room, or by the use of contaminated food or beverages, there would be no imaginable reason why the disease should not be transmitted at Mexico as well as at Vera Cruz. Such not being the case, we must infer: first, that a factor which is necessary for the transmission is present at Vera Cruz, but is absent from Mexico; and second, from the circumstance of the disease not being transmissible through the forms of exposure enumerated above, that the yellow-fever germ is pathogenous only when introduced in a less trivial manner, probably by inoculation under the epidermis or even directly into a blood-vessel. Hence my theory of the mosquito.

New Mosquito Theory.—My original mosquito theory, however, in view of the facts brought to light by Dr. T. H. Smith, in his admirable demonstration of the transmission of the Texas fever through the agency of the cattle tick, requires now to be somewhat modified, so as to include the important circumstance that the faculty of transmitting the yellow-fever germ need not be limited to the parent insect, directly contaminated by stinging a yellow-fever patient (or perhaps by contact with or feeding from his discharges), but may be likewise inherited by the next generation of mosquitoes issued from the contaminated parent. With this new development, indeed, the theory seems to cover the whole ground of conditions which are known to govern the transmission or non-transmission of the disease, and to account for every well-authenticated fact on record.

There are different species of mosquitoes which are peculiar to certain localities, even within the yellow-fever zone, though we are not able to account for their preferences in this respect, nor for the circumstances which determine their permanency in such limited areas. It is a fact, however, that the "domestic mosquito" (by which term I mean such species as constitute a parasite and commensal of man) shows no inclination whatever for extensive excursion so long as the female insects find at hand convenient subjects from whom they can draw the warm life-blood which they apparently require, not so much for their own nourishment as for the purposes of ovulation and for the reproduction of their species. That the tropical species cannot well establish themselves in temperate or cold climates, will be readily understood by repeating the following experiments: Let a mosquito of the small diurnal species found in Havana be introduced into a test tube provided with a thermometer; if the temperature be lowered, it will be seen that, when it falls to between 15° and 19° C. (59° and 66.2° F.), the insect becomes benumbed, and unless it finds some object upon which it can fasten its claws it will drop to the bottom of the tube, in a condition of apparent death, in which it will remain so long as the temperature is kept between 15° and 0° C. (59° and 32° F.). On allowing the temperature to rise again, when it reaches above 15° to 19° C. the mosquito will gradually revive and soon recovers its normal agility and the power of stinging. On the other hand, if the mosquito is confined in a closed tube and the air gradually rarefied, the insect appears to lose the power of supporting itself on its wings, and also that of stiffening its proboscis for the purpose of stinging. With temperatures below 25° C. (77° F.), the time required by the culex mosquito to digest the blood and get ready for another bite is prolonged to several days; and, according to my observations, the pupæ of that species, if kept at temperatures below 23° C. give five males to one female, whereas at 25°–30° C. the proportions are reversed. Hence it follows that during the cold season in Havana there are comparatively few mosquitoes of that kind in a condition to propagate the yellow fever. At sea mosquitoes will save themselves from being blown into the water only by avoiding the deck and other exposed parts of a vessel, and in travelling toward cooler regions they will have an additional motive for seeking refuge in the warmer and more sheltered parts of the ship. Hence the likelihood of their gathering in the holds of vessels, in which the source of yellow-fever infections has been, many a time, distinctly located. Once boxed up inside the hold of a vessel, the contaminated mosquito may be reduced to the necessity of drawing its blood-supply (*faute de mieux*) from lower animals, such as rats, etc., and to lay its eggs in any collection of fresh water that may have found its way through the chinks or otherwise. On land, mosquitoes will instinctively frequent the basement or ground floor of houses in preference to the upper ones, and they seldom seek the open air of their own accord, while their usual functions can be fulfilled under shelter, except when they are ready to lay their eggs. This is in accordance with the maternal instinct which teaches them to procure undisturbed possession of some stagnant waters for their larvæ during the two or more weeks required for the complete development of the winged insect; a condition seldom satisfied within inhabited dwellings. On the approach of its natural death, the parent insect returns to the same waters where its eggs have been laid, and its cadaver remains floating on the water, to be devoured by its own larvæ. Entrapped during the unconscious act of a person putting on his hat in a contaminated locality, mosquitoes may be conveyed to distant houses; and inside of boxes, trunks, parcels, etc., provided that a sufficient degree of moisture and particles of available food exist in their place of confinement, they can be conveyed to any distance that may be reached within the natural term of the insect's life (which sometimes lasts as many as thirty or thirty-five days).

My experiments upon yellow-fever mosquitoes have already been published; their results may be thus briefly recorded: first, Reproduction of the disease, in a mild form, within five to twenty-five days after having applied contaminated mosquitoes to susceptible subjects; second, partial or complete immunity against yellow fever, obtained even when no pathogenous manifestation had followed those inoculations; third, finally, the coincidence of cultures made with the heads and proboscides of contaminated mosquitoes giving the identical micrococcus in tetrads (M. tetragenus febris flavæ; M. tetragenus versatilis, Sternberg; tetracoccus versatilis) previously discovered by me, in collaboration with Dr. C. Delgado, in the blood and secretions of yellow-fever patients.

With such an array of evidence (presumptive or otherwise) as to the rôle of the mosquito in the propagation of yellow fever, and the concurrence of Koch, Manson, and other experts of the highest order in their advocacy of a similar doctrine for the transmission of malaria, the time seems at last come when decided measures of protection against mosquitoes should be seriously considered; the more so as the energetic

spirit of the Anglo-Saxon race is about to replace the fatalistic apathy of former rulers in Cuba and Porto Rico. The suggestion of Koch, calling for dwellings from which mosquitoes could be barred out, in order that the German colonies of Eastern Africa might be freed from malaria, ought surely to be be acted upon in countries where it is not only malaria that has to be contended with, but also the dreadful yellow fever, aptly called "the plague" in the early Spanish chronicles of America, from its analogies with the Oriental disease of that name. Why should not the houses, in yellow-fever countries, be provided with mosquito-blinds, such as are used in the United States as a mere matter of comfort, whereas here it might be a question of life or death? The mosquito larvæ might be destroyed in swamps, pools, privies, sinks, street-sewers, and other stagnant waters, where they are bred, by a methodical use of permanganate of potassium or other such substances, in order to lessen the abundance of mosquitoes; but the most essential point must be to prevent those insects from reaching yellow-fever patients, and to secure a proper disinfection of all suspicious discharges, in order to forestall the contamination of those insects. Well-ventilated hospitals should be built on high grounds, with no stagnant waters nor marshes in their vicinity, the doors and windows protected by mosquito blinds, a good system of drainage and sewerage, with facilities for disinfecting all suspicious discharges, and for destroying such mosquitoes and larvæ as might be found within the building. Only the upper stories should be occupied by the sick, and none but yellow-fever patients, and such malaria patients as are immune against yellow fever, should be admitted. The examination for admission might be carried out in a separate building, and a separate department devoted to suspicious cases under observation.

With such hospitals at hand, and an efficient board of health that would see to the proper arrangements for patients who could be left in their homes, and general sanitary improvements in and around the principal cities, there can be little doubt that yellow fever might be stamped out of Cuba and Porto Rico, and malaria reduced to a minimum. It would then be the business of the port and quarantine officers to prevent the introduction of fresh germs.

110 AGUACATE.

THE FAILURE OF ANTITOXIN IN THE TREATMENT OF DIPHTHERIA.[1]

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IN a statistical study of the antitoxin treatment of diphtheria it must not be forgotten that in late years there has been a decline in the death rate of other infectious diseases than diphtheria, against which no new remedy has been directed. Thus the typhoid-fever death rate from 1877 to 1894 in German cities of over 15,000 population averaged 29 deaths per 100,000 inhabitants; but between 1895 and 1898 it fell to 10. Gottstein[1] gives the diphtheria mortality, from 1877 to 1894, in these same cities, as 106 per 100,000 population. During 1895 to 1898 the rate was 44.

	1877-94.	1895-98.	Decline.
Typhoid fever	29	10	65 per cent.
Diphtheria	106	44	59 "

Thus while the present diphtheria mortality is still 41 per cent. of its former rate, the typhoid-fever death rate is only 35 per cent. of what it was during 1877 to 1894.

In St. Petersburg, between 1886 to 1889, as Verekoundow[1] points out, the typhoid-fever mortality was 7 per 10,000 population, and only 4 during 1890 to 1894.

Kassowitz[2] shows that the scarlet-fever mortality in the German cities was very much lower in 1896 than in 1895. Below the number of deaths from diphtheria in these two years is contrasted with that from scarlet fever:

	1895.	1896.
Diphtheria	7,634	6,237
Scarlet fever	2,852	1,993

From this it is seen that the scarlet-fever mortality decreased 30 per cent., and that of diphtheria only 20 per cent.

Much of the decrease in the infectious-disease mortality is due to sanitary improvement, and this is one factor which is usually ignored when the antitoxin question is considered. There can be no doubt, as was clearly pointed out by Deming,[3] that "good results are shown in many localities in the reduction of the mortality rate from diphtheria by sanitary measures alone."

Another thing which should be kept in mind is this: Antitoxin statistics are based on the treatment of cases which have been diagnosed as being diphtheria by the microscope; and comparison is made with the results of treatment in the past, of cases which were diagnosed on their merits as being examples of clinical diphtheria.

Bretonneau[4] said: "The fear which exaggerated the danger magnified the slightest attack of sore throat into the epidemic affection. This circumstance contributed not a little to obscure several important questions relative to therapeutics." History repeats itself when the results of antitoxin treatment are based on bacteriological examination. Such a firm believer in antitoxin as Jordan[5] concedes: "It is probably true that the basing of the diagnosis of diphtheria upon a bacteriological examination has led to the inclusion of cases which would formerly have been classed as simple sore throats." Another ardent advocate, Kortright,[6] admits: "Probably part of this decrease may be due to improved methods of diagnosis, by means of which cases formerly called tonsillitis are now classed as tonsillar diphtheria." This factor in increasing the number of cases reported and thus reducing the case fatality is admitted by Lotz[7] and Tavel,[8] and others, and it is a fatal admission; it cuts off the last leg of the antitoxin argument. Winters feels[9] "absolutely confident that at the Willard Parker Hospital the mortality has been much higher under the antitoxin treatment than it was before, if we were to exclude the numerous light cases, such as were never seen in the hospital before the use of the serum treatment." The words of Niemeyer[10] should also be heeded: "The reputed successful remedies have usually originated in the last stage of epidemics, at which time the cases are usually milder and recover more frequently even without treatment."

It must be remembered that the diagnostic value of the Klebs-Loeffler bacillus has not been indisputably established. Its presence is not an infallible indica-

[1] Read before the Brooklyn Pathological Society, April 13, 1899.
[2] Therapeutische Monatshefte, May, 1898.
[3] Indian Medical Record, January 11, 1899.
[4] Ther. Monat., June, 1898.
[5] MEDICAL RECORD, January 1, 1898.
[6] "Dictionnaire de Médecine," 1826.
[7] Philadelphia Medical Journal, February 18, 1899.
[8] Brooklyn Medical Journal, February, 1896.
[9] Correspondenzbl. der Schweizer Aerzte, 1898, No. 3.
[10] Ther. Monat., August, 1898.
[11] Archives of Pediatrics, July, 1895.
[12] "Practice of Medicine," 1883.

tion that diphtheria exists. For instance, Allen,[1] while treating a case of diphtheria, took swabbings for culture from the throats of other people in the same house. He says: "The report was returned that they contained the diphtheria bacillus, much to my disgust, and the bacilli continued to be there for three or four weeks longer, with no clinical signs whatever." Dr. Gross of the Boston Children's Hospital found the bacilli in eight per cent. of normal throats. On the other hand, Hennig,[2] in a series of 35 cases of clinical diphtheria, carefully examined bacteriologically for him by Professor Esmarch and Dr. Czaplewski, found the Klebs-Loeffler bacillus in only 57 per cent. In 4,054 cases sent to the New York board of health for diagnosis, the examination of 951 was indecisive.[3]

In Basel, Switzerland, notwithstanding there is now a low case fatality, the death rate is higher than it was in any year back to 1881. To make clear that the low case fatality is due to the greater number of mild cases reported, Kassowitz shows that while, for the ten years before antitoxin was used, an average of 245 cases was reported each year, at once in 1895 with the introduction of antitoxin the number reported jumped up to 645, and in 1896 the number had reached 835. "And yet at the present time the mildness of the disease is admitted." Referring to this fact Tavel[4] confesses that during these antitoxin years every case showing inflammation of the throat and membrane was reported, but he still clings to the belief that the use of antitoxin is partly responsible for the low case fatality. The average yearly death rate from 1885 to 1894, in Basel, was 29 per 100,000 population. In 1895 it went up to 65, and in 1896 it was still 49. This conclusively demonstrates, to say the least, that antitoxin has no power to save life.

To show that more patients now apply at the hospitals for treatment, Purjesz[5] gives the following particulars: More cases were reported in the city of Berlin in 1886 than in the first serum year 1895. In 1886 6,988 were reported, and in 1895 only 6,106. In 1895, with 300,000 greater population, 862 less cases were reported than in 1886. He argues that, as the epidemic has fallen off in the number of cases occurring, the disease has become milder in character. Yet with this comparatively small number reported from the whole city in 1895, we find 306 patients entered the Charité Hospital, whereas in former years only about 160 were brought to this institution. It follows that many of these 306 patients in 1895 had the disease in a mild form, and others no doubt had only bacterial diphtheria, *i.e.*, were cases diagnosed as diphtheria because Klebs-Loeffler bacilli were present. Formerly it was usual for the severe cases especially to be sent to the hospital. After antitoxin came into use we must conclude, in view of the fact that while the disease had not spread in the city the applications to the hospital at once nearly doubled, that very many mild cases were now taken to the hospital. The table below shows the result:

CHARITÉ HOSPITAL.

	Entered.	Died.	Mortality.
1894–95	306	41	13 per cent.
1895–96	265	39	14 "
1896–97	115	20	17 "
1897–98	156	34	20 "

In brief, the case fatality has increased year by year from 1894 to 1898 under antitoxin treatment.

In Trieste during 1895, through an agreement between all the physicians of the city, almost every case, in some months every case, was treated with antitoxin. Yet the number of deaths this year, Kassowitz[1] points out, was greater than ever recorded. The deaths ranged from 98 in 1889 to 222 in 1893. But in the antitoxin year 1895, 271 died. Antitoxin was never subjected to a fairer test than this. With practically all the diphtheria cases in the city treated with this reputed specific, nothing can explain away this pitiable result.

The following table gives the mortality rate in some cities during antitoxin years, contrasted with the rate which prevailed in the same cities during a corresponding number of years before antitoxin came into use:

DEATHS PER 10,000 POPULATION.

WITH ANTITOXIN.				WITHOUT ANTITOXIN.			
Baltimore	2 years.	1896–97	6.4	Baltimore	2 years.	1888–89	5.3
Boston	2 "	1896–97	9.8	Boston	2 "	1891–92	8.2
London	2 "	1896–97	5.7	London	2 "	1886–87	2.4
St. Louis	3 "	1895–97	7.5	St. Louis	3 "	1890–92	5.9
Philadelphia	4 "	1895–98	11.0	Philadelphia	4 "	1887–90	5.6

Recently Dr. John B. Cosby appeared before the Assembly committee on cities in opposition to the bill to prevent the New York City board of health from selling antitoxin, with the preposterous argument that the reduction in the diphtheria death rate in New York City during the past four years was due to antitoxin. He probably did not remind the committee that the general death rate from all causes is now phenomenally low, that there is a decline in the diphtheria epidemic, that an immense saving of life should be credited to the late Colonel Waring's efficient and admirable system of street cleaning, and that much good must have come from the new system of medical inspection of school children. All these facts were passed by, and antitoxin did it all. Yes, it is true the death rate in New York City fell from 15.8 in 1894 to 4.4 in 1898—a difference of 11. But the committee might have learned some further very interesting history. Dr. Cosby might have told this fact: the New York City diphtheria death rate fell from 24.8 in 1864 to 7.4 in 1867—a difference in these four years of 17 deaths per 10,000 population, compared with the smaller decline of only 11 in the four antitoxin years 1894 to 1898. This is clearly illustrated in the diagram on page 741.

Those cities which now have a low general death rate from all causes also show, as would be expected, a low diphtheria death rate. This is true of Chicago and Milwaukee. New York City, which at present has a very low general death rate compared with many years in the past, naturally has a corresponding low diphtheria mortality.

The next table contrasts the number of deaths in different cities during antitoxin years with the number of deaths in the same cities in past years before antitoxin was introduced:

NUMBER OF DEATHS IN CITIES DURING

ANTITOXIN TIMES.			BEFORE ANTITOXIN TIMES.		
	Per Year.	Deaths.		Per Year.	Deaths.
Trieste	1895	271	Trieste	1888–90	100
London	1895–97	2,533	London	1886–95	2,047
Brooklyn	1895–98	1,126	Brooklyn	1882–85	486
St. Petersburg	1895–97	1,276	St. Petersburg	1892–94	579

The deaths from diphtheria in St. Petersburg numbered 333 in 1892 and 378 in 1893. In 1896 the number of deaths from this disease was 1,118, and in 1897 1,905. Yet, in the summer of 1897, despite these disappointing figures, Baginsky, with assurance

[1] Archives of Pediatrics, August, 1898.
[2] "Sammlung klinischer Vorträge," No. 157, Leipzig, 1896.
[3] New York City Record, June 28, 1898.
[4] Ther. Monat., August, 1898.
[5] Ther. Monat., July, 1898.

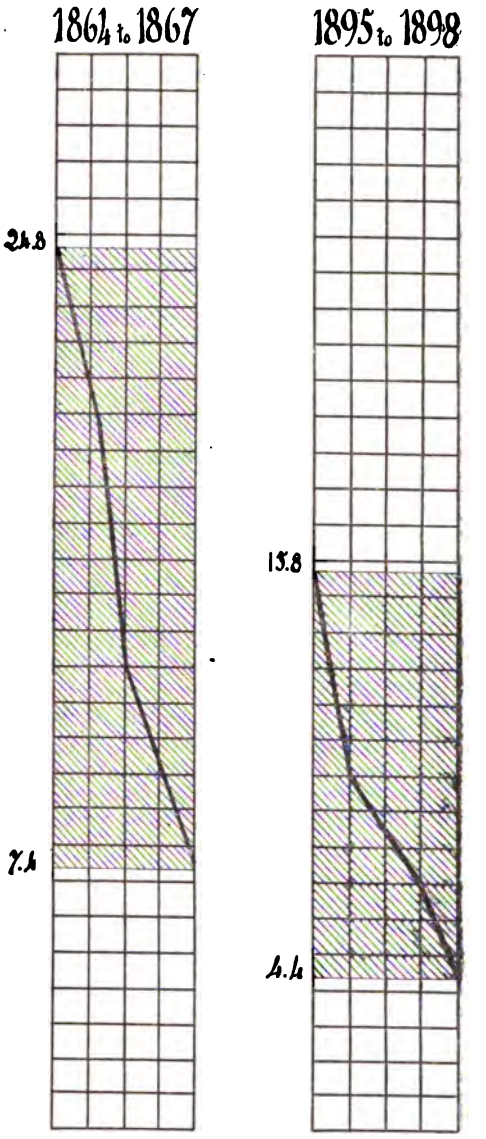
[1] Ther. Monat., June, 1898.

unwarranted even by his own experience, told an American physician that he had no more dread of diphtheria since he was using antitoxin than he would have had years ago of "any simple ordinary constipation."

It is a common assumption that the mortality from diphtheria used to be 40 per cent. before antitoxin times, which is as absurd as it is untrue. Certainly at times 40 per cent. of the patients died. The mortality was very much higher than 40 per cent. in some epidemics. Ferrand in 1827 [1] related that in an epidemic all of the 60 patients died. Bretonneau in 1826 quoted Carnevale as saying that in Chiaja near Naples the greater part of those attacked succumbed. Ozonam's summing up of 39 epidemics from 1559 to 1805 showed 80 per cent. mortality. Then the table of epidemics from 1805 to 1830, made by the Académie Royale de Médecine, gives the death-rate as 25 per cent. But Beauquin in 1828 [2] lost only 4.6 per cent. of 300 cases. Daviot [3] had only 8.6 per cent. mortality in 461 cases. Roll in 1850 [4] said that in Drontheim, Norway, of some 700 cases only about 7 per cent. died. Lespeau in 1854 [5] wrote that, in one regiment, of 200 cases only 6 per cent. were lost. And Mackinder [6] reported in 1859 a death rate of only 0.25 per cent. in 400 cases in Gainsborough, England. Were this great disparity in the diphtheria death rate before antitoxin times kept in mind, perhaps we would not so often be treated to the amusing argument that because the death rate has declined a few degrees in some places since antitoxin has been introduced, therefore antitoxin is responsible for the improvement. In London, for instance, some enthusiasts waxed eloquent over the new preparation, and gave Lennox Browne [7] the opportunity to prove that the decline in fatality in the London asylums board hospitals for two antitoxin years was only about 2 per cent. from what it was in 1894.

Another unjust way of reasoning is to compare the results in a few cases treated with antitoxin in a short space of time, with a very much greater number of cases treated without antitoxin during a considerably longer period. Gray [8] has adopted this argument. He reports 9,851 cases treated in German hospitals from April, 1895, to March, 1896, with 15.5 per cent. mortality. Then he states that from 1883 to 1894, 157,721 cases were treated in these same hospitals without antitoxin, with 26.7 per cent. mortality. From this he gravely infers that the death rate has been reduced from 26 per cent. to 15 per cent. on an average in ordinary cases. No account is taken of the fact that during the years 1883 to 1894 all the cases, good and bad, were included, while during the antitoxin months, from April to March, the statistics were generally based on selected cases. And he compares the result in 9,851 cases treated during eleven months, with 157,721 cases coming under treatment during eleven years. It is a fact open to any one making a close examination of the reports of cases treated with antitoxin soon after the use of that article was introduced, that always only some cases selected for one reason or another were treated with serum, while another set of cases did not receive it. The moribund cases were generally put in the latter class. This is true of the very first report presented by Baginsky to the Berlin Medical Society. [9] It is there stated that 23 cases were not treated with serum. In the first series treated by attending physicians with free antitoxin' from the New York City health board some were not even bacteriologically diagnosed, and the whole number of cases, 375, on which the statistics were founded, was obtained by omitting 34 cases on account of imperfect data. The same thing holds true, and to a much greater extent, of the statistics of the London asylums board hospitals.

DIAGRAM SHOWING FALL IN DEATH RATE DURING *Four Antitoxin Years* and *Four Years Before Antitoxin.*



NOTE.—Each square represents one year counting from left to right; and each square represents one death per 10,000 population counting from bottom to top.

How can a thing be considered a specific which gives 11.8 per cent. mortality in the Berlin Kaiser und Kaiserin Friedrich Kinderkrankenhaus, and at the same time allows a mortality of 23 per cent. in the Philadelphia Municipal Hospital—being more than double the mortality in one institution than in the other? Quinine would not be called a specific if it could not cure intermittent fever as well in Chicago as it does in St. Petersburg or any other city. Until antitoxin brings down the diphtheria death rate to a point lower than it ever was before, and keeps it at that point, in every place, it must be considered a failure.

In August, 1896, the death rate in the Philadelphia Municipal Hospital was 22.2 per cent.; in September

[1] Thèse de Paris, No. 234.
[2] Ann. de la Méd. Physiol., t. xiii.
[3] Work on Diphtheria, Autun, 1845.
[4] Oppenheimer Zeitsch., Bd. xlv.
[5] "Recueil de Memoires Méd.," etc., t. xiii.
[6] Medical Times and Gazette, v. xxxix.
[7] Medical Press and Circular, 1897.
[8] Jour. of the Amer. Med. Assoc., November 27, 1897.
[9] Berliner klin. Woch., July 16, 1894.

[1] Medical News, December, 1896.

it was 41.6 per cent. Had the use of antitoxin been stopped in September, when the mortality was again as high as it was in the previous month, antitoxin advocates would have had another opportunity to point out the surpassing excellence of the serum treatment. This again illustrates that antitoxin has no influence on diphtheria; the difference in the results in different hospitals is always due to the difference in the character as regards malignancy in the cases treated. When in Berlin the supply of antitoxin gave out, and the mortality at once went up, it was only a coincidence. Many an innocent man has been wrongfully executed on more convincing circumstantial evidence than this, and it ill becomes a reasoning profession to be convinced by such testimony without taking all the other facts in the case into earnest consideration.

Within the writer's knowledge diphtheria occurred in the families of four physicians in this city. Of the patients two received antitoxin and promptly died. The other two were not treated with antitoxin and recovered. It is fair to assume that the antitoxin-treated cases, being in doctors' families, were not neglected, and that treatment was begun early in the disease.

In the following table will be found the mortality of cases of diphtheria in general, treated with and without antitoxin:

MORTALITY OF DIPHTHERIA CASES TREATED

With Antitoxin.

J. Lewis Smith, under 2 years, 31 cases [1]	54.0
London Asylums Hospitals. 1896. under 5 years [2]	32.2
Baginsky, 1,324 cases up to July, 1897 [3]	11.8
London Asylums Hospitals. 1895 [4]	28.1
Philadelphia Municipal Hospital. 1898 [5]	23 0
City of Philadelphia. 1898 [6]	26.0
Russia [7]	14.6
Dorning, 7 successive deaths [8]	100.0
Dallas 11 cases [9]	90.9
Ewing 50 cases [10]	38.0
Von Engel, 39 cases [11]	25.5
American Pedriatic Society's Report [12]	12.3
Hôpital d'Enfants, Paris. 300 cases [13]	26.0
London University College Hospital [14]	28.0
Brooklyn, Richmond. and Queens. 1898 [15]	23 7
Berlin Am. Urban Hospital, 245 cases [16]	28.0

Without Antitoxin.

Ernst under 2 years. 32 cases [17]	12.5
Daviot epidemic, 1841–44. under 5 years [18]	4.7
Hennig 1,927 cases during 18 years [19]	3.0
Huebner, Leipzig Children's Polyclinic for 15 years [20]	22.5
Willard Parker Hospital, 1889 [21]	20.6
Table of Epidemics, 1805–30 [22]	25.0
Basel. 17 years [23]	12,6
Welch, Girard College, 116 cases [24]	0.0
Braymer, 32 cases [25]	0.0
Ernst, 65 cases [26]	16.9
Bieser. 115 cases [27]	5.0
Forsland. during 20 years [28]	5.0
Beauquin, 300 cases [29]	4.6
Basel. Children's Hospital. 1886 [30]	6.2
Escherich [31]	8.3
Neuman, from 1894 to 1898, 183 cases [32]	1.6

References for Above Table.—[1] New York Medical Journal, Winters, February 15, 1896. [2] Medical Press and Circular. No. 3,030, Browne, 1897. [3] Arch. für Kinderheilkunde. Bd xxiv., H. 5, 6. [4] Report for 1895. [5, 6] Philadelphia Health Report for 1898. [7] Figures by Rauchfuss. [8, 9] Journal American Medical Association, Coughlin, November 27. 1897 [10] New York Medical Journal, August, 1895. [11] New York Medical News, Biggs and Guerard, December. 1895. [12] New York Medical Journal, July 4, 1896. [13] New York Medical News, December, 1895. [14] British Medical Journal. January 25, 1896. [15] Biggs, Philadelphia Medical Journal, February 25, 1899. [16] MEDICAL RECORD, April 18, 1896. [17] MEDICAL RECORD, June 20. 1896. [18] Work on Diphtheria, Autun. 1845. [19] Verhand. des Cong. für innere Med., 1896. [20] "Behandlung der Diph.," Leipzig, 1895. [21] Report for 1889. [22] Prepared by Académie Royale de Médecine. [23] MEDICAL RECORD, February 15, 1896. [24] MEDICAL RECORD, January 28, 1899. [25] Journal American Medical Association, November 27, 1897. [26] MEDICAL RECORD, June 20, 1896. [27] MEDICAL RECORD, November 20, 1897. [28] Eira, No. 8, 1898. [29] Annales de la Méd. Physiologie. t. xiii. [30] Annales Suisses, 1894. [31] "La Serumtherapie," Vallette. Geneva. 1895. [32] Therapeutische Monatshefte, February, 1899.

Another stereotyped statement is, that the mortality for operative diphtheria cases used to be 73 per cent. before antitoxin was used. Again it must be pointed out that this is not the whole truth. And it is especially absurd to claim, as has so often been done, that now under antitoxin treatment only 27 per cent. of operative cases die.

The first successful tracheotomy for croup was performed by André, of London, in 1782. From that year there was no other successful case reported until Bretonneau saved another patient in 1825, after having failed in many previous attempts. Altogether Bretonneau lost 14 out of 20 tracheotomy cases, 70 per cent. Trousseau' lost 42 out of 65 cases, also 70 per cent. Bochut lost 115 out of 160 cases, or 72 per cent. He says the mortality in 198 cases up to 1852 was 72 per cent. But already before that year Pètel had saved 3 out of 6 cases, or 50 per cent. This was experimental work with a new operation—an operation associated with the greatest imaginable horror in the minds of parents. In those days tracheotomy had to be done without anæsthesia, a reason why it was then even more difficult than now to obtain permission to operate. The modern trained nurse was as yet an unknown factor. As Guersant well said: "Tracheotomy did not usually succeed in croup because no precautions were afterward taken to insure its advantages. The mere performance of the operation does not alone constitute the cure." Probably no one will dispute that no operation requires such persistent intelligent after-treatment; and it is here that the trained nurse contributes an inestimable aid to the physician. Much has since been learned about tracheotomy. Besides better nursing we have improved tubes to keep the respiration free, an enlightened understanding of the value of asepsis, and anæsthesia; and we have learned through accumulated experience how properly to perform the operation. Why shouldn't we get better results now than fifty years ago? The answer is, we do get better results—and we get them without antitoxin. Intubation gives better figures than tracheotomy if not better actual results, because more patients will consent to intubation. In Basel tracheotomy mortality has been as low as 59 per cent. in 333 cases. The Philadelphia Children's Hospital has had 57 per cent. mortality. In Geneva from 1872 to 1888 the mortality was 49 per cent. The death-rate of tracheotomy cases in the London University College Hospital in 1894 was 47 per cent. In Strasburg from 1891 to 1894 the tracheotomy mortality was 44 per cent. The mortality in other places has been even lower than the above-quoted rates, as shown in the following table:

OPERATIVE MORTALITY RATE

With Antitoxin.

Willard Parker Hospital, intubation, 9 months, 1895 [1]	68.0
Baginsky, 14 primary tracheotomies [2]	71.4
Willard Parker Hospital, 6 months, 1897 [3]	82.8
New York Health Department, intubation [4]	36.0
Philadelphia Municipal Hospital: 1897 [5]	68.8
Cassell. tracheotomy [6]	61.0
American Pediatric Society's First Report [7]	27.2
American Pediatric Society's Second Report [8]	25.9
Boston City Hospital. 1895–96, intubation [9]	53.0
Willard Parker Hospital. 3 months. 1895 [10]	76.9
London Northwestern Hospital, 1896 [11]	63.1
Baginsky. Berlin [12]	32.3
London Asylums Hospitals, 1895 [13]	50.0

Without Antitoxin.

Dower, Brooklyn [14]	27.3
Soerensen 13 tracheotomies [15]	7.6

[1] "Dictionnaire de Médecine," 1835.

Willard Parker Hospital, 1892 [16]	62.2
Bieser, intubation [17]	27.0
Strassburg Hospital, 1891 [18]	25.0
Cohen, tracheotomy [19]	33.7
Ernst [20]	22.2
Seymour [21]	14.2
Drobrink, tracheotomy [22]	37.0
Zurich [23]	29.0
Strasburg, 1891–94 [24]	44.3
Soerensen, Copenhagen [25]	25.0
Sonnenburg [26]	37.1

References for Above Table.—[1] MEDICAL RECORD, January 20, 1896. [2] Arch. für Kinderheilkunde, B. xxiv., H. 5, 6. [3] Meeting of the New York Academy of Medicine, 1898. [4] Report up to January 1, 1899. [5] Health Board Report, 1897. [6] New York Medical Journal, February 15, 1896. [7] New York Medical Journal, July 4, 1896. [8] MEDICAL RECORD, 1897. [9] Health Report. [10, 11] MEDICAL RECORD, January 20, 1896. [12] Kaiser und Kaiserin Friedrich Joseph Kinderkrankenhaus. [13] Report for 1895. [14] Written communication. [15] Kassowitz. [16] Reported to Drs. McNaughton and Maddren by resident physician Dr. F. W. Lester. [17] MEDICAL RECORD, November 20, 1897. [18] Verhand. des Cong. f. Innere Med., Kohts, 1895. [19] Wood's "Reference Handbook of the Medical Sciences," vol. ii. [20] New York Medical Journal, February 15, 1896. [21] Medical and Surgical Bulletin, March 21, 1896. [22] Journal American Medical Association, November 27, 1897. [23] During 1884. [24] Therapeutische Monatshefte, Siegert, March, 1895. [25] During 1895. [26] "Serumtherapie," Schurmayer, Leipzig, 1895.

II. Diphtheria exerts its harmful effects especially through sepsis, paralyses of the heart and other organs, impairment of the function of the kidneys, and the mechanical presence of an abnormal formation known as the false membrane. On none of these does antitoxin act beneficially. It is not asserted that it neutralizes the toxin already in the system, but only that it prevents the production of more toxin after the antitoxin has been injected. On the other hand, it has been demonstrated that antitoxin acts injuriously by causing paralysis of the heart and other portions of the body, on the kidneys, on the skin and the joints, and that it causes septic pneumonia, etc.

It has no effect whatever on septic diphtheria. Winters' has declared "in not a single septic case has the antitoxin made the least impression." Chapin[2] says the "so-called septic type is usually followed to a fatal termination by a persistent and powerfully depressant action upon the heart." All the septic cases included in the first report by Baginsky were fatal.[3]

Concerning the effect of antitoxin on the heart Baginsky reported: "Heart symptoms, certainly systolic murmurs, were more frequent." He admits that some die of heart failure, even when treatment is begun early. Korte[4] speaks of 40 early-treated cases, of which 19 were fatal by heart paralysis. A few years ago a member reported to the Brooklyn Pathological Society that he had lost from heart failure a case of diphtheria treated without antitoxin. When a second child in this family developed the disease, the physician at once commenced antitoxin treatment. While the second patient was convalescing, a third child in the same family became sick and was also treated with antitoxin. Both the second and the third child eventually died of paralysis of the heart. Is any comment necessary? Berlin[5] says post-diphtheritic paralysis is without doubt more frequent. Goodall[6] finds that in the London Metropolitan Asylums Board hospitals diphtheritic paralysis has been rather more frequent since antitoxin has been used. In 1894 paralysis developed in 13.2 per cent. and in 1895 in 23.2 per cent. of cases.

Of the effect of antitoxin on the kidneys Bieser[7] "soon learned that the patients developed acute suppression of the urine after the antitoxin was injected." In the London hospitals the proportion of albuminuric cases was greater in 1896 than in 1894. Soerensen[1] "observed more albuminuria, nephritis, toxic anuria, etc., in those treated with serum." Lennox Browne records 6 deaths from inflammation of the kidneys in 8 cases of diphtheria treated with antitoxin. Benda mentions 39 fatal cases, of which 33 had nephritis. Soltman[2] found albumin in 72 per cent. after antitoxin which did not show it before injection, and compares this with the record of 24 per cent. in 1894. Ewing[3] showed that antitoxin caused changes in the leucocytes and diminished the number of red corpuscles. Another investigator proved that the injection of plain horse serum is harmful. Chapin injected it into children suffering from marasmus, and all the cases did badly. He then injected the serum into guinea-pigs and a large sheep, and found the kidneys of these animals after the experiment to be the seat of cloudy swelling. Using streptococcic serum on dogs and rabbits, Thomson[4] found that 20 c.c. caused a fall of blood pressure in the kidneys. After the injection of 40 c.c. there were hæmaturia and hæmoglobinuria preceded by albuminuria and followed by suppression of the urine. Small divided doses were followed by albuminuria.

There is no convincing evidence that antitoxin exerts any influence on the false membrane in causing its early detachment or disappearance, or in preventing it from spreading. Even if it did, it would not signify much, for the membrane is simply the effect of something; it is not the disease. Patients often die after the membrane has disappeared. The diphtheritic lesion is identical anatomically with croupous inflammation due to traumatic and other causes.[5] Back of the formation of the false membrane is that deranged condition of the system permitting the growth of pernicious bacteria, which abnormal state is really the disease. We do not know but what the formation of the false membrane is nature's method of protecting the patient; and until it shuts off the air from the lungs the membrane may serve some useful purpose. Rupp[6] couldn't see any effect on the membrane in his twenty-four antitoxin-healed cases, "in such a way as to be beyond doubt."

It is a common thing, in cases not treated with antitoxin, for the membrane to begin to fall off after the first day and completely to disappear in three or four days. Rupp needed to visit two cases which were not treated with antitoxin only four days, and one, a croupal case, only three days. The diagnosis in each case was confirmed by bacteriological examination. Bretonneau in his classical work on diphtheria distinctly taught: "You will remark that at the first day of the appearance . . . a radical cure may be obtained in forty-eight hours." Yet antitoxin advocates claim everything, because in some cases treated with antitoxin the false membrane begins to disappear, as they say, early; in two or three days (Wiemer), or three or four days (Baginsky). This also happens earlier and later. In fact, with antitoxin it is often very much later. Chapin[7] speaks of a seven-year-old patient receiving 4,500 units on the third day, with the result that the throat cleared only after six days, and later the membrane partly reformed. Winters[8] saw it remain ten days in two cases, and in another at the end of the twenty-second day it was still present.

It is conceded that eruptions are often caused by the

[1] MEDICAL RECORD, April 20, 1895.
[2] MEDICAL RECORD, January 15, 1898.
[3] Berliner klin. Woch., July 16, 1894.
[4] "Serumbehandlung der Diphth.," Wien, 1895.
[5] Münchner med. Woch., No. 42, 1897.
[6] British Medical Journal, February 4, 1899.
[7] MEDICAL RECORD, November 20, 1897.

[1] Therapeutische Monatshefte, March, 1896.
[2] Therapeutische Monatshefte, February, 1896.
[3] Medical Journal, August, 1896.
[4] Archives of Pediatrics, August, 1898.
[5] Delafield and Prudden: "Pathological Anatomy," 1895.
[6] MEDICAL RECORD, January 28, 1899.
[7] MEDICAL RECORD, January 15, 1898.
[8] MEDICAL RECORD, April 20, 1895.

injection of antitoxin. Engelman[1] and Morse[2] describe cases of urticaria. Meyer[3] saw urticarial rash in one case, and a macular eruption in another. Berg[4] in summing up his observations concludes: "In very many cases the eruption, if at all general, is at least a discomfort." In others a "decided increase in the gravity of the disease accompanies the appearance of the eruption," which is present in "at least ten per cent. of cases treated with antitoxin." Martin and Hunt[5] saw the eruption in 27.5 per cent. of 178 antitoxin-treated cases. The London Asylums Hospital Report for 1896 says the eruption appeared in 35.2 per cent. of the cases healed with antitoxin.

Joint troubles also follow the use of antitoxin. Lombard[6] had one case in which there was pain in the joints. Fleisch[7] describes a case in which swelling of the hip-joint occurred. Perregeaux[8] mentions thirty cases of joint trouble following the use of antitoxin.

Before antitoxin was used in the Willard Parker Hospital 16 per cent. of the fatal cases died of pneumonia. During nine months of 1895, 53 per cent. of the deaths were caused by this disease. Winters[9] thought "the enormous increase of pneumonia has no other explanation than the hypodermic injection of serum."

Finally we have the startling fact that the injection of antitoxin for the purpose of immunization has killed many people. Korach[10] and Alfoldi,[11] and many others have reported deaths following prophylactic doses of antitoxin.

In 1895 Dr. Cordeiro concluded his report on diphtheria antitoxin to the surgeon-general of the navy with these words: "As yet we have not the slightest basis on which to found an expectation that fewer children will die in the future of this disease on account of the serum treatment"; and every year adds fresh testimony confirming the justness of this decision. The cases which are now lost when treated without antitoxin, the septic cases, the bad kidney cases, the paralytic cases, and the stenotic cases, are just the ones which it has been shown cannot be cured with antitoxin. And from all the bad effects, pointed out above, caused by the use of antitoxin, it follows that many lives have been sacrificed which might have been saved with the usual time-honored remedies.

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NEW OPERATION FOR EPITHELIOMA OF THE LIP.[12]

By W. W. GRANT, M.D.,

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Every complete operation for epithelioma of the lip must include in its consideration the extirpation of the submaxillary lymph glands, which is as important as the removal of the axillary, subpectoralis, and supraclavicular glands in carcinoma of the breast. In the paper presented, the discussion is confined to cheiloplastic operations on the lip. The method is as appropriate for deformity as for disease, and for the upper as well as the lower lip, though epithelioma is rare in the former. The future usefulness and appearance of the parts involved in every operation are worthy of the surgeon's most skilful consideration. His first effort is the complete removal of all diseased tissue. The cosmetic results of operations—especially of the face—is as certain a test of a surgeon's skill as many of the graver operations, and in no other locality is it of so much importance.

Every operation upon the mouth should aim to preserve, as perfectly as possible, the size and shape of the mouth. The normal mouth should admit, without stretching, the first three fingers of the hand, side by side.

The usual—standard—operation is the excision of a V- or wedge-shaped block of tissue, with the apex resting on the chin, and for the simple extirpation of disease of the lip it is a good operation. Whatever the intention may have been as to its application, it should be limited to very small growths and large mouths. In all operations, the incision should be made from one-quarter to half an inch beyond the ulcerated and hardened tissue on all sides. While the lips are quite elastic, few mouths will bear the sacrifice of much tissue without disfigurement. The ordinary V operation is a needless sacrifice of tissue, in order to make a smooth coaptation of the flaps; and the base of the triangle being at the vermilion border of the lip, there is consequently greater tension and contraction of tissue and lips, with resulting change of the mouth from oval to a round, sucker-like appearance, the upper lip overhanging the lower, with frequent depression of the lip at the point of union. I also believe that the extensive dissection of skin from the inferior maxilla, in order to secure a more satisfactory adjustment of flaps, tends to increase the puckering of the mouth. It is better to take the flaps from the mobile portions of the lip and cheek.

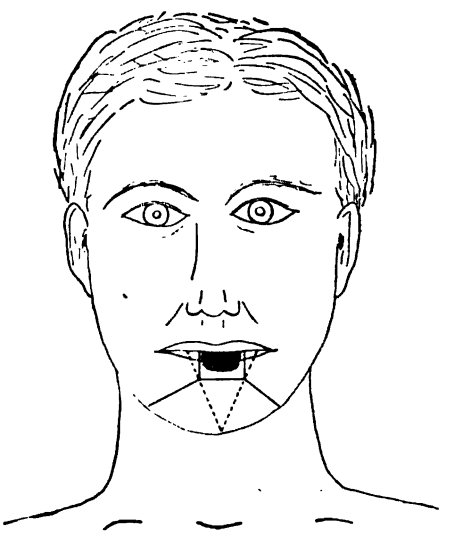

Fig. 1.—Before Operation. The dotted lines represent the usual V operation—the other lines the new mothod.

Were the disease more common, instead of being rare, in women, this phase of the subject would have received more consideration; yet men, with the aid of beard and moustache, are not by any means indifferent to the result. My interest was especially enlisted, two or three years ago, in the person of a well-known Denver lawyer, whose lip was operated on by a distinguished New York surgeon who employed the V method; the lips were so tense and the chin tissues so contracted that the mouth was round, the upper lip prominent, the lower retracted, giving the mouth the appearance and expression of an edentulous old man. These conditions still exist. When he laughs now, the lips are uncomfortably tense, and for a long time interfered with free and easy speech.

[1] Medical News, January 1, 1898.
[2] Boston Medical and Surgical Journal, February 17, 1898.
[3] Deutsches Archiv für klin. Med., p. 145.
[4] Medical Record, June 18, 1898.
[5] British Medical Journal, September 3, 1898.
[6] Ann. des Malad. de l'Oreille, du Larynx, etc., November, 1897.
[7] Berliner klinische Wochenschrift, January 31, 1898.
[8] Jour. des Prat., No. 8, 1895.
[9] New York Medical Journal, February 15, 1896.
[10] Therapeutische Monatshefte, February, 1896.
[11] Pester med. Presse, No. 10, 1895.
[12] Read before the Denver and Arapahoe County Medical Society, January 24, 1899.

I believe I have succeeded in overcoming the most objectionable features, by an improved method. I

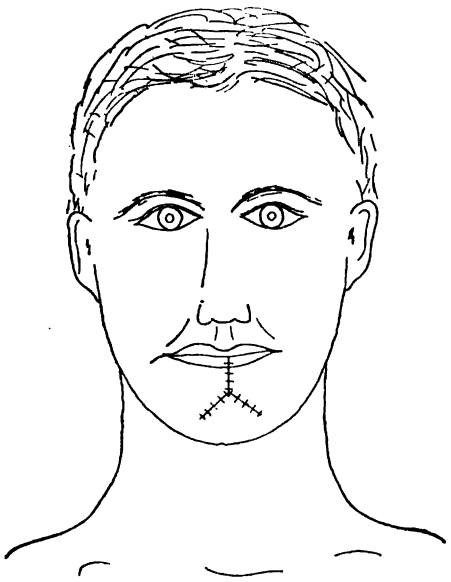

FIG. 2.—After Operation.

have performed it only three times. It is simple, easily and quickly done, and both cosmetic and practical results are excellent.

The first operation was performed on J. B. G——, aged fifty years, on January 16, 1898, for an epithelial ulcer with hard edges and base, of nine months' duration, located near the centre of the lower lip. A straight perpendicular incision was made on each side of the diseased area and extending well below it. These were united by a transverse incision, removing a quadrangular block of tissue. From each lower angle of the wound an incision was now made, obliquely downward and outward over the upper and lateral surface or border of the chin (the length, an inch or more, being determined by the amount of tissue removed from the lip); though these incisions, if desired, may be extended beneath the maxilla for the removal of lymph glands. These incisions gave two large triangular flaps, which, with little traction, slid easily over the stationary tissues of the chin. The flaps were first united in the centre with four interrupted silkworm-

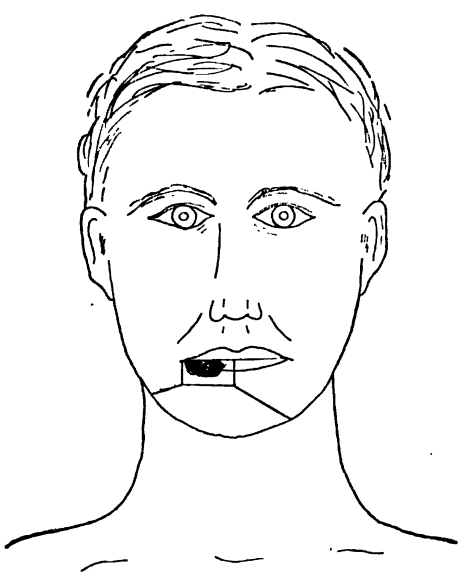

FIG. 3.—Before Operation.

gut sutures, and the lower borders of the flaps were then united to the chin with a continuous catgut suture.

The tension is not great, even though a large part of the lip should be removed. Even when it is necessary to remove the entire lip, oblique incisions into the cheek from the inferior angle of the wound, and from the angles of the mouth, will best meet the indications. In most recent cases it will not be necessary to extend the incision beyond the movable portion of the lip. When deemed necessary, the flaps may be dissected from the bone on a line with the oblique incisions.

In the third case operated on by this method, in June, 1898, the large ulcer, with much hardened tissue, occupied the lower right half of the lip, extending well into the corner of the mouth; and was due, doubtless, to the chronic, persistent habit of holding the pipe-stem in the corner of the mouth. It had existed over a year. The first incision was made from the centre of the lip downward, the second from the extreme angle of the mouth downward; the two being united by a transverse cut, removing half the lip. From the right lower angle of the wound an incision was made obliquely downward, across the upper edge of the chin and resting on a perpendicular line from the left angle of the mouth. A similar, but shorter incision was made from the other angle of the wound. The long flap was easily brought to the opposite side

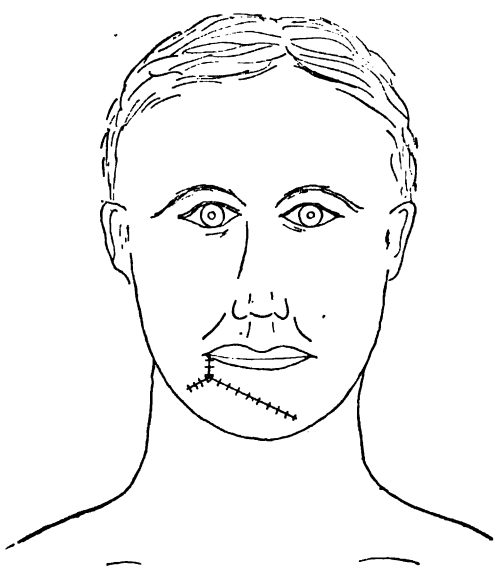

FIG. 4.—After Operation.

and united quickly to the opposite short flap, composed partly of the cheek. The result was better than I have seen from the simple V operation in this locality, with this amount of tissue excised. The mouth is not contracted, and the lower lip is fuller and more prominent in the centre. The latter is a noticeable feature of the operation.

To overcome the contracted, ill-shaped mouth, Serre and Celsus, after the usual V operation, made straight incisions from each angle of the mouth into the cheeks; and, after separating the mucous membrane above the cheek incision, it was incised above and parallel to the primary incision, the flap being used to cover the newly made part of the lip.

Three years ago, I operated on a gentleman from Windsor, Colorado, by the usual V method, this being the second operation, the first having been done by another surgeon three years before. It was necessary to remove almost the entire lower lip; and to prevent great contraction of the mouth I made, at once, the following operation, which I believe an improvement. After stitching the lip, I made an incision from each angle of the mouth to the buccal mucous membrane, curving slightly downward in conformity to the normal shape of the mouth. The mucous membrane was

freely dissected around the wound, and a short incision was then made above and below, making a substantial, tongue-shaped mucous flap, the apex of which was stitched to the angle of the skin incision with a suture or two above and below. Slight temporary eversion of the upper lip at the angle may result from complete section of the orbicularis oris. The result was excellent. The gentleman wears a moustache but no whiskers, and there is but little perceptible traction of the mouth.

For epithelioma necessitating the excision of the entire lip, Malgaigne made primary incisions similar to those I have previously described, but continued the transverse incision on each side well into the cheek, and then made similar parallel incisions from each angle of the mouth (with additional liberating incisions, if necessary), and then drew the narrow rectangular flaps to the centre and united them.

With the operation now advised, additional operations for improving the size and shape of the mouth will seldom be needed, and then probably only in case of recurrence of the disease, or the protracted existence of the primary disorder.

Of the many devices and operations employed by Serre, Celsus, Malgaigne, Syme, Buchanan, Chopart, Sedillot, and Estlander—including the elaborate operation of Buck—it is my conviction that none will meet the indications so satisfactorily as the one now described and recommended, with, if necessary, the modifications described and used at the angles of the mouth.

The advantages of the operation are: 1. The incisions are confined to the mobile, elastic portions of the lip and cheek, though it may be necessary, in some cases, to make slight dissections from the alveoli in front; the large, well-nourished triangular flaps which slide readily over the chin incision and make traction on the whole cheek and none on the chin.

2. There is less tension of the lip and it is more prominent and natural in consequence; therefore, it is more flexible in use.

3. By this method, there is less necessity for resorting to additional operations to restore the size and shape of the mouth, which is less apt to be disfigured by this operation than by others.

EPISTAXIS: ITS CAUSE AND TREATMENT.[1]

BY CARL SEILER, M.D.,

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EPISTAXIS, although in most instances of a trifling nature, is yet of great importance as a pathognomonic feature of many systemic and local pathological conditions of the system, and as such deserves a more close attention than is generally given to it in the text-books or in the ephemeral medical literature of the day.

In its milder form, which is the more general, we notice a more or less rapid dropping of blood from either one of the anterior nasal chambers, while in its more severe form the hemorrhage occurs in a more or less copious stream, usually from one nostril and but rarely from both, unless the rupture of a blood-vessel whence the hemorrhage originates is located in the nasopharynx, which does not often occur, except in typhoid fever, gout, or in the later stages of tuberculosis and Bright's disease. In the majority of cases epistaxis is of the milder form, in which the blood flows from one nostril only drop by drop and ceases within a short time, so that it is of very little significance; for, as physiologists tell us, the drop of blood is made up by the recuperative force of the system before it has reached the vessel receiving it in its descent.

[1] Read before the Scranton Clinical and Anatomical Society.

When, however, the blood flows freely in a stream and the flow continues for a considerable length of time, the ordinary tentative measures, such as cold applied to the nose externally or to any part of the body (the old woman's remedy of dropping a door-key down the back), do not avail, and more direct and efficacious measures for stopping the hemorrhage must be adopted. In such cases a careful examination of the anterior and posterior nasal cavities must be made in order to determine the exact location of the lesion giving rise to the hemorrhage, which examination under the circumstances is by no means easy; but unless it is made and the spot located, all measures, such as plugging the nasal cavities with cotton lint, saturated with astringents, adopted for the arrest of the hemorrhage will, if at all successful, be only temporary and result not only in great inconvenience and distress to the patient, but almost invariably in renewal of the hemorrhage on removal of the plug. Such an examination, which, of course, cannot be aided by the use of sight in the dark and blood-filled nasal cavities, must of necessity be made by the sense of touch guided by a thorough understanding of the various causes which are liable to give rise to such copious flow of blood from the nose. But as these causes are very numerous, it will be well to have them in a brief tabulated form.

I. Acute Traumatic.—Such lesions as result in the bursting of blood-vessels within the nose, or a result of blows upon the nose; falls, especially in children; or surgical operations within the nasal cavities, such as the removal of anterior or posterior hypertrophies, exostoses, or ecchondromes of the septum, may be classed under this head.

II. Chronic Traumatic.—By this term, which may seem at first sight rather paradoxical, I mean the infliction of slight lesions upon the nasal mucous membrane at frequent intervals, until in time and by the frequency of occurrence of the slight traumatic injury, rupture of a larger blood-vessel, or the formation of ulceration and granular tissue of the nasal membrane ensues, and even a slight temporary congestion of the parts by forcibly blowing the nose, sneezing, stooping, and so forth, bring on a copious hemorrhage. Such a condition may be caused in a number of different ways, such as picking dry scabs in the atrophic form of rhinitis with the finger-nail from the mucous membrane, the inhalation of air laden with irritating dust, the slight movement during respiration of impacted foreign bodies or rhinoliths, and so forth.

III. General Symptomatic.—Under this head we include the nosebleed in connection with and often pathognomonic of general systemic disorders, such as the epistaxis of typhoid fever, the periodical nosebleed of malarial influence; congestion of cerebral circulation, as in sunstroke or in the suppression of normal menstruation; the frequently fatal nasal hemorrhage in cases of hæmatophilia, in which either a slight acute traumatism is the initial cause or in which an increase in the blood pressure in the nasal mucous membrane causes a bursting of the naturally weakened arterial walls and produces the alarmingly copious flow of blood; and finally the bleeding from the nose experienced by mountaineers and aeronauts when ascending into the rarefied upper strata of the atmosphere.

IV. Local Symptomatic causes of nasal hemorrhage are those depending upon the anatomical structure of the nasal mucous membrane and the underlying cavernous tissue. Owing to their delicacy of structure and their physiological function they are prone to sudden increase of blood pressure and bursting of vessels and consequent bleeding from trivial local causes, such as sneezing, mental emotion, or the pressure of nasal mucoid polypi suddenly increased in bulk by the absorption of moisture from the atmosphere.

This short and superficial enumeration of the general causes of epistaxis, I trust, will suffice to recall minor details in the experience of my readers, for to enter upon their discussion here would carry us far beyond the limits of a paper such as this; and I hope that I have said enough to make the more practical part of my paper, viz., that concerning the treatment, more interesting and intelligible.

Treatment.—As we, fortunately for our patients and our success in combating disease, have generally adopted as our "credo" the maxim that, successfully to aid nature in curing pathological conditions, we must seek for their cause or causes, and if possible remove them and not merely treat the symptoms as they appear, we must carry out this maxim in its logical sequence also in the matter under consideration, and hunt up the general or local causes of epistaxis with a view of removing them and thus assisting nature in effecting a cure. Therefore when a case of epistaxis presents itself, whether of a mild (dropping) form or of a more serious (running) one, it has been my experience that the best way to proceed is as follows: First arrest the hemorrhage by compression, either with the fingers tightly clasping the alæ of the nose or, better, with a nasal clamp which I devised some years ago, keeping the head of the patient slightly inclined forward at the same time. Of course all constriction of the neck, such as is due to collar and shirt neckband, should be removed to prevent pressure upon the large vessels of the neck. This external compression is made with a view to the formation of a clot, and is preferable to plugging by the insertion into the anterior nasal chamber of styptic cotton or lint, because the compression can be removed as soon as the clot has formed, without disturbing it in its position.

While the clot is thus forming the clinical history of the case may be inquired into, and from it may be learned whether the bleeding is symptomatic, acute traumatic, chronic traumatic, or of local origin. If symptomatic, of course a general examination will indicate the proper treatment, but a careful examination of the anterior and posterior nasal cavities is still of the greatest importance, as it enables us to locate the source of the hemorrhage and apply the necessary local remedies to prevent a recurrence of the symptoms. The best way to make such a local examination, in my experience, is to let the patient expel the clot, after the external pressure has been removed, by gently blowing the nose in the natural method; that is, without using a cloth or handkerchief and without compressing either of the alæ nasi. As soon as the clot is expelled a self-retaining nasal dilator is inserted into the vestibule, and with a strong light from the head reflector the anterior nasal cavities are illuminated. If the flow of blood is so great as immediately to obscure all the parts, a plug of absorbent cotton saturated with a four-per-cent solution of cocaine is inserted and allowed to remain in the nasal cavity for a few minutes, when, on withdrawal of it, in most cases an unobstructed view can be obtained for a short time, owing to the constricting action of the drug upon the capillaries and smaller vessels, and the bleeding spot if situated in the anterior nases can be located. If, however, as sometimes happens, the cocaine has not produced the desired effect the examination must be made by the sense of touch, and preferably with the finger if the nostrils are large enough to admit it (and it is astonishing that an apparently small nostril will admit the index finger up to the second joint); if not, a probe skilfully introduced will generally give us the necessary information as to the location of the bleeding spot and also its cause if local.

In the majority of cases of so-called spontaneous epistaxis the hemorrhage proceeds from a more or less extended ulceration together with marginal granulation tissue, the vessels of which, having no walls, are non-contractile and when once opened allow a constant and copious oozing of blood into the nasal cavities. If such is the cause of the bleeding, I have found that thorough curetting of the ulcerated spot is advisable, either with the finger-nail, if such is possible, or with a nasal curette, until healthy, non-infiltrated tissue is reached, when the natural contractility of the normal vessels will close their free openings, and the nasal hemorrhage will stop of itself.

As a precautionary measure I am in the habit of covering the curetted surface with a plug of spunk, such as is used by dentists, and in the same manner I arrest the hemorrhage from a freshly cut surface in intranasal operations. If spunk should not be at hand a piece of ham fat, or lean bacon, as suggested and frequently used by the late Prof. D. H. Agnew, can be applied and answers the same purpose. Cotton or lint or any other fibrous substance, with or without astringents, should never be used for plugs to arrest nasal hemorrhage, as the fibres become too closely adherent and tear open the newly formed tissue on removal of the plug. For a similar reason iron in any form should never be used, because it forms a tightly adherent, sandy mixture with the blood, which cannot be removed by washing out the nasal cavities and has to be forcibly removed with forceps, thus greatly enhancing the chances of a repetition of the epistaxis.

If it is found that foreign bodies, rhinoliths, fibroid or mucoid polypi, or posterior hypertrophies are present and are presumably the local cause of the hemorrhage, they should be removed then and there, and the bleeding spot attended to afterward.

It is not necessary—in fact, impossible—in a short paper like this for me to go into details, particularly as to the after-treatment by tonics or ergot internally, and as to the local intranasal treatment by antiseptic washes and local applications to the lesion of the mucous membrane; and I hope that I have said enough to excite a discussion on the subject which cannot prove otherwise than highly interesting and improving.

203 Jefferson Avenue.

SOME CLINICAL FEATURES ABOUT VACCINATION.

By LUCIEN LOFTON, M.D.,

NORFOLK, VA.

PRESIDENT SEABOARD MEDICAL ASSOCIATION OF VIRGINIA AND NORTH CAROLINA.

I WISH to direct the attention of the medical profession to one or more very useful clinical features regarding vaccination.

There is scarcely a child in this and surrounding vicinity who could not "ere he lisp" testify to the personal application of vaccine, for it is rare that any practical man, be he layman or otherwise, will refuse to accept vaccination as a safeguard against variola.

Negroes, as a rule, suffer very little inconvenience from vaccination. It may be due to the fact that sympathy is less among them, or fortitude greater. Patients of this class are, on account of the general amalgamation existing in the race, more susceptible to the virus of cowpox, but, nevertheless, vaccination seems to run somewhat of a mild course when ordinary precautionary measures are instituted. A great deal is heard about the manner of preparing the arm or seat of inoculation. Within the past ninety days, in private practice, I have vaccinated three hundred and forty-eight people. The ages ranged from ten days to eighty years. Not in a single instance did I use anything but a clean towel dipped in cold water. After briskly rubbing the part, I dry

it with another towel, scarify, and deposit the virus, which is done as follows: Only the extreme outer integument is penetrated, if possible drawing *no blood*. The part is held taut with the index finger and thumb, and lightly scarified with a needle-pointed bistoury in various directions, making the place not larger than a fourth of an inch square. Now the skin is released, that the serum may flow. This is wiped away with a dry clean towel, the original position is resumed, and while the skin is taut the virus is deposited and rubbed in well with the scarificator and vaccination is done. In this way the place dries very quickly, the sore is confined to a small area, the inflammatory process is decidedly lessened, the absorption is more equalized and gradual, and, finally, the prodromal symptoms are reduced to a minimum. The virus is so slowly absorbed that practically no inconvenience is experienced. I have never had an untoward result after preparing the proposed seat of inoculation as outlined. Recently I was summoned to vaccinate a saw-mill crew of ninety-five people. Only two men were ever absent from work, and then only for a half day each. I subsequently learned that both had participated freely in alcoholics the night previous. As every one is aware, saw-mill employees do an extra amount of hard labor, and certainly this instance was one in which the microbic theory might be sufficiently tested. Let me not be understood as decrying asepsis —if that term is permissible—nor antiseptics. Some make a great ado about cleansing the arm, rubbing and scrubbing and drenching in the various so-called antiseptic preparations, but a judicious amount of *anything* is all right.

A great deal depends upon the virus. In the three hundred and forty-eight cases I quote, I used only glycerinated vaccine, and some of this I had carried in my vest pocket for eight months, and it acted as if it was a few days old I have demonstrated to my entire personal satisfaction that virus suspended in glycerin and put up in capillary glass tubes will remain potent indefinitely. Out of the above number vaccinated, only one person seemed to be immune. I say immune, because he had been vaccinated five times previously, and every one subjected to vaccination, besides this man, became inoculated at one sitting. Now we have in many people what I might term a pseudo-vaccination taking place. Instead of the characteristic infection you may see a semi-solid fungus-like growth arising with but little inflammation, no glandular enlargement, no constitutional prodromes, and within a fortnight the sore will desiccate and the scab become detached. I never had but four such cases, but I have repeatedly observed it in people who had vaccinated themselves or had some lay friend participate in the capacity of physician. Cases of this class are, as a rule, exceptionally difficult to infect, and really I believe they are immune to smallpox contagion. I speak advisedly. All of these cases occurred in people who had not been previously vaccinated.

As regards the vaccine shields, I would advise their usage early. To a great extent, when properly adjusted, they prevent any extensive inflammation, and in many cases the area of acute dermal tenderness is confined to the shield's limit. This applies especially to the felt splint, which I invariably use, and recommend on account of its flexibility, its durability, its applicability, and its cheapness.

Children may be successfully vaccinated while asleep. I recall to mind the case of the owner of a large saw mill near Emporia, in this State, who had summoned me to vaccinate the "junior" of his family, but stated in the beginning that he thought it would require a regiment to hold the young "hopeful." When I arrived, fortunately this promising youth was asleep. He was vaccinated without trouble and did not awake, and when told he had been vaccinated seemed deeply aggrieved that it had been done without his knowledge. The boy made a good recovery, with splendid immunity.

The ivory points are rapidly falling into disuse, and rightly so, for their use to many is most barbarous. The various progressive manufacturing chemists deserve unstinted praise for the clever and adroit manner in which they have from time to time made strides in the direction of improvement over the ivory points. The capillary glass tube is an ideal way of preserving the virus, and meets with hearty approval everywhere.

All praise to Jenner! No monument is so enduring as the grateful words uttered by grateful people all over this wide world of ours, for his genius, his greatness, and his goodness.

930 North Park Avenue.

Clinical Department.

RECURRENT STRANGULATION OF A LEFT OBLIQUE CONGENITAL ENTERO-EPIPLOCELE IN AN INFANT SIX WEEKS OLD—HERNIOTOMY—RECOVERY.

By HERBERT MARION STOWE, M.D.,
CHICAGO.

While hernias in infants are frequently met with, it is the rare exception that the condition causes any danger from strangulation. This probably results from the fact that little children are seldom, if ever, subjected to muscular strain of sufficient power to crowd into the hernial sac knuckles of intestine that cannot be readily replaced. Should the hernial opening be large and patulous, the bowels frequently prolapse on account of the long mesentery; but, provided the tissues are healthy, no damage is done. If, on the other hand, there results a trauma or irritation of the parts sufficient to cause inflammation and local plastic peritonitis or a gastro-enteritis accompanied by violent peristalsis and constant crying, which serves to increase the intra-abdominal pressure, strangulation is one of the not infrequent sequelæ.

Traumatism in the unskilful efforts to reduce a hernia may be the sole etiological factor in its production; but, as a matter of fact, the irritation brings on an increased peristalsis, often already augmented by dietary errors, and gas and fluid are forced by this *vis a tergo* past the constricting point until strangulation is complete.

The special features of this complication in children are the predisposition to occur during the early months of life, especially during the first five months, and the frequency of retention of urine. Children between the ages of one and four are nearly exempt. In a series of ninety-seven operations, but four were in patients of this class, whereas forty-five cases were under three months of age. In the adult strangulation may occur during any period of life, and the urine, though often diminished in secretion, is seldom retained. The other signs and symptoms are practically identical in both cases.

I obtained the following history of a colored infant of illegitimate birth. The labor was slow and tedious, because of a scoliotic, rachitic pelvis in the mother, seventeen years of age. The breech presented in the S. D. A. position. The membranes ruptured early. Pains were weak and infrequent. When the fœtal heart sounds became irregular, the medical attendant

hastened delivery by traction in the groins, extracting the trunk as far as the head. Here difficulty was encountered. The force applied to the lower limbs resulted in a separation of the skin and fascia in both groins, to the extent of half an inch. Delivery was finally effected with the child slightly asphyxiated. Both lower limbs were considerably bruised, and the scrotum was swollen and congested. These lesions, however, soon yielded to treatment, with the exception of the scrotum, which continued to increase in size. It was thought at the time that the testicle was contused. The child was sick from its birth. A few half-hearted attempts at breast-feeding and various kinds of milk and other foods, including oatmeal gruel, were given. A gastro-enteritis soon developed, and the child rapidly wasted away.

When the child was two weeks old, I first saw him. He presented a typical picture of malnutrition. Vomiting and diarrhœal passages were frequent. There were moderate tympanites and general abdominal pain, which was most marked over the left inguinal canal. The fontanelles were depressed, the tongue covered with brownish sordes, and several furuncles were present on the back. The child had a slight cough and was very restless at night.

Examination of the scrotum disclosed the testicle lying posterior to the oblong swelling and apparently normal. The swelling was one inch long, tympanitic and fluctuating, and lying in the surrounding œdematous tissue. The tension was greatly increased during expiration. The diagnosis was evident, and soon verified by taxis.

As the hernia was reduced the symptoms improved, the child falling asleep. A flannel band, one and a half inches wide, was doubled, and the loop placed over the external ring. The ends went around the body, passed through the loop, then over the perineum and posterior surface of the thigh, to be pinned to the band around the pelvis. This truss was worn up to the time of operation. The medicinal treatment consisted in the withdrawal of food, minute doses of salol (gr. $\frac{1}{20}$) and mercurous chloride (gr. $\frac{1}{10}$), and occasional sips of calcic hydrate. Baths were ordered in olive oil every night.

The next day the patient was better and quite hungry. Vomiting and diarrhœa still continued. The following prescription was ordered:

℞ Cream ..... ℥ ij.
Milk ..... ℥ iij.
Milk sugar ..... ʒ vij.
Calcic hydrate ..... ℥ iss.
Boiling water ..... ℥ x.

This seemed to agree very well, and the child regained some of his flesh. The swelling in the scrotum never entirely disappeared, and was painful upon pressure over the inguinal canal. There was probably no subjective pain.

The second attack came on eight days after the first. During the interval the gastro-enteritis was constantly present, though modified in severity. The child suffered from marked tympanites, vomiting of biliary matter, and constipation for twelve hours, while previously the bowels moved every two or three hours. There were retention of urine and a rectal temperature of 102° F. After immersion in a warm bath for ten minutes, the hernia was replaced with considerable difficulty after three attempts. Free escape of gas and fæces as well as urine signalled the relief of the obstruction, though the swelling had not entirely disappeared.

A third attack occurred three days later. The same symptoms and signs recurred, and the same relief was obtained from reduction, which necessitated the use of chloroform.

When the child was six weeks old, the last attack came on. I did not see the patient until about eighteen hours after the onset. The mother stated that she had tried several times to replace the hernia herself, but without success. A neighboring midwife was called in, and she failed. The hernia was as large as a billiard ball, tense and congested. Fecal vomiting was present. Collapse was setting in. The temperature was 103.2° F. The child was anæsthetized with chloroform, and herniotomy was at once performed. On account of the previous efforts, taxis was not attempted. The external ring was the constricting point. This was carefully divided. The sac was then dissected from the cord and surrounding tissues and opened. Two knuckles were found with thick, deeply congested walls, and here and there ecchymotic patches, due to efforts at reduction. The intestines reacted to the stimulus of hot water, and were returned into the abdomen. The sac contained about one and a half drachms of a flocculent serum. On the anterior wall was found a tip of the omentum attached half an inch below the external ring. This was deeply engorged with blood, and occupied nearly one-half of the cavity of the sac. The base was ligated in two parts and the rest removed. The sac was now ligated close to the internal ring and also below the external ring, so as to form the tunica vaginalis. The testicle was slightly swollen, otherwise healthy. The intermediate section of the sac was then removed. The suture closing the internal ring included the cut ends of the sac, as recommended by Barker, of London. The remainder of the operation was done according to Bassini's method, and the wound closed with iodoform collodion. Healing took place by first intention. The temperature rose on the second day to 104° F., but fell to normal on the ninth. Recovery was then rapid. The digestive disorder ceased, the bowels regained their normal condition, and the patient has improved ever since. Eight weeks have elapsed since the operation, but there has been no sign of peritonitis or infection.

This case illustrates the results of the violent and coarse handling which occurred from time to time in the misdirected efforts of friends. The injuries received at birth doubtless aided materially in causing the omentum to prolapse and in the subsequent inflammatory reaction to become attached to the sac wall, but the "handling" of the parts by various persons was most productive of evil.

In this connection it is well to bear in mind the statement of Mr. Birkett (Holmes' "System of Surgery," first American from second English edition, page 685): "I may represent the danger which is associated with violent attempts to reduce the hernia, by stating in a few words that more irreparable damage may be inflicted on the bowel in a few minutes by coarse, impetuous, brute force than the natural means of constriction could produce in several days."

Herniotomy in infants of average health should offer no greater mortality than in adults, provided the operation is performed early before collapse and other signs of grave constitutional disturbance have supervened. Even then, the operation has been followed with good results in some cases. A peritonitis setting in about the twelfth or fourteenth day is common in the late cases in which the patients have survived the immediate shock.

Immediate operation is indicated in all cases of over twenty-four hours' standing in which taxis has failed; in which vomiting comes on late after pain and obstruction; in which there are signs of collapse, or when there has been violent or prolonged taxis.

Prophylactic treatment is of great importance. Every child with a hernia should have its diet carefully regulated, especial attention being paid to daily bowel evacuations. Should constipation be present, the best aperients are castor oil or cascara sagrada.

When the bowel prolapses, the child should be placed in bed, with the hips elevated, and warm applications applied over the hypogastrium. Any intestinal disturbance may be controlled by hyoscyamus or preferably opium.

TREATMENT OF INFLUENZA.

By L. D. SHEETS, M.D.,

BROOKLYN, N. Y.

At the beginning of the present visitation of la grippe, I devised a prescription which has met with such uniform and complete success, that I think I ought to make it public. In all my cases, so far as I am aware, recovery has been complete, without any sequelæ. I have prescribed this remedy, and nothing else (except a dose of compound cathartic pills, in suitable cases, at the commencement of treatment) in all forms of the disease, neurotic, catarrhal, gastric, or combinations of these varieties. Some may smile at the simple, old-fashioned remedies; but I have never seen anything act so effectually, *cito, tuto, et jucunde!*

I will mention one case. A gentleman called on me one evening for treatment. I prescribed a dose of compound cathartic pills with the mixture. Next day, in passing my office, he said he could not go by without informing me of the success of my remedies. He said: "I took the pills, and in half an hour a dose of the mixture, and repeated the dose before retiring. After the second dose I felt better. During the night I took another dose, and in the morning I arose perfectly well."

If any one meets with as good success in the use of these remedies, I should be pleased to hear from him.

℞ Syr. scillæ co.,
Syr. ipecac.,
Tr. opii camph.,
Syr. pruni virg. ..... āā ʒ ij.
Tr. aconit. ..... gtt. xx.
Tr. lobeliæ. ..... ♏c.
Spts. æth. nit. ..... ʒ iv.
Liq. ammon. acet. ..... ad ℥ iv.
M. S. Two drachms every three hours.

AN UNUSUAL CASE OF SINUS THROMBOSIS AND EPIDURAL ABSCESS COMPLICATED BY MALARIA—OPERATION—RECOVERY.[1]

By M. D. LEDERMAN, M.D.,

ASSISTANT AURAL SURGEON, MANHATTAN EYE AND EAR HOSPITAL; LECTURER ON DISEASES OF THE THROAT AND NOSE, NEW YORK POLYCLINIC; FELLOW NEW YORK ACADEMY OF MEDICINE AND AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY, ETC.

This very interesting case tends to show how difficult it is to establish a positive diagnosis of sinus disease under circumstances which may exist at the time of the aural affection. It furthermore practically illustrates that at times we may have a complex state of affairs to deal with, and under such conditions we must not permit our judgment to be "side-tracked." Prolonged conservatism in this particular instance would no doubt have resulted seriously.

R. C——, a well-nourished laborer, twenty-nine years of age, was referred to my clinic at the Manhattan Eye and Ear Hospital on April 2, 1897. He was suffering from a severe earache on the right side. Two weeks before his admission to the hospital he had a similar attack, which was followed by a thin, watery discharge from the external auditory canal. This discharge ceased in two days, and no further annoyance was experienced until a few days before he came under my care.

During his second attack Dr. L. H. Miller, of Brooklyn, was called to see Mr. C—— at his home in Brooklyn. At that time Dr. Miller incised the bulging drum, as the mastoid was painful and tender to pressure. Improvement followed this treatment, but in a few days it was found necessary again to open the drum. Some bloody serum escaped, but as the patient's condition became worse it was thought best to place him in a hospital, as his surroundings did not warrant proper attention. It is interesting to note here that, six weeks before any ear trouble, the patient fell from a trolley car and struck on the right side of his head, without receiving any troublesome injury at that time.

On my examination, the mastoid region was found somewhat swollen, with tenderness on pressure. The membrane was very red and bulged prominently from the attic. No discharge could be seen in the canal. The posterior wall offered no indications. A free incision was again carried through the drum membrane, but no pus escaped. Hot boracic-acid solution was ordered as a douche every two hours, together with the application of Leiter's coil. On the day of his admission the temperature in the mouth was 104.2° F.; pulse, 92.

April 3d: There was very little discharge from the canal, with less tenderness over the mastoid. Calomel, gr. ss., was given every hour until effective. In ten hours the thermometer showed a drop to 99.2° F., with a pulse of 72.

April 4th: At 6 A.M. the temperature had again reached 101.2° F., and at 4 P.M. it climbed to 104° F. Five grains of phenacetin were then given every two hours, and the fever gradually subsided to normal in twelve hours. The ear symptoms were much improved, and the patient was feeling quite comfortable.

April 5th: For the past few hours the temperature hovered between normal and 102° F., with an average pulse of 76. It started to ascend at 8 A.M. and gradually kept on until 104.8° F. was reached. No antipyretic was given during this time.

April 6th: There was no pain or swelling over or around the mastoid process, and very little moisture was noticed in the external meatus. The drum was gradually assuming a natural color. An examination of the eyes by Dr. David Webster proved negative. Warburg's tincture in drachm doses, three times daily, was given, as the patient had previously been employed in digging trenches, and a malarial infection was suspected. Under this treatment the fever again came down to normal in ten hours, and he passed a comfortable night.

April 7th: At 8 A.M. the temperature was normal, but it once more started upward and finally stopped at 105.2° F. at noon, at which time the patient had a decided chill, followed by profuse perspiration. At midnight the thermometer showed a normal reading, which so remained for ten hours. Another excursion to 104.2° F. took place just twenty-four hours after the chill.

April 9th: Microscopical investigation demonstrated plasmodium malariæ in the blood at this time, so hypodermic injections of the muriate of quinine in five-grain doses every four hours were given. Internally, Fowler's solution in five-drop doses was administered. As all ear symptoms had subsided at this date, no local treatment was found necessary. The temperature still fluctuated between 99.4° F. and 101.6° F. for seven days, in spite of hypodermatic medication. My patient was feeling quite comfortable, and as no other indications arose which accounted for the persistent temperature, we had to be-

[1] Read before the annual meeting, eastern section, of the American Laryngological, Rhinological, and Otological Society, at Washington, D. C., January 28, 1899.

lieve that it was due to his malarial infection. An occasional occipital twinge of pain allowed me to suspect a possible sinus invasion, but as all other local symptoms were absent, I did not feel justified in opening the mastoid at this time. I determined, however, to perform an exploratory operation, if any definite local symptom appeared. On April 17th, Dr. Webster discovered that the right optic disc was somewhat swollen on the temporal side, and a similar condition affected the left disc on the nasal side. Up to this date no change in the eyes had been observed.

On April 18th, assisted by Dr. Webster and Drs. Farrell and Thompson of the house staff, the usual mastoid operation was performed. A seemingly healthy cortex was found; but the mastoid antrum was filled with granulation tissue. A drop or two of pus was discovered in the mastoid tip. The lateral sinus was exposed at the knee, and the section extended to near the jugular bulb, and for some distance posteriorly. On puncturing the sinus with a small aspirating needle screwed to the hypodermic syringe, and withdrawing the piston, we were gratified to find pus in the barrel. An incision was then made in the sinus in its longitudinal diameter toward the torcular Herophili. Considerable pus escaped from the sinus after the incision, but no blood flowed, showing an obstruction at this site. A small wire curette was then introduced into the sinus, and gradually carried posteriorly until the thrombus was thoroughly removed, and free bleeding occurred. On measuring the extent of the thrombus, we found that the curette had travelled a distance of an inch and a half before the gush of blood showed that the sinus was again patulous. The same procedure (curettage) was carried out toward the jugular bulb, until active bleeding appeared, which was easily controlled in both instances by iodoform compresses. As the circulation was fully established and as no general symptoms warranted further exploration, the internal jugular vein was not ligated. Before completing the operation I found an area of diseased bone on the upper boundary of the mastoid antrum, which led to an epidural collection of pus. After thoroughly curetting this region, the parts were douched with a warm bichloride-of-mercury solution, 1:5,000. The usual dressing was applied, with compresses of iodoform gauze over the sinus and dural openings. The patient did not pass a good night, being restless and complaining of considerable pain in the right side of his head.

April 19th: The outer dressing was changed; the patient was feeling most comfortable. Temperature at 2 P.M., 100.6° F.; pulse, 72.

April 20th: The optic neuritis was subsiding. His sleep last night was somewhat disturbed.

April 21st: The wound was dressed; some pus was found in the bone cavity. It was douched with antiseptic solution. A probe was passed into the sinus in both directions, which brought on some hemorrhage. The latter ceased promptly under pressure. The parts were cleansed and re-dressed. Temperature, 99.6° F.; pulse, 80.

April 24th: The wound was dressed. Very little pus was present. A probe passed into the sinus opening was followed by active bleeding, proving that the circulation was not obstructed. The patient was out of bed to-day for a few hours, feeling quite comfortable, with a good appetite.

April 27th: There was no pus in the wound. The sinus was not probed, as it appeared closed, and distinctly pulsated.

April 28th: There was very little swelling of the optic discs. The patient went out for a walk.

April 30th: The wound was healing rapidly and the general condition was excellent. Hearing distance—watch, right ear, three feet.

The patient continued progressing in the same satisfactory manner, and was discharged from the hospital on May 7, 1897. He returned for dressings, and his recovery was uneventful. The wound healed completely in about eight weeks.

At present my patient is enjoying very good health, and is working at his former occupation. Fortunately for him the ophthalmoscope saved his life, for no other symptom justified any surgical interference. General symptoms were absent, and the clinical and microscopical picture of malaria assisted all the more in confounding the differential diagnosis. The only pressure symptom which appeared, and that late in the course of the disease, was the optic neuritis, no doubt due to obstruction of the inferior petrosal sinus.

Such instances of aural complications certainly offer additional testimony to the importance of exploratory operations in this region. The general surgeon and gynæcologist consider it their duty to perform such operations, and frequently find extensive disease. Under our present excellent system of cleanliness, the aurist should establish the same rule, when in doubt.

38 East Sixtieth Street.

Progress of Medical Science.

Polypi of the Small Intestine.—Dr. Karajou records (*Wiener Klinische Wochenschrift*, No. 9, 1899) the case of an anæmic phthisical patient, twenty-three years old, who for some time had suffered from severe, recurrent attacks of abdominal pain, associated with increased peristalsis and occasional vomiting. He was able to feel nodular thickenings in the abdomen, and decided upon operation. After performing a laparotomy a large number of tumors could be felt in the small intestine. Five incisions into the intestine were necessary to remove all the polypi. The operation was successful, and the patient left the hospital cured. It is very rare to find, as in this case, the polypi confined to the small intestine; only one similar case is recorded.

The Ocular Evidences of Hysteria.—Casey A. Wood (*American Journal of the Medical Sciences*, January, 1899, p. 42) reports a series of illustrative cases, and expresses the opinion that most instances of hysteria present well-marked, easily recognized ocular signs and symptoms, some of which, such as reversal of the relation of the color-fields and the field for white, the tonic form of blepharospasm, spasm of accommodation and of convergence, and pseudo-paralytic ptosis, may be regarded as pathognomonic. Defects of vision (in the absence of refractive errors, anomalies of accommodation, and lesions of the fundus) are, generally speaking, hysterical if accompanied by photophobia and any form of blepharospasm. No examination of a patient for hysteria should be regarded as complete without considering the condition of his ocular apparatus. When there is no conclusive external evidence of the neurosis, the perimeter should be used carefully, the range of accommodation noted, and the ophthalmoscope employed. It should always be remembered that ocular hysteria is common in children and in men. Organic disease (especially traumatism) of the eye may accompany purely functional disturbances of that organ.

Supra-Arterial Epicardial Fibroid Nodules.—As the result of a histological study of five cases presenting multiple grayish-white, fibroid nodules situated in the epicardium directly over branches of the coronary arteries of the heart, Knox (*Journal of Experimental*

Medicine, vol. iv., No. 2, p. 245) reaches the conclusion that such nodules are not uncommon. They may be present in large numbers and are found most frequently upon the surface of the ventricles, although they may occur upon the auricles and even on the outer surface of the ascending aorta. They are rarely observed over the coronary veins. While often resembling in gross and superficial appearances the nodules described by various writers under the name of periarteritis nodosa, they differ from these in several essential respects. They are seated outside of the adventitial coat and lie within the epicardium. They are composed of dense, fibrous, sclerotic tissue, poor in cells. In the earlier stages of their formation they are richer in cells, both fibroblasts and lymphoid cells. These supra-arterial bodies bear no definite relation to endarteritis, although they may be associated with this condition. There were found with great regularity in the arterial wall immediately beneath the nodule; changes that indicated a weakening of the wall in this situation. In some instances the muscular wall coat was thinned and degenerated, but the most common and important change was reduction and often disappearance of the elastic lamellæ and fibres, the outer elastic lamella being the one most frequently and intensely affected. These lesions were often limited to the segment of the arterial wall adjacent to the epicardium, the inner or myocardial segment of the same artery being free from similar alterations, or presenting them only in a slight degree. It is suggested that the absence of the outer or epicardial segment of the firm support afforded to the artery on the inner or myocardial aspect by the surrounding tissues renders the former more liable to damage of its elastic tissue resulting from irregularities and increase of blood-pressure, associated perhaps with defects of nutrition. In consequence of the weakening of the arterial wall the artery would tend to bulge at the affected spot toward the epicardium were this tendency not restrained. The formation of the dense supra-arterial nodule of fibrous tissue over the weakened area holds this tendency in check and may therefore be regarded as an adaptive or compensatory change. The question as to the immediate exciting cause of the new growth of tissue offers the same difficulties as that pertaining in general to similar growths of connective tissue. Some would doubtless attribute it to direct stimulation from the pressure and shock of the impinging artery, others to defects in the tissue, and still others to a disturbance of the neighborhood relations of the part.

The Differentiation of the Various Forms of Polyneuritis.—Dr. Verrier holds (*La France Méd.*, Jan. 13, 1899) that in the various forms of polyneuritis, notwithstanding certain similarities, differentiation is possible; only in those cases in which different forms coexist, as, for example, polyneuritis alcoholica and tuberculosa, is it difficult to separate the individual symptoms of each. His differentiation is as follows: (1) Polyneuritis following the use of alcohol gives rise to paralysis of the extensor muscles of the lower extremities, increased patellar reflex, hyperæsthesia of the skin, trophic disturbances in the skin and nails, and slight atrophy of the muscles with reaction of degeneration. The prognosis is good. (2) Tuberculous polyneuritis causes analgesia of the upper extremities, paralysis-like weakness of the hands, atrophy of the small muscles of the hand. The lower extremities are first affected late in the disease. (3) Polyneuritis following diphtheria begins eight to fourteen days after the disappearance of the diphtheria, and is more frequent in adults than in children. The muscles of the soft palate, lips, cheeks, and the tongue are the ones usually affected. Next in frequency come the muscles of the lower extremities, then the upper limbs, and lastly those of the neck. There is seldom tremor in the affected muscles, and pain is absent. The skin is anæsthetic. Dizziness, strabismus, diminution of acuity of vision, or ptosis may coexist. The prognosis is usually good. (4) Polyneuritis following lead-poisoning: The upper limbs are first affected. Besides pain, muscular tremor appears early, sometimes in the forearm, at others in the shoulder or arm. The extremities are cold to the touch; the reflexes are diminished or absent. The diaphragm or the intercostal muscles may become involved. (5) Polyneuritis of leprosy causes attacks of severe pain, anæsthesia of the extremities and the face; paralysis and muscular twitching of the upper limbs, occasionally associated with "claw" position of the hands; severe trophic disturbances with perhaps the loss of the nails or fingers. (6) Polyneuritis due to carbon-monoxide: Aside from signs of the poisoning itself, there are severe skin and muscle pain, and also motor disturbances. (7) Polyneuritis from malaria: Here the lower extremities are painful and lame, the reflexes diminished, the warmth is extinct, and the sense of touch intact. (8) Polyneuritis from typhoid: Whereas the muscles of the face and arms always remain unaffected, the lower extremities are paralyzed and at the same time the seat of considerable pain. Trophic changes are slight. The prognosis is good.

The Significance of Tube-Casts in the Diagnosis and Prognosis of Disease of the Kidney.—As the result of a careful clinical and microscopical study, Péhu (*Revue de Médecine*, February 10, 1899, p. 110) arrives at the conclusion that search for and study of urinary tube casts may yield most useful information in the diagnosis and prognosis of nephritis. According to their mode of origin, tube casts may be divided into three groups: (1) Those resulting from transudation through the walls of the uriniferous tubules of certain substances contained in the blood, in connection with acute or chronic circulatory disorders, such are hyaline casts, hæmoglobin casts, fibrinous casts, and blood casts; (2) those resulting from desquamation, by the setting free of degenerated epithelial cells of the uriniferous tubules, such as colloid, fatty, amyloid, and epithelial casts; (3) those resulting from proliferation of the striated epithelial cells of Heidenhain under the stimulus of a pathogenic irritant. Granular tube casts are characteristic of epithelial nephritis; their detection in greater or less numbers, their persistence, even in the absence of acute inflammation, are diagnostic of inflammation involving the intricately arranged uriniferous tubules of the cortex of the kidney known as the labyrinth. The remaining varieties of casts are of less diagnostic significance as to the form of renal disease. Hyaline casts, which are the most frequent, generally accompany circulatory disorders, but are not of themselves of distinctive diagnostic significance. As a prognostic guide in cases of epithelial nephritis, a study of the granular casts is of value in disclosing the successive anatomico-pathological stages of the morbid process in the kidneys. In the acute stage the casts are numerous, coherent, narrow, and filled with compact granulations, and are indicative of active cellular proliferation. In the subacute stage the casts are less numerous, less coherent, and less narrow. When secondary sclerosis begins to take place, with this variety of cast colloid casts make their appearance. In the chronic stage of the disease the casts are few in number and little coherent. If recovery and restoration take place, albumin and tube casts disappear from the urine. If the morbid process enters upon a cicatricial stage, the uriniferous tubules, imperfectly regenerated, permit the escape of a variable, and generally small, amount of albumin, without, however, the formation of any tube casts.

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CANCER AND CONTAGION.

THE graphic method of study has yielded so many excellent results in other fields of knowledge, notably mathematics, that it is a matter for surprise that it has not been used more extensively and carefully in the interpretation of disease causation. For over thirty years Haviland, of England, has been insisting that the spread of cancer is in some way related to fundamental soil conditions, and he has noted that in districts in which the underlying strata are of limestone the disease is rare, and that where there are water-soaked clays the mortality from this disease is high. He did not at the same time present any economic evidence with reference to the classes of people that inhabit the districts, but since carcinoma is not known to be a respecter of persons, such economic evidence is of less value than it would be, say, for phthisis.

That there might be an excellent field for good work in the study of the distribution of cancer in a more or less restricted district, suggested to D'Arcy Power the investigation recently contributed to the *Practitioner* for April, 1899, on "The Local Distribution of Cancer and Cancer-Houses." Similar studies have recently been made by Noel for France and Behla in Germany, but neither of these shows with such startling clearness the apparent local contagious character of this disease. By plotting the map of a district, sixty square miles of a flat country, lying sixty to one hundred and fifty feet above the sea level, with a population of twelve thousand, among which insanity, phthisis, and cancer are peculiarly prevalent, D'Arcy Power shows the houses in which cases of cancer have been known to be present. The question of blood relationship is naturally taken into consideration. During the years 1872-98, one hundred and seventy-three cases of cancer were under observation, fifty-nine in men and one hundred and thirteen in women. Forty-nine had cancer of the alimentary canal, ten epithelioma of the lip, twenty-two cancer of the liver; the breast was affected in thirty-seven cases and the uterus in thirty-one. The maps show that there is a remarkable tendency for the cases to cling to certain spots and groups of buildings, irrespective of the age or size, poverty and reduced income capacity do not seem to determine this local segregation, since the manor-house as well as the cottage shows a like condition. The disproportionate number of cases of cancer of the gastro-intestinal tract drew his attention particularly to the water-supply, and it is interesting to note the relationship of the infected areas to the water distribution, which supports in large measure the contentions of Haviland, yet Power does not believe that water is the direct infecting agent, and he has suggested an intermediate host.

It is impossible here to give full attention to the noteworthy sequences of this study, though many of them merit thoughtful attention. He draws the inference from his study that there were localized epidemics of cancer restricted to certain districts, to villages, to houses, and even to single rooms in a house, and further concludes that there is a strong presumption in favor of cancer being an infective disease, to which some are more susceptible than others. Locality seems to be a predominant factor, and the nature of the locality associated with cancer seems so characteristic that it is possible to say whether or not it is advisable for a patient with a well-marked family history of malignant disease to reside in a given spot. He does not think that the cause will be found in any given room or house or water-supply, notwithstanding the remarkable cases noted in his paper, but such etiological factors must be looked for in wider fields, and that there is some intermediate host probable, whose chances of detection will increase or diminish with the care with which the fauna and flora of a given region are thoroughly searched.

CREMATION IN ENGLAND.

IT is coming to be more and more generally recognized that cremation is for many reasons, hygienic as well as economic, the best means of disposing of the dead, and particularly when death has resulted from transmissible disease. Apart from sentimental considerations, the only serious objection that can be offered against cremation is of a medico-legal nature, namely, that with incineration of the body possible evidences of crime may be destroyed; but such objection would be overcome by careful scrutiny of death reports, with inquiry into the cause of death in all doubtful or suspicious cases.

Some interesting observations on this subject were made by Sir Henry Thomson (*British Medical Journal*, March 25, 1899, p. 713), in the course of an address delivered at a recent meeting of the Cremation Society of England, now twenty-five years old. The beginnings of the society were small and its early career was discouraging. Its objects and purposes originally met with opposition, and four years elapsed before its first crematorium was completed, and six years more before the first incineration took place under its auspices, although private incineration of two bodies had been performed in 1882 and of one in 1883. The number has increased gradually from three in 1885 to two hundred and forty in 1898, and the total has reached twelve hundred and eighty-three. The society has assumed the obligation of investigating the conditions of death in the case of every body for whose in-

cineration application was made, and it has now further invoked the services of a distinguished pathologist for consultation purposes in cases of unusual doubt or difficulty, and for making necropsies when required.

The interesting question is raised whether cremation, while remaining optional in cases of death from ordinary causes, should not sooner or later become obligatory when death is due to such transmissible diseases as smallpox, scarlet fever, diphtheria, cholera, typhoid fever, tuberculosis, etc., at all events in the chief centres of population. Such a course would seem amply justified to sustain the active efforts being made in every direction to limit the ravages and restrict the dissemination of preventable disease.

DEATH IN HEADACHE POWDERS.

THE daily papers have of late contained reports of death in various cities attributed to self-administration of unknown remedies. The other day a woman in Pittsburg died in twenty minutes after swallowing a powder for the relief of headache. This is said to have been the fifth death in that city alone, recently set down to the same cause. Such instances teach the nostrum-loving American people but slowly. The report of the physicians who have this week made an autopsy in the case of a lady of Detroit is said to show that death was hastened by the use of secret headache powders. In this connection a report published in our news department will be found of interest. It would seem but right that the ingredients of all nostrums sold in the drug store should appear upon the package. This would protect in a measure both the druggist and the purchaser. When both are ignorant of what is being administered, great damage may often result.

Surely some legislation is called for.

A NEW FLOATING HOSPITAL FOR ST. JOHN'S GUILD.

DURING the hot weather that invariably prevails in this city for a longer or shorter period, the plight of the poor, and especially of the little ones, is indeed pitiable. Then is the time that summer diarrhœa claims its victims by the thousands, and the chances of fighting successfully against this, the most fatal of infantile maladies, are but small.

All the conditions under which "the submerged tenth" have perforce to exist are favorable to the contracting and spread of cholera infantum. Cooped up in the unsavory, unsanitary tenement district, where sufficient air and light are lacking, and fed on improper and deleterious food, what cause is there to wonder at the appalling death rate among the infants? The organized charities have done much to improve the lot of the poor in New York, but there is still an almost unlimited field for the efforts of philanthropists. The Guild of St. John has, since its initiation in 1866, been foremost in its endeavors to save infant life. In 1875, its Floating Hospital made its first trip; in 1881, a Seaside Hospital was erected on Staten Island, and in 1892 the Children's City Hospital was opened, and the Women's Auxiliary Association was instituted under the auspices of the same society. It is well known that nothing conduces so much to the well-being of infants as fresh air and proper food. The Guild of St. John has supplied these wants to the extent permitted by the inadequate accommodation afforded by the Floating Hospital and the Seaside Hospital. It has, however, long been recognized that its powers of doing good have been greatly restricted by the lack of more room. Through the munificence of a New York woman a new boat has been provided; built for the express purpose and complete in every detail, so that in the hot months of this and coming years upward of three thousand mothers and children will have the opportunity of a health-giving sail and of escaping for a time from the contaminating influences of their wretched homes.

News of the Week.

A Question of Diagnosis. — It is reported in the papers that Miss Julia Parker, a Brooklyn schoolteacher, who was sent to North Brother Island about two weeks ago, supposedly suffering from smallpox, was found later to have nothing more serious than chickenpox. She was allowed to return to her home after a detention of ten days. It is announced that she will bring suit against the city for the annoyance to which she has been subjected through the alleged blunder of the authorities. The school to which she was attached has been closed since the announcement of her illness.

The Van Cott Fellowship in Pathology.—An anonymous benefactor has presented to the Hoagland Laboratory in Brooklyn an endowment fund of $25,000, for the establishment of a professorship in the department of pathology, to be known as the Van Cott fellowship, in honor of Dr. Joshua M. Van Cott, the present head of the department. The income of the fellowship is $1,250 each year, and Dr. Van Cott is to have the power of appointment during his lifetime. He has named Dr. Archibald Murray, his assistant, for the fellowship for the first year.

The National Confederation of State Medical Examining and Licensing Boards will hold its ninth annual meeting at Columbus, Ohio, on Monday, June 5th. Any member of any examining or licensing board of any State or Territory is eligible to membership while he continues a member of the board, upon presenting proper evidence of his position to the council of the confederation; and unless elected to membership as prescribed by the constitution, the membership will cease when he ceases to be a member of the board of examiners. Physicians not members of an examining or licensing board may, upon application to the council, be nominated by it to the confederation and be elected to membership by a two-thirds

vote of the members present at any meeting. Members and ex-members of State medical examining-boards, physicians and educators who are interested in the cause of higher medical education, are invited to attend this coming meeting.

Recrudescence of Cholera in India.—It is announced from Allahabad that a serious epidemic of cholera has followed in the wake of the bubonic plague. At Kurrachee, the principal seaport town of Sinde, there were sixty-four deaths from cholera on May 18th.

West Point Examining-Board.—The secretary of war has appointed the following board of medical officers to make the physical examination of candidates for admission to the Military Academy at West Point: Col. Dallas Bache, assistant surgeon-general, U. S. A.; Maj. Louis A. La Garde, surgeon, U. S. A.; and Capt. Charles M. Gandy, assistant surgeon, U. S. A. The board is ordered to meet at West Point on June 1st.

Virchow on Peace and War.—According to a despatch in *The Sun*, Professor Virchow was recently interviewed on the subject of the Peace Conference, and expressed the opinion that disarmament will sooner or later be realized. But with that charming naïveté of peace advocates, who seem to think that their object can best be gained by vituperation of all who look on war as at times a necessary evil, he added: "Detestable and criminal demagogues in the press and in public life, mainly to flatter their own vanity, cause nations to sacrifice their interests to racial prejudices, based on nothing but the grossest ignorance. Nations let themselves be led astray by deceptive words such as glory, dignity, and honor, to which they append, without reflection, the fateful adjective 'national.' Rulers are often as weak as their subjects, and, instead of finding satisfaction in the serious fulfilment of their duties, only think of catching the approval of the most contemptible part of public opinion. The government of the United States has lately given a pitiable example of such weakness. That civilized land was plunged into a war, barbarous and unjust—for all wars are such—by the criminal action of brainless demagogues and the notorious incapacity of its rulers. They have sinned against humanity and civilization. Let us hope that the American people have recovered from their bout of intoxication, and that they will do all they can to redeem their errors." It is fortunate that Professor Virchow is more careful of his facts when pursuing scientific investigations than he is when dealing with politics and history.

Death of an Aged Physician.—Dr. William L. Russell, who for many years was the oldest living graduate of Harvard College and Harvard Medical School, died in Barre, Mass., on Saturday, May 6, 1899, at the ripe old age of ninety-nine years six months. The cause of death was parotitis. Dr. Henry Henry J. Walcott, Jr., of Barre, writes that Dr. Russell was born in Carlisle, Mass., October 28, 1799; he entered Harvard College in 1822, and graduated in 1826. After graduating he taught school for a short time, but soon decided to study medicine. He was a student of Dr. Proctor's in Lexington, and completed his studies with Dr. Doane, of Boston. He also was assistant physician at the McLean Asylum. After graduating he went to Barre, and remained in active practice twenty years. The doctor retained his faculties until the last, and always attributed his good health to his temperate habits. He never used tobacco or alcohol, and scorned an overcoat, even in the coldest weather.

The Smallpox Scare in Norfolk, Va., has about subsided. The disease has been of a very mild type, and few if any malignant cases have been discovered. The mortality has been less than two per cent. The majority of deaths occurred among negroes.

Brooklyn as a Borough is becoming healthy. A decrease in the death rate for the week ending May 20th is shown by the vital statistics bureau. There were 14.57 deaths per 1,000, while for the corresponding week of last year there were 18.04.

Physicians' Certificates of sickness for unwilling jurors will no longer be accepted by some of the city justices, but instead the doctor will be called into court to testify as to the nature of the disqualifying illness.

Moral: Those drawn for jury duty should see to it that they present objective rather than subjective symptoms, or the physician may doubt their statements.

Treatment of Cardiac Asthenia of Pneumonia.—Dr. Henry L. Elsner, of Syracuse, N. Y., writes that the report of his paper read before the Climatological Association incorrectly states that the ethereal mixture is recommended at intervals of an hour or two, whereas the intervals should be of only fifteen minutes. The statement was also made that the sparteine and caffeine are to be prescribed at intervals of four or six hours, instead of at intervals of two or three hours, as Dr. Elsner recommends. The great object which the speaker had in mind was to administer the remedies at frequent intervals, in order that the heart and arteries might be held continuously under their influence.

Philadelphia Pediatric Society.—At a stated meeting, held May 9th, Dr. D. L. Edsall exhibited a case of probable sarcoma of the kidney in a child, four or five years old, in which operation was contemplated. Dr. J. P. Crozer Griffith exhibited a case of presumably congenital disease of the heart in a child two years old, and which he thought to consist in septal deficiency and pulmonary obstruction. Dr. A. A. Eshner and others suggested that the peculiar long and vibratile murmur, occupying the presystole and the systole, together with the sharp second sound, and a dilated left auricle, pointed to the existence of mitral obstruction. Dr. A. Hand, Jr., presented a child about four years old, with a diplegia, partially flaccid and partially spastic, but without noteworthy mental deficiency. Dr. A. O. J. Kelly suggested the possibility of the condition being hysterical. Dr. A. A. Eshner expressed the opinion that it was probably depen-

dent upon subdural hemorrhage, perhaps occurring during parturition, as the child was a seven-months infant, and other children had likewise been born prematurely. Dr. James Tyson reported a case of generalized vaccinia, and exhibited photographs showing the distribution of the eruption. It seemed the consensus of opinion that the conditions were associated with some accidental infection. Dr. D. L. Edsall read a communication on "Congenital Stenosis of the Pylorus," reporting a case believed to be of that nature. He suggested that in some instances the condition might be of reversionary type. Dr. L. M. Allen reported a case of erysipelas in a child, fourteen weeks old, whose mother had suffered a streptococcus infection of the arm, and another child had had an attack of scarlet fever. He reported also a case of melæna neonatorum, in which recovery ensued, although the hemorrhage had been quite copious. Dr. Emery Marvel reported a case of noma, terminating fatally. Dr. W. M. Welch exhibited photographs from two cases of noma complicating measles.

Jefferson Medical College.—Judge Mayer Sulzberger has been elected a trustee in place of Col. Samuel Goodman, resigned.

The Camden (N. J.) District Medical Society held its annual meeting at Camden on May 9th. Dr. Daniel Strock read a paper, entitled "Secrets of Patients." The following officers were elected for the ensuing year: *President*, Dr. W. S. Jones; *Vice-President*, Dr. J. F. Leavitt; *Secretary*, Dr. Paul M. Mecray; *Treasurer*, Dr. Joseph L. Nicholson; *Historian*, Dr. Harry Sherk; *Reporter*, Dr. John G. Doron.

Philadelphia County Medical Society. — At a stated meeting, held May 10th, Prof. E. G. Conklin presented a communication entitled "Phenomena and Mechanism of Inheritance," in which he pointed out that the ovum was a result of the union of the germ cell and the sperm cell, of the chromatosome of each of which it received equal parts. All that the ovum could therefore inherit was certain physical qualities of structure, capable of varied manifestations of activity. Inherited characteristics might be looked upon as evolved in consequence of ordinary influences and stimuli, and acquired characteristics as those resulting from the operation of extraordinary influences or stimuli. Only in this sense could acquired characteristics be considered capable of transmission by heredity.

Pathological Society of Philadelphia.—At a stated meeting, held May 11th, Dr. M. P. Ravenel read a communication upon "The Resistance of Bacteria to Cold," in which he detailed experiments showing that typhoid bacilli, anthrax bacilli, and diphtheria bacilli, exposed to the action of liquefied air (at a temperature of more than 350° F. below zero), were not killed. Dr. Joseph Sailer reported a case of tumor of the cauda equina, which on histological examination proved to be a melanotic sarcoma. The patient was uræmic, and died shortly after coming under observation. No other neoplasm was found, and it was thought that the spinal growth might be primary. An anomalous swelling of the cord was present in the dorsal region. Dr Sailer exhibited an aneurism of the arch of the aorta, which formed an immense tumor, projecting to the right and forward, eroding several ribs and largely filled with clot. Death had resulted, not from hemorrhage, but from exhaustion. The heart was of only moderate size. Dr. J. Hendrie Lloyd exhibited specimens of amyloid disease of the liver and kidneys, of eight years' duration, obtained from the body of a girl, dead at the age of eighteen years, who had suffered from tuberculous disease of the hip-joint from the age of three years. Drs. T. S. K. Morton and W. G. Spiller exhibited a specimen of tabetic arthropathy of the ankle-joint, for which amputation had been successfully performed. Vessels and nerves in the amputated member showed marked degeneration. There was some doubt as to whether the condition was a true tabetic arthropathy or merely a tuberculous joint in a tabetic patient. Dr. J. S. Brister exhibited specimens of carcinoma of the rectum with extensive secondary involvement of the liver. Drs. J. M. Cruice and C. P. Stackhouse exhibited specimens from a case of subdiaphragmatic abscess. The condition had during life been believed to be an empyema, and had been operated on from this point of view. The primary focus of suppuration was supposed to be an abscess about the vermiform appendix. Dr. J. P. Arnold exhibited consolidated lungs in the stage of gray hepatization from a case of typhoid fever, in which death had resulted in the third week of the disease. Dr. Joseph Sailer exhibited a section from the semilunar ganglion obtained in a case of typhoid fever, and presenting no abnormality. Dr. D. Riesman exhibited lungs presenting extraordinary bullous emphysema.

Dr. Henry M. Weeks, late second assistant physician and pathologist to the New Jersey State Asylum for the Insane, has been elected superintendent of the New Jersey State village of epileptics at Trenton.

A New Brooklyn Hospital.—The Bay Ridge Hospital, Dispensary, and Training-School for Nurses has been organized and placed in charge of a board of directors for the purposes of meeting the needs of a hospital service for the thirtieth and thirty-first wards of Brooklyn. The use of a building has been offered free of expense for five years, provided $5,000 is raised by June 1st.

A Hospital's Responsibility for a Nurse's Negligence.—Some time ago, a woman went to St. Vincent's Hospital to have an operation performed. She was put under ether, and when she regained consciousness after the operation she complained of pain in one leg. It was found that a hot-water bottle was lying on the leg and had caused injuries which, it was claimed, resulted in permanent disability. The patient sued the hospital for $30,000 damages. At the trial term the complaint was dismissed, the judge affirming that the hospital authorities could not be held responsible. The case was appealed, and now the Appellate Division has handed down a decision that the hospital cannot escape responsibility in that way, and a new trial has been ordered.

The Medical Department at Manila.—In a report to Surgeon-General Sternberg of the operations of the medical department in the Philippines from February 4th until March 1st, Major Henry Lippincott, chief surgeon at Manila, writes as follows concerning the first aid rendered in the fighting line: "The time has, perhaps, hardly arrived when a full history of the first aid afforded our men should be written. I may say, however, that the surgeons were not taken unawares. The medical officers of this command had been making preparations for a possible attack on our forces, and when it did come were ready for all emergencies. The first-aid packages have proven to be of the greatest possible value; indeed, our whole equipment reflects the highest honor for our department. Litters, pouches, and medical and surgical chests were in readiness, easily prepared articles of food, stimulants and water, were on hand, and our ambulance company (reassembled for the work) did, and is still doing, excellent service. The signal corps put the hospitals in communication with the troops at the front, and thus we were able to send supplies at a moment's notice."

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending May 20, 1899. May 12th.—Assistant Surgeon S. B. Palmer, resignation accepted from May 15th.

Vaccination and Smallpox in the Italian Army.—Livi (*British Medical Journal*, April 29, 1899, p. 1,017) records some interesting statistics demonstrative of the utility of vaccination in the prophylaxis of smallpox. From 1867 to 1897 inclusive, 3,095,571 vaccinations and revaccinations were performed upon men in the Italian military service. During this time there has been a gradual diminution in the number of those who presented marks of smallpox, pursuing a parallel line with the diminution in the number of unvaccinated. Vaccination, further, was more successful in those who had not been previously vaccinated, and least so in those who had suffered from variola. There has been a regular augmentation in the general proportion of successes, from 260 per 1,000 in 1867 to 698 per 1,000 in 1897. This is attributable in part to improved technique, in part to greater facility of securing first-rate lymph, and in part to the replacement of arm-to-arm vaccination by animal vaccination. There has been a constant diminution in the morbidity and the mortality from smallpox, the mortality having become almost *nil*. This result cannot be due to more rigid isolation and disinfection alone, as other infectious diseases subjected to the same influences have not responded similarly. Those who had never been vaccinated were most likely to die when attacked by smallpox, while those who had been recently and successfully vaccinated were most likely to recover. These figures do not differ essentially from the statistics already published repeatedly at different times, but they have a special significance as dealing with large numbers and being of most recent date. Vaccination is to-day, as it was a hundred years ago, a reliable and trustworthy prophylactic against smallpox, and it is impossible for an ordinary mind to "conceive upon what proofs, upon what arguments, a serious scientific opposition to vaccination can be grounded."

College of Physicians of Philadelphia; Section on General Medicine.—At a stated meeting, held May 8th, Drs. W. G. Spiller, M. J. Stern, and T. S. Kirkbridge reported a "case of focal intracranial pressure, and they exhibited the brain from the patient. The case was that of a man who, sixteen years previously, had fallen and injured the left side of his head. After eight years a swelling was noticed in this situation, and several years later paresis in the right lower extremity, and later in the right upper extremity also. Headache and vomiting were superadded, speech became paraphasic, and finally a convulsion occurred. On ophthalmoscopic examination bilateral optic neuritis was found. Operation was decided upon; a segment of greatly thickened and infiltrated bone was removed from the calvarium, and a new growth found in the cortex of the left motor area. Hemorrhage was profuse, and death occurred a few hours after the operation, from loss of blood and shock. On histological examination the growth was shown to be an endothelioma. In addition, an unsuspected melanotic sarcoma of one choroid was found. Dr. F. A. Packard reported a case of Addison's disease with tuberculosis of the kidney and descending tuberculosis of the ureter and bladder. The patient was an Italian, who was greatly wasted and presented pigmentation of the skin. Death resulted from asthenia, and tuberculosis was found in the lungs, intestines, mesenteric glands, adrenals, kidneys, ureters, and bladder. Dr. D. J. Milton Miller exhibited a photograph from a case of inflammatory enlargement of the submaxillary glands complicating typhoid fever. Dr. F. A. Packard reported a similar case. The complication seems to be an exceedingly rare one.

The Leprosy Lazaretto at Tracadie.—In a report on leprosy at Tracadie, N. S., contained in a recently issued blue-book of the Canadian agricultural department, Dr. A. C. Smith states that there are twenty-one inmates of the lazaretto, fifteen males and six females, representing all stages of leprosy. During the year there were two deaths, and three new cases (Icelanders) were admitted. The general health of the inmates is good. Since the establishment of a lazaretto in 1844, leprosy has been more or less kept in check in the province, and during the last few years a more careful segregation has led to a notable diminution. The lepers are not strictly isolated, however, for with the observance of ordinary precautions they are free to receive the visits of their friends and of clergymen.

A Novel Insurance Suit.—A *Sun* correspondent reports that an English life insurance company has brought an action in Paris against Mme. Paulmier, who some time ago shot M. Ollivier, a sub-editor of the *Lanterne*, by mistake for M. Millevoye, the chief editor of that paper, because of the publication of an article libelling herself and her husband, a member of the Chamber of Deputies. M. Ollivier is still incapacitated by the effects of his wounds from performing

his usual duties, and the company sets up the novel allegation that Mme. Paulmier has damaged the value of its risk.

German Institute of Tropical Hygiene.—Plans have been drawn for an institute for the study of tropical hygiene and pathology in Berlin. Dr. Koch will be the director.

"The Medical Review."—Dr. L. T. Riesmeyer, who has for the past six years had editorial charge of *The Medical Review*, of St. Louis, has retired and is succeeded by Dr. Hanan W. Loeb.

The Plague in Europe.—The Russian health authorities are reported to be alarmed at the advance of the plague toward Europe. It appeared some time ago in Russian Turkestan, and is now said to be raging in Mecca. If this report is correct, it is difficult to see what can possibly prevent its spread through the Mussulman world. The Turkish health officers are the only ones that would be permitted to approach the centre of infection, and they, even if they had the will, are powerless to enforce sanitary measures in the holy city. In view of the very actual danger that threatens Europe, the Russian Public Health Society proposes the convening of an international conference to devise measures of protection against the plague. The disease has already reappeared in the province of Samarkand in Turkestan, and it is feared that it will soon be heard of along the southern and eastern shores of the Mediterranean, as well as in Constantinople.

A Medical Club.—Efforts are being made to found a social club of medical men in Paris, similar to one recently established in Berlin. One argument in support of the founding of the club at the present time is that of the approaching Universal Exhibition in Paris, and of the fact that, besides other attractions for medical men, the meeting of the International Medical Congress will be held in Paris at the same time as the Exhibition.

Schoolgirls and Corsets.—The Saxon minister of education has recently issued a decree forbidding girls attending public schools in Dresden to wear corsets.

American Orthopedic Association.—The thirteenth annual meeting of the American Orthopedic Association will be held May 31st, June 1st and 2d, at the New York Academy of Medicine, 17 and 19 West Forty-third Street.

Death from Headache Powders. — Three deaths from the taking of headache powders having occurred recently in Allegheny County, Pa., the coroner's jury on the last case recommended that precautionary notices be printed on all such preparations containing coal-tar products, and that a State law be enacted to enforce this regulation. In the absence of such a law, druggists were urged to warn patrons as to the danger of using powders of this sort. It would be well besides if the ingredients of such preparations were printed conspicuously on some part of the wrappers in which they were contained, and still better if their sale was prohibited except on the prescription of a physician.

Dr. Emil Mayer, of New York City, has been appointed co-editor for America in the *Internationale Centralblatt für Laryngologie und verwandte Wissenschaften*, of which Sir Felix Semon, of London, is editor-in-chief.

Sanitary Condition of Havana.—Dr. Agramonte, assistant surgeon U. S. A., in a letter to Dr. O. Henry Dessau, of this city, says: "Everything is now ready and we could take care of fifty cases at once, but the improvement of sanitary conditions on one hand and the beautiful even weather on the other have successfully kept away the dreaded disease, so that at this date (May 14th) we do not have a single case in the island. We have had in all six cases since the 1st of January; such a record has never been approached during the four hundred years of Spanish rule." You will recognize the largeness of this news, for it speaks volumes in testimony of American spirit and humanity.

Obituary Notes.—Dr. Joseph William Stickler, of Orange, N. J., died suddenly at the Fifth Avenue Hotel, in this city, on May 18th. He was apparently in perfect health when he left his home to come to New York the day before his death. Dr. Stickler was forty-five years old, and was a graduate of the College of Physicians and Surgeons in this city in 1879. He had practised in Orange throughout his entire professional life, and had earned for himself an enviable reputation as a pathologist and practitioner. He was interested in public-health matters, and especially in the question of animal diseases as affecting man. He was instrumental in bringing about legislation in New Jersey to check epidemics of bovine tuberculosis, and also in bringing out the fact that human scarlatina could be communicated from disease in cows and other animals. Dr. Stickler was a member of the New York Pathological Society and the New York Academy of Medicine, as well as of other medical societies in his own State.—Dr. Alfred O. Stimpson was found dead in his office in Thompson, Pa., on May 20th, with a bullet wound in his head. He had evidently been dead several days. He was a graduate of the McGill University, Montreal, in the class of 1868. He served as regimental surgeon during the war with Spain. —Dr. Jonathan Borden Fulton died in Irvington, N. Y., on May 20th, from pneumonia. He was graduated from the Harvard Medical School in the class of 1868, and was fifty-two years old. He had practised medicine in Irvington for twenty-seven years, and was president of the health board of that town at the time of his death.—Dr. Charles W. Pfeiffer, examining physician to the street-cleaning department and a prominent Mason, died at his residence, 212 East Eighty-seventh Street, on Monday, of chronic nephritis. He was born in Philadelphia in 1854 and graduated from the Bellevue Medical College in 1878, and later became one of the physicians attached to the board of health, a position he resigned to accept an appointment as physician to the street-cleaning department.

Reviews and Notices.

TRAITÉ DES MALADIES DE L'ENFANCE. Par JULES COMBY, Médecin de l'hôpital des enfants malades. Troisième edition, revue et considérablement augmentée. Paris: J. Rueff. 1899.

COMBY'S "Diseases of Children" has been a classic for the French student for years. This, the third edition, differs little in general scope from the preceding editions, though much new matter has been included. The work is constructed on a very simple plan. The author first considers the general physiology of the infant, gives a number of hygienic and therapeutic considerations, and then divides the diseases of infancy into two great divisions: 1, general diseases; and 2, local or organic diseases. In the first series, the infectious diseases are grouped; in the second, the diseases of general nutrition. The book is thorough, and expresses the general continental point of view. As is to be expected, more consideration is given to the work of French authors than to others, in which regard the author closely imitates his *confrères* of the region of the Rhine. The style is excellent and the mechanical workmanship all that could be desired. The work is certainly to be recommended.

CHIRURGIE D'URGENCE, INDICATIONS THÉRAPEUTIQUE OPÉRATOIRE. Par DR. E. ROCHARD, Chirurgien des Hôpitaux de Paris. Avec figures dans le texte. Paris: Octave Doin. 1899.

THIS is a very interesting little volume upon surgical conditions which are often met in active hospitals and require prompt treatment, usually operative. Among the subjects discussed are fractures of the skull, appendicitis, and acute intestinal obstruction. The chapter upon the first-mentioned subject is well written and complete, but contains nothing novel. In treating first attacks of appendicitis, the author thinks that the question of operation at once is open to discussion, but that it is usually best in the average acute case. There is a satisfactory chapter upon strangulated hernia, with some good illustrations. We recommend the book to those who read French.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By LEWIS A. STIMSON, B.A., M.D., etc. With 326 Illustrations and 20 Plates in Monotint. New York and Philadelphia: Lea Brothers & Co. 1899.

THIS is an enlarged and rewritten edition of the author's previous work with the same title. It is, as the author claims, a useful work of reference for the general practitioner as well as for the specialist. Diagrammatic illustrations have been freely used and a number of skiagraphic plates has been introduced. These sometimes serve a useful purpose, but this method of diagnosis has not proved the revolutionizer which its early advocates hoped, and its limitations are recognized in the present volume. The subject of fracture of the patella forms an interesting chapter, and we are impressed with the excellence of the results after operation by the author's periosteal suture method, and with the advice that only those accustomed to doing surgical operations regularly should operate in cases of fracture of the patella. We should like to see the objections to the use of wire sutures in the patella urged more strongly. The book as a whole forms one of the best treatises upon the subject, but in our opinion the part of the work upon fractures is better than that upon dislocations.

GOUT: ITS PATHOLOGY AND TREATMENT. By ARTHUR P. LUFF, M.D. Lond., B.Sc., F.R.C.P.; physician in charge of out-patients and lecturer on forensic medicine at St. Mary's Hospital. New York: Wm. Wood & Co. 1899.

THIS short essay of some two hundred and forty pages is in part a reproduction of the author's Goulstonian Lectures on the "Chemistry and Pathology of Gout," delivered in 1897, with supplementary material added. The work is made up of four sections. Part I. is a reproduction of the former lecture above spoken of. Part II. discusses the various theories of the causation of this disease, its various symptoms and its groupings, its diagnosis and its prognosis. Part III. consists of a most interesting series of experimental work, which was undertaken to find out some of the underlying principles of the elimination of the gouty poison and the influence of certain noxious principles, notably alcohol, and the effect of the drug treatment of the disease. This part of the work is very practical and conducive to good methods of treatment. Part IV. deals directly with the methods of treatment. The work is small, but to the point and practical. It is one of the best presentations of the subject for the general practitioner that we have seen of recent years.

URINARY ANALYSIS AND DIAGNOSIS BY MICROSCOPICAL AND CHEMICAL EXAMINATION. By LOUIS HEITZMANN, M.D. With 108 original illustrations. New York: William Wood & Co. 1899.

THIS is a work intended for the general practitioner, and for the purpose it is well devised. It is divided into three parts. There are five short chapters on the chemical analysis, seven long chapters on microscopical examination, very profusely illustrated, and several excellent chapters on microscopical diagnosis. The book will be valuable for the illustrations alone; these, while crude for the most part, are sufficiently accurate for general purposes. The chapters on microscopical diagnosis will be found of much service.

TWENTY-THIRD ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE NEW JERSEY STATE HOSPITAL AT MORRIS PLAINS, FOR THE YEAR ENDING OCTOBER 31, 1898. Trenton, N. J.

THIS report is, like so many reports in this country, made up for the most part of statistics, the only function of which is to give evidence of the activity of the clerical help in the institution. But unlike many other reports it also contains a small amount of work that is of the progressive variety, There is in it a short article on the cell changes noted in a case of general paresis, by Dr. Prout, second assistant physician and pathologist. This, while it shows a lack of knowledge of the vast amount of work already done by the same methods and on the same disease, is nevertheless commendable on the part of the pathologist, and is of the class of work that should be encouraged and distributed in such media.

GENERAL PHYSIOLOGY: AN OUTLINE OF THE SCIENCE OF LIFE. By MAX VERWORN, M.D., PH.D., Professor of Physiology in the University of Jena. Translated from the Second German Edition by PROF. FREDERIC S. LEE, of Columbia University. One volume, 600 pages. London and New York: Macmillan & Co.

THE medical profession, as well as all students of the biological science, are under obligations to Dr. Frederic S. Lee for his excellent and most readable translation of Verworn's "General Physiology," a work that can scarcely be judged by comparison with others, for it is altogether unique in the presentation and handling of this most important subject. Readers of scientific German literature have been familiar with the book since the appearance of the first edition, five years ago, when it was given a most cordial reception and wide reading, and they as well as English readers will welcome the translation of the second edition.

The subject is considered in six chapters. The first is taken up with a brief statement of the problem of physiology and the history of physiological research, and a consideration of the method of physiological research. Chapter II. is devoted to a clear statement of the composition of living substance and a contrast of living and lifeless substances. Chapter III., altogether one of the best presentations of the subject we have ever read, is concerned with the elementary vital phenomena—the phenomena of metabolism, the phenomena of form changes, and the phenomena of the transformation of energy. In Chapter IV. the author discusses the general conditions of life, the origin of life upon the earth, and the history of death. Stimuli and their action are next considered, and this chapter will particularly interest the practitioner of medicine. The last and most important chapter takes up the discussion of the vital process, the mechanics of cell life, and the constitutional relations of the cell community.

It would be entirely impossible to convey, in a brief notice, an adequate idea of the storehouse of information which this small volume is, or of the comprehensive, philosophical way in which the matter is handled. It may be said truthfully that it constitutes the most satisfactory outlook over the problems, facts, theories, and hypotheses of life, viewed from the standpoint of the comparative physiologist, available to the student of philosophy or biology at the present day. The translation leaves nothing to be desired.

Therapeutic Hints.

Nervous Enteritis.—

℞ Tincture of opium ..... gtt. x.
Water of orange flowers 20
Old rum,
Simple syrup .....āā 40
M. S. One dose.

—RITTERBAND.

Asthmatic Attack.—

℞ Morphinæ sulphatis..... gr. ½–¼
Strychninæ sulphatis..... gr. $\frac{1}{30}$–$\frac{1}{20}$
Hyoscinæ hydrobromatis ..... gr. $\frac{1}{100}$
M. S. At dose.

—DR. S. SOLIS-COHEN.

Suppurative Otitis Media.—

℞ Acidi picric..... 0.2
Spirit. dilut 2.0
Aquæ destill..... 20.0
M. S. Five drops two or three times a day.

—LANOIX.

Tuberculosis of Upper Air Passages.—

℞ Aristol 10
Menthol 3
Benzoinol 87
M. S. Use as a spray.

—S. S. BISHOP.

Gonorrhœal Rheumatism.—

℞ Vini colchici seminis..... ʒ iij.
Spir. ammon. aromat..... ʒ xiij.
M. S. 3 i. every three hours.

—BARTHOLOW.

Or:

℞ Lithii carbonat... ..... ℈ v.
Aquæ destill..... ʒ xx.
M. S. Apply by means of lint.

—GARROD.

To Sterilize and Acidify the Urine.—

℞ Acidi benzoici ..... ʒ ij.
Acidi borici ..... ʒ iij.
Aquæ destill ..... ʒ xij.
M. S. Tablespoonful well diluted three or more times daily.

—LEONARD.

Dysuria.—

℞ Sodii salicyl 10.0
Extr. bellad..... 0.3
Aquæ destill..... 195.0
Tinct. aurant. cort 5.0
M. S. Tablespoonful every two to three hours.

—RITTERBAND.

Vertigo of Arterio-Sclerosis.—

℞ Sodii iodidi ..... ʒ ij.
Aquæ destill ..... ʒ viij.
M. S. 3 i.-ij. t.i.d.

—*Rev. de Thérapeut.*

Asthma.—Exercise, gymnastics, walking, bicycle. In the attack, paint the nostrils at once with a 1 : 20 solution of cocaine hydrochlorate. Take a hot mustard foot-bath, with the hands placed in very hot water. Smoke cigarettes "Espic" or nitre paper in a pipe, or burn the following mixture in a saucer:

℞ Potass. nitrat... ..... 3.0 gm.
Pulv. fol. daturæ,
Pulv. fol. belladonnæ,
Pulv. gelsemini.....āā 5.0 gm.

Inhale iodide of ethyl five drops, or allow a teaspoonful of pyridin to evaporate in a saucer near the patient.—CASSINE, *Gaz. Hebd.*, February 19th.

Wrinkles.—These tell-tale marks of time are caused by the diminished elasticity of the skin and by loss of water from the tissues as age advances; and thus the creases that in youth leave no mark, become in after years permanent. In an infant the amount of water in the tissues is 66.4 per cent., while, as years advance, it forms but about 58.5 per cent. It is absurd to fill the furrows up with powder and paste in an attempt to hide them. The better way is to preserve the elasticity of the skin by hygienic means, especially between the ages of twenty and thirty. Where the lines tend to become prematurely permanent, "a mixture of cold cream and adeps lanæ should be rubbed in twice a day. "Retiring cream," having as its base wool-fat, readily penetrates the skin and renders it soft, smooth, and supple. It is made according to this formula:

℞ Expressed oil of almonds..... ʒ ij.
Cacao butter ..... ʒ iv.
Adeps lanæ ..... ℥ ij.
Glycerin ..... ʒ ij.
Oil of rose ..... gtt. ij.
Melt the first three ingredients by means of heat, then add the others.

The product has a distinct advantage over other ointments in being miscible with water and medicinal ingredients. "Lotion of glycerin and tannin" is also a useful application.

℞ Glycerite of tannin,
Rose water.....āā ʒ i.
Mix and apply to the wrinkled surface with a camel's-hair brush.

—O. B. SALISBURY.

Metritis of Gonorrhœal Origin.—Apply oil of wintergreen to the vagina and cervix uteri.—JOUIN.

Pertussis.—The substance named pertussin by Taschner is said to have the formula: thymol, one part; syrup, seven parts; and is reported to be efficacious in other forms of spasmodic cough and in emphysema as well as in whooping-cough.

Herpetism and rheumatismal affections were much benefited in a number of instances recorded by Lancereaux and Paulesco, from the use of iodothyrin.—*Journ. de Méd. Intern.*, January 1st.

Toothache from Cold.—Salicylate of sodium in fifteen-grain dose; repeat if necessary in four hours.—F. C. COLEY.

To Cool Drinks without Using Ice.—Wrap the bottle in a cloth wrung out of cold water and stand it in a vessel filled with cold water. Place the vessel on a window sill and produce a draught by means of open doors.—*Zeitschrift für Krankenpflege.*

Habitual Constipation.—Inject eight ounces of tepid water on retiring and allow it to be retained until absorbed. Increase the quantity progressively each night while lowering the temperature of the water. If necessary, give an ordinary injection in the morning. Four to six weeks suffices to establish unaided defecation.—KLEMPERER.

Essential Œdema of the Lids.—After having tried a classical treatment, compression, iodides, arsenic, etc., Déchamp conceived the idea of employing the Lannelongue method. He made injections of chloride of zinc (1 : 20) into the cellular tissue, the seat of the œdema, and effected cures after from six to eight injections, repeated once a week.—*Jour. des Sciences Méd. de Lille*, October 1, 1898.

How to Economize Life.—A man has just so many hours to be awake, and the fewer of these he uses up each day the more days will they last. I believe that a man might last two hundred years if he would sleep most of the time. That is why negroes live to such an advanced age—because they sleep most of the time. The proper way to economize life is to sleep every moment that it is not necessary or desirable that you should be awake.—TESLA.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, May 8, 1899.

CHARLES N. DOWD, M.D., CHAIRMAN.

Cases of Tuberculous Epiphysitis without Involvement of the Joint; Recovery.—DR. CHARLES N. DOWD presented a child, five years old, who about one year ago had been admitted to St. Mary's Hospital with a sinus above the knee. On operation it had been found to lead to the epiphysis, and the femur was extensively involved. The diseased bone had been removed, leaving a very thin shell of bone between the cavity thus made and the joint. The healing process had progressed steadily, and there had been no discharge for the past three or four months. At present the joint appeared to be perfectly restored. The case was presented as an example of what could be done at times in the way of removing a tuberculous focus before it had invaded the joint.

Dr. Dowd also presented a young girl who, last summer, had developed a sinus above the left ankle. At the operation, it had been evident that there was an epiphysitis, and all the diseased part had been removed. Since then there had been no evidence of inflammation about the ankle-joint, and the functional condition of the joint seemed to be excellent. The speaker said that he had hoped to exhibit another case, one in which there had been tenderness for some time in the ankle-joint. On making an incision it had been found that the periosteum was lifted, and that beneath it was considerable serum. This had been evacuated, and the parts curetted, with an equally satisfactory result.

Tuberculous Peritonitis; Operation Three Years Ago; Recovery.—DR. A. L. FISK presented a man who had come to him first in 1896. He had noticed an increase in the size of the abdomen coincident with loss of strength and the occurrence of night sweats. There was an elevation of temperature to about 100° F. every evening, and a fall to the normal in the morning. On October 28th, he had operated by the median incision, and this had revealed a tuberculous peritonitis with an accumulation of fluid, but very little pus. To the left of the median incision there had appeared to be a collection of fluid or pus posteriorly, but on exploring this it had been found to be the colon, which was consequently cut. Great difficulty had been experienced in suturing the bowel, but union had been secured. He had remained in the hospital one hundred and nine days. He now weighed one hundred and forty-five pounds, and was in excellent health, but there was a hernia in the abdominal cicatrix.

Bullet Wound of the Liver and Lung; Recovery.—DR. PERCY R. BOLTON reported the case of a man, forty-two years of age, who had entered the Hudson Street Hospital with a pistol wound in the epigastrium. On admission, there had been considerable shock, but aside from this there had been no distinctive symptoms. The abdomen had been opened in the median line, and considerable blood found in the abdominal cavity, but no evidence of injury to the intestine. There was a gash in the anterior surface of the left lobe of the liver, about two inches in length and one inch in depth. This had been bleeding quite freely at the time, but the hemorrhage had been readily checked by a gauze packing. On the sixth day the patient himself had discovered the bullet beneath the skin in the sixth space on the right side, near the axillary line. The overlying skin had been incised, and the bullet removed. About this time the man had developed pain in the chest, with some fever. Examination had revealed the presence of a moderate quantity of bloody serum in the right pleural cavity. This had been removed by aspiration, and after that his recovery had been uneventful. The points of interest in the case were the readiness with which the hemorrhage from the liver had been controlled by packing, and the fact that the bullet had injured the liver, the diaphragm, and the lung, and yet there had been no hæmoptysis. This, the speaker said, corresponded with his experience with the returned and wounded soldiers last summer.

Bassini Operation on a Relapsed Hernia.—DR. W. B. COLEY presented a boy who had been operated upon by the Bassini method, two years and a half ago, for a hernia recurring after the Czerny operation. There had been no recurrence, and the scar at present was firm. The older Czerny incision having been so low down, there had been no difficulty in these cases in carrying out the usual technique of the Bassini operation.

DR. FISK said that, about a year and a half ago, he had had a case at the Babies' Hospital similar to the first one presented by Dr. Dowd. In curetting the cavity he had opened into the joint. He had then washed out the joint thoroughly, and healing had been complete, and with a perfect functional result. It was the first case of the kind that he had seen.

DR. J. B. WALKER said that he had met with a similar case involving the head of the humerus.

DR. COLEY said that very few of the cases of tuberculous peritonitis that were operated upon were traced for as long as three years, and hence such a report was particularly valuable. It seemed to him that there was an excellent opportunity of effecting a cure in the hernia now present.

DR. FISK said that he would like very much to operate upon the man for the hernia, if only to have an opportunity of inspecting the peritoneum once more.

DR. GLOVER C. ARNOLD recalled a case of stab-wound in which the knife had passed through the scapula. He had been obliged to remove the broken blade of the knife with a pair of carpenter's pliers. In spite of this severe injury and the certainty that the lung had been injured, this man had not had hæmoptysis. He did not think that the absence of this symptom was very unusual.

An Original Method of Closing a Biliary Fistula after Cholecystectomy.—DR. J. E. KELLY read a paper on this subject. The case on which the paper was founded was that of a woman, forty-four years of age, who in December, 1896, had first developed the usual symptoms of biliary calculi. In the following April two large gall stones had been removed by one of the surgeons. In October, 1897, an attempt had been made by another surgeon to close the fistula. The gall bladder had been excised, but the fistula had still persisted. The speaker said that having been successful in several instances in locating the visceral lesion by dissecting out the fistula, and using it as a guide, he had determined to adopt this plan in the present case. A circle of the skin around the orifice of the fistula had accordingly been incised, and the extensive line of cicatrices had been followed as nearly as possible. He had been able to demonstrate the transverse fissure, but could not follow it farther. The next step had been to determine the location of the duodenum, and to divert the bile into the bowel. The operation had necessitated very extensive incisions. The external wound had, however, healed primarily except at the site of the drainage tube. The aperture had closed completely in three weeks, and the patient had left the hospital after three months in perfect

health. It had occurred to him in connection with such operations that the liability of the Murphy button to be retained might be avoided by having the two halves of the button made of unequal diameter, and inserting the larger one in the distal end of the bowel, so as to oppose the peristaltic action, which was probably responsible for the retention of the button.

Dr. George E. Brewer said that the case reported was one of the most distressing that he had ever encountered in hospital practice. The idea of implanting this fistula in the duodenum had been a novel one to him, but certainly as soon as the bile had been diverted in this way the woman's condition had immediately improved. He was under the impression that Dr. Weir had devised a modification of the Murphy button similar to the one suggested in the paper, and had used it successfully.

Dr. Farquhar Ferguson referred to a number of interesting cases of gall stones that had come under his observation as a pathologist, illustrating the difficulties of diagnosis and treatment.

Dr. Kelly said that he was of the opinion that, in the case referred to, at the same time that the old fistula had disappeared a new artificial duct had been formed. There was every reason to believe that the duct had remained pervious and had offered a passage for the bile into the intestine. He ventured to hope that this procedure might form the basis for operating in several other cases. After reflecting upon this case, it had seemed to him possible to transplant a portion of the intestine from place to place in the abdominal cavity, as, for example, for the purpose of forming a loop around the new growth. There were large spaces between the colic arteries and their primary divisions, and hence, if a triangular flap was made with its base at the intestine, it should be easy to turn this flap through the mesocolon and bring it upward.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 12, 1899.

T. Mitchell Prudden, M.D., President.

A Case of Hemiatrophy of the Brain of a Child.—Dr. David Bovaird presented the brain from a child, eleven-months old. The infant had been returned to the New York Foundling Asylum suffering from severe diarrhœa, and this had been the cause of death. During the five days it had been under observation the asymmetry of the skull had been noted, together with the fact that the child was exceedingly restless, and was prone to beat its head against the crib. The child had made no attempt at walking or talking. There was no paralysis. The autopsy had revealed on the inner surface of the dura mater over the left half of the brain a pad of fibrous tissue, well supplied with blood-vessels. It was closely adherent to the dura and could be separated from the pia only by tearing. Examination of the brain had shown marked atrophy of nearly the whole of the left hemisphere. The lesion was confined to that portion of the brain supplied by the middle cerebral artery. The tip of the frontal lobe, the occipital, and lower portions of the temporo-sphenoidal were normal. The median surface was normal. Throughout the affected area the convolutions were shrunken and small, and the sulci were widened. The withered convolutions were much harder than normal, and of a peculiar yellow wax-like color. Although the distribution of the atrophy suggested a lesion of the middle cerebral artery, that vessel was apparently intact and pervious. The mat of fibrous tissue lining the dura over the atrophic hemisphere was considered a secondary and complementary lesion, the primary process being the atrophy of the brain.

Acute Meningo-Encephalitis with Œdema of the Cerebrum of the Affected Side Simulating Hemiatrophy.—Dr. Eugene Hodenpyl presented in connection with this case a specimen from a case of acute meningo-encephalitis simulating hemiatrophy of the brain. The specimen had been taken from a man who had been found unconscious in the street, and who had died a few hours after entering the hospital. At the autopsy a purulent otitis media had been found on the right side. The right hemisphere was considerably larger than the left, and the pia on that side was thickly covered with an exudate of fibrin and pus. Microscopical examination of the brain of the right side showed that its increased size and increased softened consistence were due to a well-marked œdema.

A Case of Occlusion of the Coronary Artery, with Infarction of the Myocardium, and Sudden Death.—Dr. F. C. Wood then showed a case of infarction of the heart muscle causing death with symptoms of angina pectoris. The patient had been a well-nourished, previously healthy man of about fifty-five years of age. For some six weeks before his death he had suffered from a rather acute bronchitis, but this had become so greatly improved that he had been able to return to his office, though still troubled by an occasional severe pain in the left chest. The next day he was distinctly worse, and died within twenty-four hours, with very great pain over the præcordium, radiating down the arm, and with a feeling of impending death. The heart action was rapid and feeble. The autopsy showed a moderate chronic nephritis and a thrombosis of the anterior branch of the left coronary artery, which was very atheromatous, as was also the right. The point of obstruction of the vessel was about three centimetres from its origin in the aorta, just after the giving off of the septal branch. Here there was a firm thrombus attached to the wall of the vessel. The heart muscle was changed over an irregular area, measuring about three by two centimetres. It was of a pale, opaque yellow, very friable and soft. The softening and change did not extend the whole thickness of the ventricular wall, there being at least half a centimetre of healthy muscle between it and the ventricular cavity. Microscopically the myocardium was necrosed and fatty, with a considerable infiltration by an inflammatory exudate. No bacteria could be demonstrated by staining. The condition represented quite accurately the results obtained in animals after ligaturing the coronary for twenty-four to thirty-six hours, so it might be presumed that the patient's severe symptoms were due to the beginning changes in the myocardium. A partial expression of the irregular cardiac contractions before death was shown by the presence of a very well-marked fragmentation of the myocardium. Such cases of thrombosis were not uncommon, but the much more usual course was for the obliterating process of the endarteritis to take place so slowly that the necrosed areas were replaced by fibrous tissue, without any very marked symptoms to call attention to the change.

A Case of Subacute Myomalacia Following Septic Inflammation of the Left Ureter.—Dr. Carlin Philips presented a heart that had been taken from a man, fifty-four years of age, a laborer, who had been admitted to Bellevue Hospital on April 18, 1899. He was alcoholic in habits, but denied syphilitic infection. He had had the ordinary diseases of childhood, and at the age of twenty-four years had smallpox. Since the age of five years he had had weekly attacks of renal colic. In 1894 he had a nephrectomy performed for renal calculi. Since that time had had been free from attacks of great abdominal pain. One week before ad-

mission the patient complained of a severe cold, with pain over the upper portion of the sternum, and constant cough. He said the pain was not very severe, but it gradually increased. He had chilly sensations at times, coming on irregularly and without definite rigor. The patient had been in bed part of the time, and was extremely sensitive to cold. He had some nausea and headache, but no vomiting. He had good appetite, but was sleepless. He entered the hospital on account of cough, weakness, and pain in the chest. On admission, his pulse was 80; respiration, 22; temperature, 100.4° F. The heart dulness was increased. The apex was at the sixth intercostal space and one-half an inch outside of the nipple line. The sounds were weak. No murmurs were present. There were fine moist râles over both lungs posteriorly, and broncho-vesicular breathing over the right apex; fine friction sounds and subcrepitant râles were heard over the right infraclavicular region. The epigastrium was tender but not distended, and was everywhere tympanitic on percussion. The liver dulness was somewhat increased. The patient's temperature was between 99° and 100° F. most of the time, but during the second and last week it reached 102° F. on two occasions. He suffered from great pain in the abdomen and also from pain over the upper portion of the sternum. The pulse varied between 110 and 120, and occasionally reached 130. The urine had specific gravity 1.031; it was free from blood, albumin, etc., but contained a few hyaline and granular casts. The patient died on February 3d, or about two weeks after admission. The clinical diagnosis was acute myocarditis and peritonitis.

The autopsy was performed by Drs. McAlpin and Lewald two days later. The findings in brief were acute bronchitis, hypostatic congestion and œdema of the lungs, chronic adhesive peritonitis. The region of the left kidney was filled with a large vascularized cicatrix of connective tissue and fat. The left ureter was found as a fibrous cord with obliterated lumen. Along the ureter were found a few minute pockets of greenish pus. The right kidney was enlarged, and showed large recent hemorrhagic infarctions. On opening the pericardium it was seen to contain about six ounces of fluid blood. The heart was enlarged. In the region of the left apex was an aneurismal dilatation, measuring 5 cm. in diameter. This area was peculiarly dark, with fine yellow mottling. On opening the ventricles there was seen to be a dark grumous clot partially filling the aneurismal pouch, and intimately adherent to the contiguous wall. The valves were but slightly thickened and perfectly competent, and the remaining endocardium was normal. The anterior coronary artery was completely thrombosed throughout, but showed only slight atheromatous changes. Microscopically, the coronary vessels were seen to contain an old parietal thrombus, partially organized, not obliterating the lumen, and a fresh thrombus completely occluding the vessels. The heart wall in the affected regions showed microscopically the greatest multiplicity of changes, which differed from the usual picture seen in acute infarctions of the heart. In brief, there were organizing thrombus in the ventricle, simple atrophy, brown atrophy, fatty degeneration, simple necrosis, Zenker's necrosis, cloudy swelling, areas of purulent foci, and subacute interstitial myocarditis. Owing to the absence of pronounced atheromatous changes in any of the vessels, and especially of the coronary arteries, the findings in the heart were considered to be the result of septic thrombosis following infection from the left ureter.

Dr. Philips said that Birch-Hirchfield stated that this condition was of extreme rarity, and for that reason the specimen was presented.

A Case of Hemorrhagic Infiltration of the Myocardium with Interstitial Myocarditis.—Dr. John H. Larkin presented specimens from a case of hemorrhagic infarction of the heart. They had been taken from a man, thirty-seven years of age, who was admitted to Bellevue Hospital, January 16, 1897, with the following history: He had always been in good health till three weeks ago. He never had rheumatism; did not use beer or whiskey. Four weeks ago, in December 18, 1896, he caught cold but kept on working. For a week he was troubled with severe pain about the heart; the pain was not made worse by inspiration; it was of a lancing character, not constant. The pain still continued, but was not so severe as at first. On December 25th, three weeks ago, he had to stop work on account of shortness of breath and feeling sick generally. Dyspnœa, which was at first noticed a month ago, had gradually increased. He had had orthopnœa for three weeks. He had cough with profuse expectoration. On January 14th, he raised about one-half an ounce of blood. His feet were swollen. His temperature was 100° F.; pulse, 116; respiration, 28. On examination the heart sounds were feeble and rapid. There was no murmur. The heart was enlarged; the impulse was in the axillary line, sixth interspace; the sounds were more distinct at this point. There were pleuritic râles over the cardiac region and the right base posteriorly. The pulse was small, weak, and rapid. When lying down there was pulsation of the vessels of the neck up to the lobe of the ear; when he stood erect, only halfway up, a harsh, short diastolic murmur, most marked over the sternum, developed. On January 29th the patient was out of bed three times during the night. On the following morning, while sitting up in bed, he became unconscious, with twitchings of the entire half of the body, including the neck muscles but excluding the facial ones. There were yawning and lateral nystagmus, with diminution of the pupil of left eye. He had Cheyne-Stokes breathing. He died shortly afterward. At the autopsy nothing abnormal was noticed in the brain. The lungs were normal. The heart was slightly increased in size. There was no valvular lesion. In the wall of the left ventricle was a dark area, which contrasted sharply with the surrounding pale heart muscle, extending from the endocardial surface to about 3 mm. from the pericardial surface. The cardiac muscle in this area was dark and quite soft and depressed below surrounding muscle. A cross section showed the darkened area to be about 2 cm. long. The spleen was large and congested. The liver was in a state of chronic venous congestion. The kidneys showed a large congested surface; granular markings were not evident. Microscopical examination of the heart showed that the muscle in the infarcted area had been replaced by hemorrhagic extravasation. Scattered through this blood clot were remnants of dead heart-muscle cells, without nuclei, many containing larger and smaller vacuoles. At the periphery of the area was a narrow band of newly formed fibrous tissue, with thin-walled blood-vessels and œdematous stroma. In places this tissue had proliferated between the muscle fibres so that it made a solid mass; and aside from the lesion proper it looked not unlike spindle-cell sarcoma. Changes in the coronary artery from the same case showed extensive obliterating endarteritis. There was great thickening of intima, with secondary degeneration and calcification.

A Case of Interstitial Myocarditis following Scarlatina and Diphtheria.—Dr. Larkin also presented specimens from this case, that of a girl of fifteen years, who had always been well till December, 1896, when she had diphtheria and scarlet fever, from which she apparently recovered. Early in January,

1897, she began to suffer from marked dyspnœa, and was brought to Roosevelt Hospital on January 10th. On admission she was well nourished; somewhat pale; with bounding and irregular pulse. There were dyspnœa and œdema of both lower extremities. Urine, specific gravity, 1.012, containing twenty per cent. albumin, with granular and hyaline cysts. The lungs were normal. The heart was increased in size, and there was a double murmur at the apex and base. She continued to do badly until January 13th, when she died comatose.

An autopsy was made on January 14th by Dr. Ewing. The lungs were œdematous, otherwise normal. The left ventricle of the heart was hypertrophied; there were soft, fresh vegetations on the aortic and mitral valves and on the surface of the endocardium of the left ventricle. About midway between the base and apex on the anterior left lateral half of the left ventricle the cardiac muscle was dark and somewhat soft. This area occupied the inner two-thirds of the heart muscle; the outer third appeared normal; the area extended vertically about one inch. The liver was pale and fatty. The spleen was hard and congested. The kidneys showed acute nephritis, with marked congestion of the pyramids, and a fine granular surface. The microscopical examination showed that a large area of the heart muscle was replaced by a new-formed connective tissue, in part very cellular, in part fibrous. This tissue formed in one place a solid mass; in other places it lay between the muscle fibres, which showed various phases of atrophy and degeneration. The new-formed connective tissue was noteworthy on account of the very numerous thin-walled blood-vessels, which in places were dilated and had evidently ruptured, giving rise to interstitial hemorrhage. The kidneys showed subacute diffuse nephritis, with marked œdema of interstitial tissue; there was thickening of Bowman's membrane, with increase of cells in and on the capillary tufts; exudate was found in the tubules, with parenchymatous changes in the epithelium and congestion of the blood-vessels. There was moderate fatty infiltration of the liver; the cells stained poorly; numerous areas of focal necrosis were seen similar to those found in typhoid. These areas of necrosis were especially numerous in the spleen, being much larger than those in the liver. To this there was added chronic congestion of the splenic pulp.

As to the possible cause of the myocarditis in this case, a number of factors were to be thought of. Inasmuch as there was an acute endocarditis with soft fresh vegetations on the aortic and mitral valves, these, if detached, might serve as emboli to the coronary artery or its branches, thereby shutting off the blood supply from a given area of heart muscle with resulting infarction and subsequent replacement by fibrous tissue. But embolism of the coronary artery was least probable, as the mechanical action of the heart in systole drives the bulk of the blood into the aorta past the coronary orifice, and as the position of the artery was at right angles to the current of blood in the aorta. Embolism of this artery is, however, a possibility. The existence of focal necrosis in other viscera in this case, following scarlatina and diphtheria, would suggest the possibility of a similar origin of the primary heart lesion. The specimen was especially interesting on account of the over-production of blood-vessels and the secondary interstitial hemorrhage in an area of new-formed connective tissue, which was evidently in the way of restoring as well as might be the integrity of the heart.

A Case of Cutaneous Sarcoma of the Leg following a Burn.—Dr. Leon T. Lewald presented this case. The specimen had been removed by amputation from a woman, twenty-nine years of age. She had received a burn twenty-four years ago, and the area had never completely healed, there having been a granulating surface and two deep discharging sinuses. About two years ago an attempt had been made to excise the sinuses and secure healing, but the operation had failed, and sloughing had occurred. During the last four months the ulcer had taken on a fungous growth. Microscopical examination of a small section of the tumor had seemed to warrant amputation, and this had been done about five weeks ago. Since that time an operation had been performed on the enlarged glands of the inguinal and femoral regions. They had already become involved in the malignant process.

Dr. E. K. Dunham exihibted under the microscope a series of sections made through the fungous mass. They showed what appeared to be a rather large spindle-cell sarcoma, and the same structure, he said, had been found in the supposed metastatic growth. The section from the ulcerated portion that had not become fungous showed an apparently typical picture of an epithelioma. It might be an accidental appearance, however, resulting from the coincident attempt of the epithelium to cover the granulating surface. The speaker asserted that when proliferation had been going on so long, one would ordinarily hesitate to say positively, from an examination of a portion of tissue from the granulating surface, that the case was or was not a sarcoma. In this instance, however, there seemed to be no room for doubt.

Cutaneous Sarcoma following a Wasp-Sting.—Dr. Hodenpyl presented in this connection two cases of cutaneous sarcoma that had developed after a sting of a wasp. The first case was a spindle-cell sarcoma that had developed over the sternum in a man, forty-six years of age, immediately after being stung by a wasp. This tumor had grown steadily until at the end of two years it had been removed by operation. So far there had been no recurrence. The second tumor had been removed from a man, sixty-three years of age, who had been stung in the thumb by a wasp. Immediately afterward a nodule had developed on this part, and the tumor had been excised at the end of three months. Microscopical examination had shown the growth to be a small spindle-cell sarcoma.

A Male Pseudo-Hermaphrodite.—Dr. F. S. Mathews showed under the microscope sections of a testis taken from a supposed female child. At time of removal of the testis, January, 1892, the child was twelve years old. The operation was performed by Dr. Charles T. Poore at St. Mary's Hospital for Children. At the time of operation the testis, which lay under the skin of the left thigh just below the external abdominal ring, was thought to be an enlarged lymph node. No microscopical examination was made until the present winter. The individual from whom the testis was removed was located after considerable search, and an examination permitted. The pseudo-hermaphrodite, now nineteen years of age, was tall, slim, and pale. The external genitals were those of a normal female. There was no hair on face or pubes. The vagina was one and one-quarter inches long. Through the vagina and rectum a very thorough pelvic examination could be made. Examination revealed no trace of uterus or prostate gland, nor was another testis to be found in the pelvis, iliac region, or outside the external abdominal ring. This individual then was a male pseudo-hermaphrodite. Most of the cases described were either, like this one, undeveloped males, or males possessing well-developed male organs, and in addition vagina or uterus. No true hermaphrodite could be found described in the literature of the subject.

Miliary Tuberculosis of the Pleura without Other Tuberculous Involvement of the Lung.—Dr. Eugene Hodenpyl read this paper (will appear in future number).

Dr. W. H. Park said that at the health department laboratory guinea-pigs had been inoculated from a case of pleurisy with effusion, and tuberculosis had resulted in these animals. The patient with pleurisy had, however, perfectly recovered after about two months. He would like to know whether tuberculin would bring out a reaction in such a case. If the affection was a latent tuberculosis this should occur, and under such circumstances it would be very puzzling to decide how much significance should be attached to the tuberculin test.

Dr. Prudden said that while the work embodied in this paper did not absolutely exclude miliary fibromata, it made it clear that their occurrence was far less frequent than had been hitherto supposed.

PENNSYLVANIA STATE MEDICAL SOCIETY.

Forty-Ninth Annual Meeting, Held at Johnstown, Pa., May 16, 17, and 18, 1899.

First Day—Tuesday, May 16th.

The meeting was called to order by Dr. Webster B. Lowman, president. After prayer by Rev. S. A. Potter an eloquent address of welcome was delivered by Dr. Tomb, who spoke feelingly of the fraternal aid given by the profession of the State to the physicians of Johnstown, when overwhelmed by disaster a decade since. It was not, he said, alone the books, instruments, and cash, over eight thousand dollars, contributed to those overwhelmed by the flood, but the personal aid and comfort exhibited that touched their hearts.

Address on Surgery.—This paper was presented by Dr. Guthrie, of Wilkesbarre. He said that the recent war demonstrated that the latest rifle was a humane weapon. The Mauser type of bullet was practically aseptic, and rarely carried scraps of clothing into the wound. Esmarch's first-aid packet, improved by Senn, had proved its value. Bullets were located better by the *x*-ray than by Nélaton's probe. The female nurse had demonstrated her superiority over the male nurse, and the American woman was the best nurse of all. He referred eloquently to the medical heroes in Cuba, Porto Rico, India, and Egypt. Of anæsthesia, he said that many attempts had been made for fifty years to improve on chloroform and ether; the latest mixture, Schleich's, had been widely tested, but the consensus of opinion now seemed to be unfavorable to its use. In his own hands it appeared to be no safer than chloroform, to say the least. He called attention to Burton's suggestion of adding a small quantity of ether, one part, to chloroform, seventeen parts, as giving deeper breathing and stronger heart action. As collateral evidence confirming this theory, he cited a friend's case in which a woman, septic after miscarriage, was curetted without using an anæsthetic. The temperature suddenly rose to 104° F., with violent headache; phenacetin, gr. x., was given, and was followed by collapse. A few drops of ether by inhalation revived the sinking heart, but while strychnine and nitroglycerin were being prepared collapse occurred again, and again ether bridged the crisis; then strychnine and nitroglycerin were injected, and the woman was saved. He reviewed the progress of antisepsis and asepsis, and said that he had for some time been using catgut suture prepared by a cumol sterilizer, designed by Dr. J. G. Clark. He said that such operations as oöphorectomy had been overdone, and cited a case in which multiple operations had left a neurotic woman worse off; but there was now a conservative reaction in this domain of surgery. The whole address was an eloquent plea for bold but rational surgery.

Pott's Disease.—This paper was read and apparatus demonstrated by Dr. McCurdy, of Pittsburg. He had treated cases of this disease in patients as young as eleven months, and as old as forty-two years. The patient should be stripped, and his attitude observed in standing, walking, and sitting. He demonstrated supporting apparatus—a jacket and chin-rest for disease above the seventh dorsal vertebra; and showed a metallic collar for cervical disease, consisting of two locking parts and pads to rest on the chin and vertebra prominens, and supporting the chin and occiput. In using the jacket and supports he thought the supporting point should be the anterior superior spines of the ilium to the chin.

Cerebellar Abscess.—This case was reported by Dr. Crombie, of Pittsburg. A child, ten years old, with remote tuberculous heredity, had earache, tonsillitis, otitis media, ruptured membrana tympani, and discharge; then followed headache and vomiting. The pulse was 70, temperature normal. There was œdema about the right eye. The urine was highly albuminous. In a few weeks the œdema increased; the vision became impaired, and optic neuritis appeared. Convulsions closed the scene. The post-mortem revealed adhesion around the aqueduct of the vestibule, with half an ounce of greenish pus in the cerebellum, and three small cerebellar abscesses at other points. The mastoid was healthy, and no caries was felt by the probe in the middle ear. The nephritis was supposed to be independent and to contraindicate operation, but had he operated it was thought the search for pus in the usual sites would have been fruitless. The differential diagnosis of these cases was discussed by Drs. Hammond and Lautenbach, of Philadelphia, and Dr. Diller, of Pittsburg.

Stricture of the Rectum.—On this topic Dr. Beach, of Pittsburg, urged that the proctoscope should be regularly used. This instrument and inflation of the rectum, as perfected by Martin, have revealed new and definite data in rectal diseases. Stricture of the rectum, ulcerative in origin and inflammatory in development, required early recognition to avoid a serious issue. The "rectal valves" are anatomical facts; they are two to four in number, dividing the rectum into three or four chambers. Many cases of so-called stricture were hypertrophied valves, and could be managed in a radical manner. He described varieties of malignant and non-malignant stricture, and cases simulating stricture. In one case with stercoraceous vomiting, he cured the patient by removing from the upper rectal chamber an adenoid which had acted as a ball-valve, producing obstruction. The tubular variety of stricture was treated by frequent use of a divulsor and massage with graded sounds. Annular stricture in the movable rectum should be treated by multiple incisions followed by massage. Stricture of the fixed rectum by cicatrical tissue should be incised bilaterally and deep enough to sever a few fibres of the rectal sphincter. Gummatous or other neoplasm should be extirpated by perineal section of the rectum. Carcinomatous stricture should be removed by the Kraske method with colotomy. Obstipation resulted from semilunar stricture, and could be cured by valvotomy.

The Scrubbing Brush was the title of an ingenious and amusing prescription of Dr. Forbes, of Philadelphia, for the humblest and simplest of surgical instruments: ℞ Curled horsehairs, ʒ iij. Contrive a pad with them about four inches long, three broad. S. To be used with soap and water in rubbing the hands and parts. This "job," as Dr. Forbes humorously called it, can be bleached with fumes of sulphur, stitched and pressed or not; the cost is about two cents

apiece; it can be sterilized, kept in alcohol, and applied to various uses.

Atypical Features in Some Common Nervous Diseases.—This was the title of a paper by Dr. DILLER, of Pittsburg. He said there were a number of diseases in which one or two symptoms were so prominent that mention of them suggested the disease they characterize, as hemiplegia in apoplexy, staggering in tabes, and delusions of grandeur in paralytic dementia. These important landmarks might be stumbling-blocks if relied on exclusively without considering other symptoms. He recited cases illustrative of this point, in which apoplexy had been mistaken for fainting; tabes had been overlooked in the absence of staggering, etc.

Clinical Experiences of Head Injuries.—In this paper Dr. ANDERSON, of Pittsburg, proposed a theory of the mechanism of compression of the brain, *i.e.*, anæmia of nerve tissue from paralytic dilatation, and engorgement of the pial veins; this caused irritability, which increased the arterial pressure and central paralysis, and death resulted from asphyxia.

The Possibilities of the Profession.—This was the annual address by the president, Dr. LOWMAN, and was comprehensive and scholarly. He urged systematic medical inspection of schools, a national department of health, uniform sanitary laws in the different States, still higher and more clinical medical education, etc.

In the evening the members and ladies were entertained at a pleasant reception by Dr. Lowman.

Second Day—Wednesday, May 16th.

The Time of Meeting.—The resolution, laid over from last year, changing the time of meeting from May to the third Tuesday of September, was adopted, and will go into effect in 1900.

Address in Laryngology.—This paper was read by Dr. KYLE, of Philadelphia. He said that we need more general medicine in specialism; there was danger of specialism becoming too special. The *x*-ray was valuable in detecting diseased bone and foreign bodies in this department. Cataphoresis was of some value. Suprarenal extract, before and after nasal operations and in tuberculous laryngitis, had been beneficial in his hands. Orthoform was about the only new local anæsthetic now much employed. He used ichthyol in ordinary tuberculous laryngitis. He failed to see the utility of antidiphtheritic serum in ozæna. Turbinectomy was the most overworked operation in nasal surgery. The speaker reported six cases of gas in the antrum (emphysema) due to carious teeth; these cases were accompanied by ozæna. Transillumination of the accessory cavities had become important.

Treatment of Slight Injuries of the Eye.—This paper was read by Dr. ALLYN, of Pittsburg. Particles of iron striking the eye usually penetrated; the earliest thorough examination was most important. Dr. Allyn described the technique of extracting metallic particles from the interior of the eye by the magnet.

The Duty of the Physician to His Patients in Respect to Opticians.—This paper was read by Dr. LAUTENBACH, of Philadelphia, and was a plea for the employment of skilled oculists instead of mere opticians. The paper was discussed by Dr. Allyn and Dr. Tyler.

In closing the discussion Dr. Lautenbach said that there was only one optician in Philadelphia who refused to sell glasses over the counter.

The Normal Movements of the Ocular Muscles.—Dr. WILLETTS, of Pittsburg, read this paper. It was discussed by Dr. Pierce.

The Mechanical Treatment of Ptosis.—This paper was read by Dr. HECKEL, of Pittsburg. He said he had had five cases of this disease, two of which he operated on without permanent cure. Turner's device of a piece of gold wire soldered to the spectacle frame gave him satisfactory help in these cases.

A Note on the Employment of Solutions of Toluidin Blue in External Inflammatory Diseases of the Eye.—This paper, by Dr. VEASEY, of Philadelphia, was read by title.

The Address on Hygiene was given by Dr. COPLIN, of Philadelphia. He said that he believed that the transmission of malaria by mosquitoes had now been demonstrated. He reviewed the subject of the spread of disease by the various household pests, detailing his experiments in the laboratory of the Jefferson Medical College, and exhibited photographs and plates showing the tracks of the insects containing colonies of typhoid and other infectious organisms. These investigations were still in progress, and an account of them would be published later.

A Tumor from the Liver, Weighing One Pound and Five Ounces.—This paper was read and specimen shown by Dr. KEENE. A few years ago he reported two cases of removal of tumors of the liver, one by elastic ligature on an articifial pedicle made by the Paquelin cautery, and one by the latter, aided by the finger-nail. He now showed a third tumor removed by himself, and reported a fourth case, a cyst, removed by Dr. Locks. The history of his third case was as follows: Three months ago the patient, aged fifty years, had a dull grinding pain in the epigastrium, which increased after meals. There was no nausea or vomiting. The bowels were regular. The patient's weight decreased, by the loss of thirty pounds, to two hundred and five pounds. The epigastrium was bulging, with a hard, movable mass extending down to the umbilicus. There was dulness continuous with the liver. The urine was normal. The stomach was examined by the latest methods. The operation was performed April 23d. On opening the abdomen the tumor proved to be hepatic. The left lobe of the liver was nodular, the right not so; there appeared to be no glandular infection. The microscopic examination by Dr. Coplin and other experts showed the tumor to be probably caseated carcinoma. He removed the entire left lobe of the liver with the tumor, using the Paquelin cautery slowly, for twenty to thirty minutes. The hemorrhage was not severe except from large veins, which he closed instantly with the finger and by passing a ligature with the Hagedorn needle. Five ligatures of large veins were applied. From eight to ten ounces of blood only were lost. A few catgut stitches approximated half the flaps, leaving about half the raw surface exposed. He packed the wound with iodoform gauze, flushed the abdomen with decinormal salt solution, and closed the walls except where the gauze projected. The patient had hiccough and vomited for two days, until the stomach was washed out and the packing was removed; it was streaked with bile. Three to four ounces of bile leaked daily, diminishing, and in two weeks only a slight sinus remained. The patient is now well and out of doors. Dr. Keene said it was an interesting question whether the peritoneum could not dispose of a good deal of aseptic bile in these cases, and said that he might be tempted in some instances to close the abdomen without drainage. The case was discussed by Dr. Coplin and others.

Nephrectomy.—Dr. NOBLE, of Philadelphia, read some remarks on nephrectomy, detailing seven cases on which he had operated, and urging certain and early diagnosis by modern methods, cystoscopic and ureteral.

The State Board of Health and Antitoxin.—This paper was read by Dr. DAVIS, of Pittsburg, who

affirmed the value of antitoxin. The cost sometimes limited its use. Less than five dollars' worth, as sold by the commercial houses, was hardly worth using, and he had used five times as much for a single case. The State should take action to aid the use of antitoxin.

Operative Treatment of Cancer of the Uterus.—This paper was read by DR. MONTGOMERY, and discussed by Drs. Shoemaker, Massey, and Noble.

The Address on Obstetrics was given by DR. BALL, of Lock Haven.

Vaginal or Abdominal Section in Pelvic Surgery.—This paper by DR. BAER was read by title.

Puerperal Septicæmia.—This paper was read by DR. WAGONER, of Johnstown.

DR. ENFIELD, of Bedford, gave a clinic demonstrating the treatment of obstinate stomach cases by mechanical means.

Dr. George W. Guthrie was elected president, and the efficient secretary, Dr. C. L. Stevens, was re-elected.

Third Day—Thursday, May 18th.

The programme for Thursday's session was as follows: The Address in Medicine, Dr. J. Chris Lange, of Pittsburg; "The Relation of the General Practitioner to the Specialist," Dr. J. M. Baldy, of Philadelphia; "Diphtheria in the Roselia Foundling Asylum of Pittsburg—Treatment with Antitoxin," Dr. Adolph Koenig, of Pittsburg; "Intoxication from Toxalbumins and Other Toxins," Dr. Mary McD. Shick, of Reading; "The Treatment of Tuberculosis," Dr. L. F. Flick, of Philadelphia; "Pulmonary Tuberculosis, with Intercurrent Typhoid Fever, Complicated by Pneumonia," Dr. A. E. Eshner, of Philadelphia; "Tuberculosis Following Typhoid Fever," Dr. F. U. Ferguson, of Gallitzin; "Relapse in Typhoid Fever," Dr. L. H. Mayer, of Johnstown; "Certain Drugs in Enteric Fever—A Study in Therapeutics," Dr. J. C. Wilson, of Philadelphia; "Myxœdema, Report of a Case," Dr. E. H. Small, of Pittsburg; "Diagnosis in Mild Cases of Smallpox," Dr. W. D. Haight, of Johnstown; "On the Remote Results in Artisan's Palsy," Dr. F. S. Pearce, of Philadelphia. Special discussion on chronic renal diseases: "Etiology and Pathology," Dr. E. G. Matson, of Pittsburg; "Prognosis and Treatment," Dr. H. A. Hare, of Philadelphia. The general discussion was opened by Drs. James I. Johnston, of Pittsburg, and John A. Musser, of Philadelphia.

Surgical Suggestions.

To Remove Blood from the hands, sponges, etc., wash them in a basin full of lukewarm water to which a teaspoonful of tartaric acid has been added. Do not employ soap. Instruments, bandages, gauze, etc., may be cleansed in the same way and afterward rinsed in fresh water.—*Zeitschrift für Krankenpflege.*

Deafness and disease of the middle ear must not be overlooked as symptoms of adenoids. The effect upon the hearing bears no relation to the amount of vegetation present; no treatment short of removal is satisfactory.—H. S. STRAIGHT.

Early Operation in Cholelithiasis.—Dr. A. H. Meisenbach (*Medical Review*, January 21, 1899) concludes as follows: (1) Gall stones occupy the same position, as far as the welfare of the patient is concerned, as do recurrent appendicitis, hernias, and other surgical conditions that may eventually endanger life. (2) A patient suffering from so-called recurrent stomach cramps should undergo a rigid examination by competent persons, and if by ordinary means a diagnosis cannot be arrived at, an explorative laparotomy is justifiable. (3) A patient known to have gall stones should have the case plainly stated as to the benefits of an operation, and should, therefore, not be allowed to suffer for months and years. (4) All known medical treatment is of no avail in over fifty per cent. of all cases. (5) Surgical interference is the only rational means of cure. (6) In case of early operation, cholecystotomy is one of the safest operations in abdominal surgery. (7) Ninety per cent. of cases are benefited or cured by operation, the death-rate being five per cent. or less. (8) Procrastination endangers the life of the patient and makes surgical operation more complicated.

"Acute" Bedsore in Fracture-Dislocation of the Spine.—A very constant and disturbing symptom in fracture-dislocation is "acute" bedsore, so called from the rapidity with which it is liable to come within three or four days of the injury before simple pressure, or irritation from soiling of the parts by urine or fæces, could be regarded as sufficient reason for its production. The actual cause is the direct effect produced upon the nutrition of the part by the cord lesion, which in the same way leads to the bladder ulceration, kidney disorganisation, and periurethral sloughing with which the onset of acute bedsore commonly coincides. The sore usually occurs first in the sacral or lower lumbar region as a dusky bluish swelling, the surface of which soon vesicates; ragged sloughs rapidly form, and an irregular inert wound, surrounded by a low form of cellulitis, follows, often exposing the subjacent bones, necrosis of which is prone to happen; if the patient survives long enough, the spinal canal may be opened up in rare cases. These sores are not confined to the back, but may affect the scrotum; they are sometimes rymmetrical over the anterior superior iliac spines, and may form over any bony prominence in the palsied limbs. Acute bedsore is not necessarily limited in its onset to the first few days after the original injury, but may occur at any time in the course of a case of fracture-dislocation if rapid changes in the cord occur; *e.g.*, if, in damage of the dorsal cord, rapid descending changes involve the lumbar enlargement. The ordinary bedsore which is liable to occur over points subjected long to pressure in any case of exhausting disease, although it may occur in the course of a case of fracture-dislocation, has nothing in common with the acute bedsore now described, but it may assume the characteristic of acute bedsore at any time if rapid descending changes occur in the cord.—DR. WILLIAM H. BENNETT.

The Management of Patients Before and After Laparotomy.—Dr. Wiggin (*Lancet*, April 30th) concludes a paper with this title, by calling attention to certain important points as follows: (1) The importance, whenever practicable, of prolonged preparatory treatment of patients about to undergo an abdominal operation; (2) the importance of the administration of cathartics in the early part of this period, followed by large enemas for the purpose of cleansing the intestinal tract; (3) the importance of keeping a record of the body temperature, respirations, and pulse-rate for several days in advance of the operation, and of making a final examination of the urine; (4) the necessity, in the female, of arranging to have the operation performed a few days after the menstrual period, and of cleansing of the vagina even when it is intended that the operation shall be by the abdominal route only; (5) the administration of a small quantity of peptonized food (one ounce) containing stimulants two hours before giving the anæsthetic, for the pur-

pose of lessening the tendency to nausea and vomiting after the recovery of consciousness; (6) the necessity of the anæsthetic being given by an experienced physician and in the smallest possible quantity; (7) the necessity of protecting the patient's body properly with clothing and blankets during the operation; (8) the advantage of stimulating the patient before the heart has become much exhausted, and of using intra-venous saline injections before the radial pulse has become extinct; (9) the leaving in the abdominal cavity, after free irrigation, of a quantity of hot saline solution for the purpose of stimulating the patient, preventing the formation of intestinal adhesions, and lessening the danger of septic infection of the peritoneum; (10) the necessity of making the patient comfortable by change of position during the first two days of convalescence and by the use of the rectal tube; (11) the necessity for the early administration of food in reasonable quantities and at proper intervals; (12) the necessity of withholding stimulating enemata after operations in which extensive and firm pelvic adhesions have broken up; (13) the necessity for deliberation as to the wisdom of reopening the peritoneal cavity in a given case of supposed concealed hemorrhage; (14) the importance of washing out the stomach as soon as the diagnosis of intestinal paresis is made, and of the persistent use of saline cathartics till the bowels move; (15) the importance of not administering cathartics too early or in too large doses to those convalescing from abdominal operations and who are pursuing a normal course.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

WEATHER — SUMMER SESSION — HOSPITAL FUNDS — CLINICAL EXAMINATION OF LEUCOCYTES — DYSARTHRIA — RECOVERY FROM REPEATED RECURRENCES OF CANCER—REMOVAL OF BULLET FROM BRAIN—X-RAY CASES — ADVERTISERS AND DOCTORS—FINE FOR BREACH OF SANITARY LAW—COLLEGE OF PHYSICIANS — ROYAL SOCIETY — THE REGISTER FOR 1899—RECENT DEATHS.

London, May 5, 1899.

A couple of days ago I read in the newspapers that in New York you were suffering from a heat wave. I wished we could relieve you of a portion of your excess of heat, for we were having a cold snap. We are now nearly at the end of the first week of May, but enduring very uncongenial weather. Yesterday we had frost in London, and to-day it is continued, while the reports from the provinces show that the temperature has been still lower than here. Early crops of various kinds have been injured or destroyed, and though strong people are delighting in extra exercise, the weakly and invalids are shivering over their fires and lamenting the set-back toward winter. In the north and in Wales they have snow.

The summer session opened on Monday, and teachers and students are hard at work.

The secretaries of the Prince of Wales' hospital fund have this week issued a further appeal, which now lies before me. The council declares it to be "urgently necessary that His Royal Highness should be in a position to distribute £50,000 at the end of the current year." The present income is only about half that sum, and during the two years of its existence the fund has distributed £89,000. If the Prince could manage to get rid of the Sunday fund influence and the overbearing weight of the large hospitals which have already swallowed most of the contributions, I have no doubt a larger amount would be forthcoming. There was much discontent last year, and talk about the Burdett clique absorbing too much. Howbeit, the fund is of great assistance, and criticism does not hinder good wishes for its increased capacity to help. Already two donations of £1,000 each have been received, and the appeal will probably elicit a considerable response.

The Saturday fund has issued its annual report—the twenty-fifth—from which it appears that there was a falling-off in the amount received compared with the previous year, which is due to giving up street collections. This was perhaps to be expected—indeed, many thought the loss would be much greater. But the street collections were always opposed by many, and at length became too offensive. It is therefore a source of gratification rather than regret that they have been abandoned.

Dr. A. G. Phear brought before the Medico-Chirurgical Society a preliminary paper on "The Clinical Examination of the Hæmic Leucocytes." His object seemed to be to show the superiority of fluid preparations to the common cover slips. The latter, of course, flatten and otherwise distort some of the leucocytes. Some, too, are washed away during staining, while others are obscured by the numbers of the red corpuscles. Thus accurate drawing and measurement are impossible. In fluid preparations the white cells are fixed and preserved approximately as spherical bodies, they are not distorted, and camera-lucida measurements and drawings may be relied on. Thickness of the non-flattened cells does not matter, as, by gradually focussing from above downward through the cell, views are obtained at different focal planes which are equal to a series of sections. Dr. Phear recommended a solution of methylene blue (0.2 per cent.) in forty-per-cent. alcohol for diluting the blood—a small quantity being added to a drop of blood on a glass slide; and mixed by directing a current of air through a pipette on the surface of the fluid, which is allowed to spread as a film; a cover glass is then put on, and the edges are sealed with vaseline. The procedure takes about three minutes, and the preparation can be examined at leisure with an immersion lens, and is available equally for a differential count and the study of individual cells. By this method Dr. Phear said a group of cells could be differentiated—large, oval cells—which found no place in accepted classifications. He gave particulars of these and other forms, as well as of the changes observed in their forms and numbers.

Dr. P. Weber then read a paper on a case in which a child was attacked by some acute disease with cerebral symptoms, when about two years old. This left him unable to speak as he was learning to do previously, and now at seven years old he could utter only inarticulate sounds. The child was shown to the society. He was fairly well developed, could hear what was said, and seemed to understand it. Lately he seemed to have improved, though the "lalling" defects and stammering were very marked. Still it might be expected that the improvement would continue, since recovery has been known to take place in similar cases, some of which were mentioned at the meeting. Much depended, as to the rate of progress, on the instruction that could be obtained.

A number of interesting cases were exhibited at the Clinical Society. Perhaps the most striking was one of spontaneous recovery from carcinoma of the breast after repeated recurrences, shown by Mr. Gould. The patient was a single woman, forty-nine years old, who was shown to the society in November, 1897. In 1888, after a blow, a lump appeared in the left breast, which was removed in 1890, and on microscopic examination was pronounced to be scirrhus. In 1892 there

was a recurrence in the axilla, and excision was done. In 1894 there was another recurrence, with also a lump in the right breast. These were removed in December. In 1895 there was another recurrence in the scar, with a lump in the other breast, and enlarged axillary glands. Dyspnœa was present. She was admitted to the cancer ward and regarded as a hopeless case. There were numerous nodules around the scars and elsewhere, and dulness at the base of the right lung. In March, 1896, she could not lie down in bed, and there was a large lump in the right thigh bone. Three months later, *i.e.*, in June, 1896, though nothing had been done, she had lost her dyspnœa and the nodules had disappeared. The swelling in the thigh had diminished and was no longer painful. Mr. Gould showed her in November, 1897, when the scars alone were visible, and he now showed her again, to prove that the improvement was not ephemeral. He mentioned that she had last menstruated in January, 1895, and the improvement was manifested many months later; and he remarked that no credit could be given to treatment, as she had had none, and the improvement took place in the cancer ward of the Middlesex Hospital, which had been devoted to cancerous patients for the last fifty years.

Among other cases there was one of a shot-wound from a revolver, through the hard palate, with suicidal intent. The man improved, and in a few weeks could walk about, but epilepsy afterward came on. A bullet was located in the corpus callosum by a skiagram, and removed on the sixty-ninth day. Paralysis ensued. He improved, but now has optic neuritis. Skiagrams had shown two bullets, and there were two shots. The president remarked that surgeons did not advocate interference in such cases, as bullets often gave rise to no symptoms. Another member suggested that relief of tension might explain the amendment. Mr. Barker, who showed the case, admitted that there was considerable tension, but he thought that the bullet was also causing irritation, on account of the optic neuritis when the symptoms were abating.

Among the other cases three may be named in which *x*-rays were useful—one, a lad with characteristic deformities of rickets, shown on the screen; another an elderly man with a hard tumor in a tendo Achillis, which in a skiagram looked calcified, if not ossified; and an infant who had undergone operation for spina bifida, a skiagram of the cavity being shown.

Dr. Dockrell's appeal has failed, it being held that the jury having found that the advertisements of defendant were not libellous, the verdict could not be disturbed. You will remember that the doctor's name was used to puff the defendant's nostrum. The plaintiff admitted having tried the nostrum himself and prescribed it. He had given no authority for his name to be used, and therefore sought to prevent such use. It is a pity he failed, but it shows the danger of dealings with nostrum-mongers. The proverb applies: "You cannot touch tar without being defiled." This action, nevertheless, elicited from one of the judges a statement that the result does not mean that a vendor of a quack medicine has a right to use an eminent physician's name without authority, as that would be a wrong for which a British jury would doubtless award heavy damages.

A fine of £2 with 10 guineas costs has been inflicted on the proprietors of the Carlton Hotel, just built, for laying drains inside, contrary to the rules of the County Council. As the new hotel is said to have cost about £500,000, such a paltry fine is not likely to prevent others from defying sanitary rules.

The College of Physicians has elected ten members to the fellowship. Eight are graduates of the favored universities—Oxford, Cambridge, and London. The college has also adopted a half-hearted resolution on the midwives bill.

The Royal Society's conversazione was held on Wednesday evening, and was as usual a brilliant and interesting affair. Medical subjects were represented by Dr. Manson, Major Ross, Professor Schäfer, Major Bruce, and others. Lord Lister, as president, received the guests.

The "Medical Register" for 1899 has been issued. Already complaints of inaccuracies have reached me, and probably more will be heard about them. The Register is required to contain the names on the general register on January 1st each year. From the table prefixed it appears that 1,210 names were added in 1898, being 129 fewer than the average of the last five years. Deductions must be made for deaths and other causes, bringing the net increase down to 415.

Deaths are announced as follows: Surgeon-General Robert Cockburn, aged seventy-four years, and Deputy-Surgeon-General George Elias Farrell, C.B., at the age of sixty-eight, both of the Bengal Medical Service. Hon. Brigade-Surgeon J. G. Grant, A.M.S., who served in Egypt in the campaign of 1882, and received the Tel-el-Kebir medal and clasp. Dr. Reynolds, of Teddington, aged thirty years, who went to Africa and died there of black-water fever. Dr. A. R. Shaw, of Kew, aged seventy-seven years.

MEDICAL MATTERS IN THE TRANSVAAL.

(From our Special Correspondent.)

THE turn of the season is ushering in fresh cases of smallpox from all quarters. Natives, especially those coming from up-country, quickly take the disease. Although vaccination—or in their case it would be more correct to call it inoculation—has long been known among the natives as a prophylactic against smallpox, yet in the majority of cases it is insufficiently done. They are inoculated directly from a mild case; the fatal results are *nil*, and they do not carry marks of secondary spots to any appreciable or visible extent. Of course they are all properly vaccinated as soon as they come to work on the mines, but evidently in many cases too late. The percentage of severe confluent cases is very great; last year all the hemorrhagic cases were fatal, both among whites and colored. An important factor in increasing the death rate from smallpox was thought to be the long and tedious journey which the sick had to traverse before reaching the lazaretto, there being only one for the whole of the gold fields of the Witwatersrand, a stretch of over forty miles. This year begins with a different arrangement—Boksburg, Johannesburg, and Krügersdorp each having its own lazaretto. It is thus hoped that this will greatly reduce the death rate.

The hospital for lepers, both black and white, which at present is about one hour's drive to the east of Pretoria, is being decentralized. It is found that the influx of cases is larger than the building can accommodate, having regard to good sanitary arrangements. There is no doubt that there are many more cases at large about the country than people think; that the disease is on the increase is beyond question, cases being almost daily brought in from all parts of the country for segregation, according to the law of the land. Most of the cases are of the anæsthetic or mixed variety, which gradually assumes the character of elephantiasis nodosa and elephantiasis mutilans. Last week a whole family, consisting of father and five children, was brought in as subjects for examination (the mother had previously succumbed to the disease)—the youngest child only six years of age, but looking more like sixteen, from nodular disfigurement. It is a fairly common oc-

currence .o find whole families affected at the same time with the disease, and yet, owing to the careless observation powers of the sufferers, it is impossible to trace the cause. Most of them will assure you that it commenced shortly after being exposed to wet and cold while still in an exhausted state from prolonged exer tion. Many amateurs, or so-called "quacks," have come forward, offering with their "sure cures" to effect marvels, and have been given opportunities of doing so, the government liberally allowing such applicants to try their vaunted remedies. It is thought that we have, growing in the country, herbs which have been spoken of for centuries among the Kaffirs and Hottentots as being of great virtue in curing the disease. I believe this to be very probable. We have an example in the "Monsonia ovata," lately brought before the medical profession; it has a wonderful curative power over all dysenteric affections. The plant, which is of the geranium order, has been known to natives for many years, and is used by them with great and relieving effect in bowel troubles; but it is only now that we are beginning to find out its value.

PRETORIA, SOUTH AFRICAN REPUBLIC, April 10, 1899.

MEDICAL MATTERS IN MELBOURNE.

(From our Special Correspondent.)

MUCH interest is being taken in the fifth session of the Intercolonial Medical Congress, which will be opened on the 18th of September of this year at Brisbane, Queensland.

The last session was held in Duneden, New Zealand, a little more than three years ago, and was attended by practitioners from all parts of Australasia. The special interest then given to the subject of tuberculosis, more particularly to the modes of infection, has borne good fruit, for public attention has now been called to the importance of proper inspection of dairies and dairy herds. The importance of instituting a systematic scientific inspection of dairy herds has more than a local significance, when it is recollected that Australia, and more especially Victoria, is a large exporter of butter and meat.

In the medical faculty of the University of Melbourne, efforts are being made to bring the curriculum into line with the schools of Great Britain. It has long been recognized that the student, during his five years' course, gets overmuch lecturing and examining, and too little time for practical teaching. Theoretical portions of the course have been maintained at a high standard, but clinical instruction has not kept pace with the progress made in other departments.

The new scheme, which has not yet been ratified, provides for a reduction in the number of lectures in most of the strictly medical subjects, the abolition of systematic lectures on materia medica, and the making compulsory of attendance on clinical work for an increased period.

The summer now passing away has been, on the whole, mild. The sure index to the season is the rise and fall of the number of reported cases of typhoid fever. The cases this summer have been few and of a mild type.

Attention has been drawn by the coroners to the heavy mortality among infants that are put out to nurse; that is, illegitimate children that are given out to some woman to look after for a certain sum. The law now stands that any woman taking a child to nurse for payment must register herself, and her establishment is liable to inspection by the health authorities at any time. Any infant that dies cannot be buried until a coroner's inquiry has been held.

MELBOURNE, AUSTRALIA, April 1, 1899.

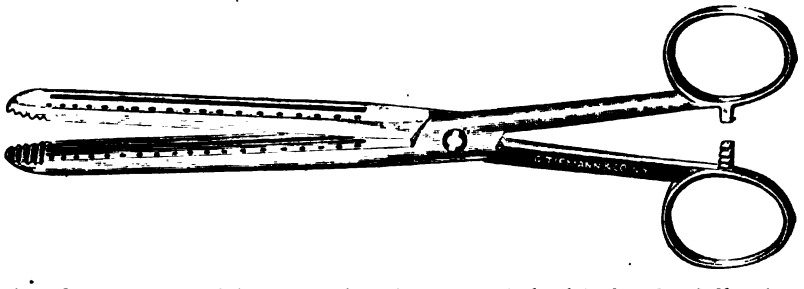
New Instruments.

A NEW PHIMOSIS CLAMP.

BY MARK I. KNAPP, M.D.,

NEW YORK.

THE clamp is straight and quadrangular. A longitudinal slot divides the clamp into an anterior and a posterior part. The anterior part serves only to tighten the tissues for the knife, thus insuring a straight edge to the cut part, and to provide the anterior margin to the slot, which slot is used as a director for the cutting knife. The posterior part has perforations running along the length of the blade, parallel with the slot and three-thirty-seconds of an inch distant from it. The perforations are one-eighth of an inch apart. The thickness of each blade is five-thirty-seconds of an inch. On the inner surface of each blade, running to within one-half an inch from the end, are two longitudinal grooves, one in the anterior part and the other in the posterior part, between the perforations and the slot. At the end of the inner surface of each blade extending for one-half inch are transverse ridges and grooves. The perforations are to guide the suturing, straight needles; the longitudinal grooves on the inner surfaces serve to get a good hold of the tissues, and the transverse grooves and ridges at the end of the inner surfaces may serve as artery forceps.



The operation is proceeded with in the following way: The foreskin is pulled away from the glans penis as much as desired and the clamp applied close to the glans, diagonally forward and downward. Half a dozen or a dozen straight, thin, threaded needles, having been previously prepared, are now passed through the perforations, the distance of these from one another being left to the discretion of the operator, who may use the instrument as it is, viz., one suture every one-eighth inch apart, or, if he chooses, he may use every second or third perforation. The sutures must be of sufficient length each to provide for two sutures. The suturing having been done, a sharp knife is inserted into the longitudinal slot and drawn through the clamped tissues. The clamp is now opened, and the blades are released from the sutures. The cut surface represents four layers, *i.e.*, two external (skin) and two internal (mucous membrane). A director is now brought underneath the sutures and between the two inner layers of mucous membrane, which sutures are then raised sufficiently to allow for two sutures of each single one, one for either side. The sutures are now cut and tied so that each suture shall hold one layer of skin and one of mucous membrane. The mucous membrane will now have to be notched at the median line on the dorsum to allow it to retract over the glans. The wound is then dressed in the ordinary way.

The claims for this instrument are: Extreme rapidity of the entire operation, one or two minutes only being necessary; second, absolute control in the event of bleeding, as the sutures are there before the clamp is released; third, the cut surface is absolutely straight, not ragged; fourth, there cannot be any puckering, as the sutures are applied when the skin is yet in normal apposition with the mucous membrane; fifth, the sutures are equidistant; sixth, the suturing and cutting being done while the tissues are clamped, and consequently there being no circulation, the operation can be done without an anæsthetic; and last but not least, the instrument makes the operation so safe and so simple that it can be performed with perfect safety even by a novice.

280 Broome Street.

AN INSTRUMENT FOR USE IN EPISTAXIS.[1]

By B. SCHEINKMAN, M.D.,
NEW YORK.

In the course of my general practice, I have often felt a great want of some more practical and reliable instrument than those that are at present at our command in the treatment of the severer forms of epistaxis, with which the general practitioner is more or less frequently confronted. The means we at present possess, with all due respect for their ingenuity, referring especially to the well-known Bellocq's cannula, I regard as not sufficiently practical, rather too complicated, and, above all, not always reliable.

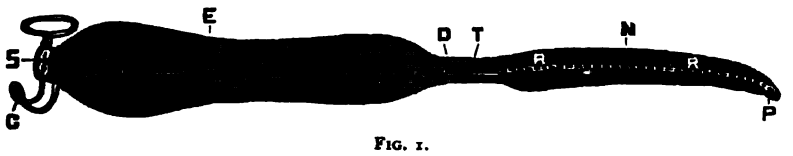


Fig. 1.

I do not consider it necessary for me to enumerate all the disadvantages and inefficiencies in our present methods of treating these cases, as I believe the general practitioner to be sufficiently familiar with most of the unpleasant features, such as the loss of time involved in the manipulations with a corresponding unnecessary loss of blood; the struggles, gagging, and general alarm of the patient, especially in cases of women and children who frequently offer obstinate resistance to our efforts, owing to the irritation to the fauces produced by these manipulations, etc.; and above all the uncertainty and anxiety as to the exact time for the removal of the plug, which removal is liable to be followed by a renewal of the epistaxis and a repetition of the same manipulations, disagreeable to both physician and patient.

The few cases of fatal epistaxis which have recently occurred in the hands of presumably skilful physicians have still further confirmed my opinion as to our inefficiency in treating such cases, and I have decided to search for some means which would offer better facilities in dealing with these emergencies, and if possible to eliminate entirely fatal epistaxis.

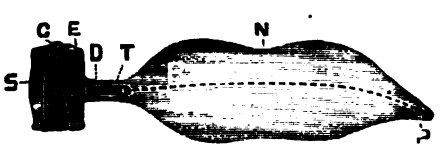


Fig. 2.

After considerable trouble, I have finally succeeded, as I believe, in devising and constructing an instrument which appears to me to answer the purpose, in both its practicability of application and its reliability.

As will be seen from the accompanying cuts, it consists of two oblong, sausage-like rubber air chambers (Fig. 1) the nasal, *N*, and extra-nasal, *E*, parts united and communicating with each other by a constricted neck or duct, *D*. The nasal chamber, *N*, encloses within its whole length a metallic probe-like rod, *RR*, for the purpose of imparting to it the necessary stiffness for the introduction into the nasal canal; the posterior extremity, *P*, of the rod *RR* is probe-like in shape, and corresponds with and is enclosed within a corresponding probe-like extremity of the rubber chamber *N*; while its anterior extremity, *T*, ends in a short tube which, being enclosed within the neck *D* of the adjacent chambers, forms an incollapsible communication between the chambers *N* and *E*.

The extra-nasal chamber is not stiffened but always retained in shape and filled with air, owing to its thicker fabric and high elasticity; its distal extremity forming part of the common duct *D*, while its proximal extremity is provided with a small arrangement, *S*, that serves as a spool upon which the chamber is wound up in the process of emptying its air contents into the nasal chamber, when the latter is *in situ*. This little mechanism is further provided with a catcher, *C*, that keeps the wound-up chamber from unwinding itself as it would otherwise do. It will also be noticed that the nasal chamber *N* is in almost a collapsed state, which condition makes it much easier of introduction into the narrow nasal canal, and is caused by the tendency of the extra-nasal chamber to keep up shape; a certain amount of suction is exerted upon the air contents of the nasal chamber, which is somewhat less resistant, thereby creating a vacuum in the latter, and thus collapsing its walls.

It is, therefore, evident that in winding the extra-nasal chamber upon the spool, thus forcing its volume of air through the common duct into the intra-nasal one when in the canal, the latter will become inflated (Fig. 2) and will swell up in the direction of least resistance and fill up all possible space within the lumen of the canal; thus not only plugging up the anterior and posterior nares, but also compressing and stopping up any bleeding vessel at any part of the surface of the canal, and consequently immediately checking the hemorrhage and ultimately allowing of the occlusion of the bleeding vessel or vessels by coagulation, thus bringing about the final cure.

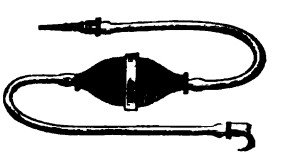
[1] Demonstrated before the Eastern Medical Society, April 14, 1899.

A NEW EAR SYRINGE.

BY EMIL AMBERG, M.D.,
DETROIT, MICH.

It has been observed how unsatisfactory ear syringes are often bought by patients; such an instrument should be easily manipulated and cleansed, and, at the same time, not be too expensive.

The Davidson Rubber Company, in Boston, has manufactured for me the instrument which the accompanying illustration depicts. It is a small-sized bulb syringe with a soft rubber tip. Full directions should be given to the patient how the syringe ought to be cleansed, and how it is to be kept aseptic. The instrument is made also with detachable tip. The syringe is about twenty-three and a half inches long.



32 West Adams Avenue.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 20, 1899:

	Cases.	Deaths.
Tuberculosis	170	141
Typhoid fever	12	8
Scarlet fever	196	14
Measles	438	18
Diphtheria	219	25
Laryngeal diphtheria (croup)	13	10
Cerebro-spinal meningitis	0	8
Chicken-pox	32	0
Smallpox	1	0

Poison in Pure Water.—It is said that Professor Koeppe's investigation into the cause of illness at a water resort in Germany leads to the belief that the absolute purity of the spring was the sole cause. Can it be that the too great purity of the Philadelphia water supply is at the bottom of the present alarming sickliness of that city?

What the Student Should be Taught.—He should be taught, from the inception of his medical course to its very end, that there is a totality of the organism as well as a totality of symptoms; that there is no organ of the body independent of its fellow or fellows; that all are connected anatomically and physiologically, and that disease or lesion of any one may, and frequently does, disturb other and distant organs. Besides, he should become thoroughly imbued with the idea that the mission of the physician is, first, to prevent disease; and, second, to cure disease which he cannot prevent, in the easiest and safest possible manner, by internal medication if possible, by other methods if necessary. He should be given an abiding faith in therapeutics; but he should likewise be taught the limitations of the internal remedy, so that each case which presents itself for treatment will be studied from a diagnostic and pathologic as well as a therapeutic standpoint. If he be thus equipped, there is little danger of his becoming either an extremist in therapeutics or a pure localist. He will be a true physician in the highest sense of the term—a safe man to intrust with the lives of his fellow-men.—Dr. J. C. Wood.

Influenza.—*English Outlook* says: "Now that the epidemic of influenza is beginning to decline, there is no lack of 'certain cures.' Happily all the suggested remedies have this in common, they are perfectly harmless. And well they may be, for violent medication is folly. Absolute rest in bed, hot drinks, and mild laxatives combined with a little of that most potent of all remedies—time—will give uniformly good results in nine cases out of ten. Another interesting feature about most of the suggested remedies is that they are drawn from either the cruet or the spice box. One innocent and delighted M.D. extols the virtues of cinnamon. But he naïvely announces that he must refuse to treat with cinnamon any cases more than twenty-four hours old. Moreover, the period within which his cases are invariably 'cured'—from three to six days—is precisely the natural self-limited lifetime of the disease through which it will run if no treatment whatever, except rest and warmth, be given. It is the old story of nature curing the disease, and the remedy or the doctor getting the credit. A delightful contribution to the hilarity of the subject has been made by an enterprising daily journal which one morning editorially delivered itself of the oracular dictum: 'People do not get serious attacks of influenza who keep their blood well alkalinized with potash.' The next day it publishes the warning of 'one who speaks with authority' against the use of potash, as the smallest amount in the blood is the cause of many sudden cases of heart failure, and recommending common salt. Of course potash and common salt in the doses usually taken, or indeed likely to be tolerated by unregenerate humanity, are alike practically harmless, and the influenza will get well of itself with equally cheerful promptness under either of them, if the victim only stays in bed."

Boric Acid in Milk.—In the opinion of Sir James Vaughan the presence of boric acid in milk has not as yet been attended with injurious results; and he has accordingly dismissed a case in which the fact of the acid having been used was beyond question. The point in dispute was whether boric acid could be considered an adulterant. The complainants called expert evidence to show that it caused indigestion, diarrhœa, eczema, and other diseases. The defendants, on the other hand, called experts, who denied that it was in any way injurious, unless taken in very large quantities. They contended that the acid is no more harmful than common table salt, and that its use in milk is directly beneficial by preventing the decomposition which is liable to take place when milk is sent a long distance by rail. Evidence has been taken before a committee of the House of Commons upon the point, but the only conclusion arrived at appeared to be that while the use of such substances as salicylic acid was directly injurious, it remained doubtful whether boric acid was injurious or not.—*Pharmaceutical Journal.*

Health Reports.—The following cases of smallpox, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ending May 20, 1899:

Smallpox—United States.

		Cases.	Deaths.
Alabama, Mobile	May 12th	2	
Dist. of Columbia, Washington	May 12th to 15th	3	
Georgia, Savannah	May 9th to 16th	5	
Illinois, Chicago	May 9th	2	
Indiana, Evansville	May 6th to 13th	2	
Kansas, Emporia	May 6th to 13th	2	1
Kansas City	April 29th to May 6th	32	8
Kentucky, Louisville	May 4th to 11th	16	
Louisiana, New Orleans	May 6th to 13th	9	
Shreveport	May 8th to 13th	4	
Maryland, Steelton near Baltimore	May 17th	4	
Minnesota, St. Paul	April 29th to May 6th	1	
Missouri, St. Louis	January 21st to May 12th	65	
New Mexico, Las Cruces	May 12th	19	
New York, Borough of Brooklyn	April 29th to May 6th	1	
Ohio, Cleveland	May 6th to 13th	11	
Pennsylvania, Allegheny	May 6th to 13th	2	
Johnstown	May 6th to 13th	1	
Philadelphia	May 6th to 13th	1	
Rhode Island, Providence	May 10th	1	
South Carolina, Barnwell County	May 16th	3	
Beaufort (not verified)	May 16th	3	
Clarendon County	May 6th	3	
Edgefield County	May 6th	5	
Texas, Galveston	April 29th to May 6th	7	
Laredo	April 29th to May 6th	2	
Virginia, Newport News	May 9th to 17th	11	
Norfolk	May 11th to 18th	16	
Portsmouth	May 11th to 18th	9	
Wisconsin, Milwaukee	May 6th to 13th	2	

Smallpox—Foreign.

Belgium, Brussels	April 15th to 22d	..	1
Egypt, Cairo	March 26th to April 22d	..	4
England, London	April 15th to 22d	3	
Greece, Athens	April 22d to 29th	21	8
India, Bombay	April 4th to 18th	..	15
Calcutta	March 25th to April 8th	..	3
Nicaragua, Bluefields	April 22d to 29th	1	
Russia, Moscow	April 8th to 15th	8	2
Odessa	April 22d to 29th	5	1
St. Petersburg	April 15th to 22d	28	3
Turkey, Constantinople	April 17th to May 14th	..	5

Cholera.

India, Bombay	April 4th to 18th	..	6
Calcutta	March 25th to April 18th	..	43

Plague.

India, Bombay	April 4th to 18th	..	1,199
Calcutta	March 25th to April 8th	..	266
Madras	March 25th to March 31st	..	1
Japan, Formosa and Tamsui	March 8th to 29th	..	394

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Original Articles.

SOME OF THE PROBLEMS OF THE ALIENIST.[1]

BY FREDERICK PETERSON, M.D.,

NEW YORK,

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MR. PRESIDENT AND MEMBERS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION: The invitation to deliver the annual address before the American Medico-Psychological Association both delighted and alarmed me. I cannot say how deeply I appreciated the honor which had come to me so unexpectedly from this notable body of alienists, but I felt all the more keenly those misgivings that must naturally arise in the mind of one who is asked to follow in the footsteps of several distinguished predecessors. What could I say to you of psychiatry, that science wherein your own experience so far outrivals mine? What new thing could I bring you from the domain of neurology, that would be helpful, interesting, or inspiring? The more I revolved the problem in my mind, the more perplexed and apprehensive I became. I recalled the trend of similar addresses on former occasions, which dealt mainly with the relations of the neurologist to the alienist and with the progress of psychiatry, and these subjects were so well and so exhaustively presented, that I gained no solace from a contemplation of their well-worn texts. So finally turning from the field of things already accomplished, both in the practical care and treatment of the insane and in the scientific investigation of brain and nerves—noteworthy, fascinating, and wonderful as your progress herein has been—I gave wings to imagination, wings somewhat inefficient, it is true, and let it roam the region of unsolved difficulties and undiscovered things. The progress of the past century in every department of human knowledge and undertaking is familiar to us all. Step by step, every decade with an added impetus, has this progress been made. The development of our modern hospitals for the insane and the accumulation of facts in respect to the nervous system are but a small part of this marvellous evolution of mankind and civilization, a small part by contrast with the whole, yet great indeed when viewed alone. Since so much has been done in these hundred years, what is foreshadowed for us in the century to come?

Meditating in this wise, my text suggested itself:

Some of the Problems of the Alienist.—These problems are of two kinds: first, the practical ones, which have to do with the methods of care and management of the insane; secondly, the scientific, which look for solution to the clinic and to the laboratory.

I need not say with what respect and admiration I have witnessed during these twenty years the improvements you have wrought in your hospitals—improvements in structure, advances in economical means and devices, reforms in the laws relating to the insane, successful efforts to abrogate political influence in administration, and betterments in the methods of study, care, and treatment; nor need I here refer to the remarkable awakening in every hospital for the insane in the Union to the importance of modern scientific research, as evidenced by the establishment of laboratories and the employment of psychologists, pathologists, and chemists to further the good work. It is, therefore, in no spirit of criticism that I seek to discover and discuss within the limits of this brief address the lines of future progress, but rather with the feeling that whatever ideas I may express as to the possibilities of the future only reflect a similar and simultaneous prevision in you, who, more than I, are cognizant of the present deficiencies of psychiatry and alive to the potentialities of the morrow.

The Practical Problems.—As regards, then, first the material welfare of the insane, let us suppose that there is a populous state or country in which as yet no public provision for the insane has been made. We are consulted as to the best methods of care in the light of past experience elsewhere and present knowledge. We shall find in this hypothetical community, in which no asylums as yet exist, that the subacute and chronic insane are provided for in jails and almshouses, and the acutely insane to a certain extent in general hospitals and a few scattered retreats in the hands of private individuals or corporations. What will be the ideal method of state care (for it should be state care) for such a commonwealth to adopt? It has long been an axiom among asylum physicians that early diagnosis and speedy removal to a special hospital for the insane are of paramount importance in nearly all acute psychoses. There are very few acute cases that cannot be more successfully treated in suitable special hospitals than in their own homes. Early diagnosis, if it means anything, means the diffusion of a practical knowledge of psychiatry among general practitioners. Now this object can be attained only through the establishment of psychiatric clinics in all of our larger cities, and especially in connection with medical schools. Clinical instruction in insanity is given as yet in but few of our medical colleges, and even where it now forms a part of the curriculum, it is given in a perfunctory way, the chair of psychiatry being generally combined with that of neurology, rather to the neglect of the former. Speedy removal to a special hospital necessitates ease of access, the least possible legal interference, and location in the centres of population. In fact, the same laws which govern the selection of sites for general hospitals are as appropriate for individuals sick from brain disease as for those sick from lung, liver, or any other disease. Indeed, why are they not more appropriate, if the relative importance of the diseased organ to life and happiness be considered? We should never dream of placing a general hospital for acute disorders in some remote region of the country. Why deal differently with acute disorders of the brain?

Psychopathic Hospitals.—Furthermore, one centre of population in the commonwealth is no more entitled to benefit from the public treasury than another, so that the logical conclusion is that within the limits of

[1] Annual address delivered at the meeting of the American Medico-Psychological Association at New York, May 24, 1899.

each city of fifty thousand to one hundred thousand inhabitants there should be created by the State a special hospital for the reception and treatment of acute cases of insanity. Possibly isolated pavilions in connection with general hospitals might suffice for the needs of the smaller cities. Such hospitals for acute psychoses may be known as hospitals for nervous diseases, hospitals for mental diseases, hospitals for nervous and mental diseases, or, more briefly, following a recent suggestion, as psychiatric clinics or psychopathic hospitals. But the matter is of greater moment than the name. Since the acutely insane are ordinarily restricted, much as general hospital patients are, to their beds, wards, or rooms, location in the midst of a city is no greater disadvantage to the special than to the general hospital.

The law should be as lenient to this afflicted class of patients as is compatible with due regard to the preservation of their personal rights, never, however, for a moment forgetting that after all it is a sick man and not a delinquent with whom it has to deal. In the framing of laws for the commitment of the insane, delinquency has often quite eclipsed illness in the eyes of legislators. For our psychopathic hospitals, doubtless some emergency provision of ten days or more would be permitted before resorting to commitment by any legal process.

It seems to me, then, that the true method of dealing with the acutely insane consists in the creation of these special hospitals in all of our large cities. The more one examines the matter, the more convinced one becomes of the feasibility, economy, reasonableness, and humanity of such a course. It is the logical deduction from your axiom above referred to—early diagnosis and speedy removal to a hospital for the insane—and I venture to prophesy that before twenty years of our new century have passed, there will be psychopathic hospitals in many of our American cities, where now there exists not a single one. With the organization of such psychiatric centres, certain other important results will be attained. The profession as a whole will become more interested in, and more familiar with, the psychoses, owing to better facilities for study and observation. The chair of psychiatry in our medical colleges will become distinct from that of neurology. The city psychopathic hospital will gather to it all those spirits that are eager for discovery in the wide domains of physiology, psychology, pathology, and chemistry in their relation to the central nervous system, for it is in the cities that most of these pathfinders reside, and only in the cities that collective investigations by various laboratories become possible. Attached to the hospital for mental disorders, in order to supplement the methodical clinical studies there made, there will be a variety of laboratories wherein the biologic unit of man may be studied by an aggregation of specialists trained in many branches of scientific work. Only in this wise will great discoveries and far-reaching results become attainable. There are good psychological laboratories now connected with a number of our universities, an outcome of the lively interest taken in recent years in the comparatively new field of physiological psychology; but their true sphere of usefulness and activity lies in combination with clinics and hospitals for nervous and mental disease.

The State of New York, inspired by one of our noted neuropathologists, Dr. Ira Van Gieson, has organized an ideal laboratory for the collective investigation of disorders of the central nervous system—ideal, I say, for it is the first time in the history of this hemisphere that a government has set to work to study insanity as it should be studied, viz., by an aggregation of discoverers in many fields, biology, anthropology, psychology, pathology, chemistry, and the like. This is an event in our civilization. It is an example to be followed by other States and countries. Somewhat similar foundations have been laid elsewhere, but never so well nor so thoroughly. This good work should go on. Let money be lavished upon investigation of this kind! In no other way can it be better spent. The next step, in order to perfect so valuable an organization, should be the establishment of the necessary adjunct to this State laboratory—a psychopathic hospital—to the end that the clinical part of the great work may be closely combined with the more precise methods of scientific research. When this is accomplished, as it is quite sure to be, there will exist a model psychiatric institution for many another large city to copy. Thus in the early years of the new century we shall expect to see created, in conjunction with hospitals for the acutely insane in our cities, a constellation of laboratories, in which various experts will co-operate to achieve results almost impossible under present conditions.

Not the least valuable feature of the psychopathic hospital with its laboratory annexes, will be an outdoor department or dispensary, to which will come not inconsiderable numbers of patients on the border-line of insanity, for still earlier treatment than the city insane hospital affords. Preventive medicine as regards disorders of the brain has never had such opportunity as will here be given to test the value of its methods.

Colonies for the Insane.—To return now to the hypothetical commonwealth for which we are to indicate ideal methods of caring for the insane, the class of acute psychoses having been disposed of, there yet remain the gradually increasing aggregations of chronic insane for which much greater provision must be made. Here it is no longer a question of early diagnosis and speedy removal to a hospital, but one of humane care and economical administration. A considerable proportion of the chronic insane ultimately recover, either completely or with some defect, and another considerable proportion are acutely sensitive still to the pleasant or distressing stimuli of their environment, so that the phrase "humane care" includes medical supervision and treatment as well as some degree of home-like and agreeable surroundings. Healthful out-of-door physical employment has long been proved to be the best medicine for the chronic insane, not to speak of its value from the economical standpoint. Hence the chronic insane should be transferred from the psychopathic hospitals to the country. The old rule of "ease of access" has still some application here. The chronic insane should be located likewise in the vicinity of the large centres of population, both to admit of expeditious transfer and to grant both patients and friends the boon of frequent visits. There will be among these chronic insane some who, for various illnesses or surgical conditions, will have need of hospital treatment, so that a small general hospital will be a requisite in this country institution. Others again, from the nature of their malady, will be more or less helpless, infirm, bed-ridden, excitable, unclean, and for these a small infirmary will prove necessary. The majority of the patients will be able to occupy themselves a part or all of the time, and need therefore neither the solicitous care of the hospital nor the restraint of the infirmary. This is the class which has occupied the attention of asylum physicians for years past the world over, and much has been written concerning the best methods of caring for them, whether by boarding-out systems, county asylums, or by some such scheme as is exemplified at Gheel. In the ideal institution for the hypothetical commonwealth these working classes will reside in buildings adjacent to the scene of their labors. I take it that, out-of-door employment being not only the most healthful but the most lucrative, the agricultural and gardening features

will occupy the largest number of patients. Hence such as have to do with the live stock, dairy, etc., will reside in the farmstead group of buildings. The tillers of the soil will have their own cottages near the fields and meadows, the gardeners theirs hard by the market-garden and flower-fields. The brickmakers and quarrymen will live in still different quarters, the artisans of the various handicrafts in still others, and so on, until we have before us not an "institution" after all, not a corridored agglomeration of huge pavilions, not a palatial barrack for hundreds of patients of all classes, but a farming hamlet, a village community if you please—in fact, the colony system of care in its best exemplification. These working classes among the insane, while they are too defective in mind to admit of return to their former positions in social life, are still to a marked degree sensitive to their environment, appreciative of most things that make life precious to their unrestrained friends in the outside world. You recognize this fact in all that you do for them in your asylums or hospitals as now constituted, in your ornamentation of wards, halls, and rooms, in your granting of parole of the grounds, in your supplying them with work, in your various entertainments, theatricals, balls, out-of-door games, musicals, and the like. Most of them require only a little care-taking, a little discipline, a little supervision, and they conduct themselves nearly as well as their saner brethren. Many of them recover even after years of chronic insanity. But, for the majority who do not recover, this community must be a permanent asylum, a refuge, a home. That word "home" has a significant meaning, and I cannot forbear dwelling upon it a little longer because of its significance. We need not go back to the ultimate origin of the idea of home, except to say that the instinctive love of home is deep-rooted in the breast of man, like the homing instinct of the pigeon and the dog, that it lies at the basis of family life and of state life and of patriotism, and that in love of home some philosophers trace even the origin of the earliest beliefs in after-life in another world. We need not go back so far as this, I say, in order to demonstrate the power of the instinctive love of home, or to understand why we should seek to give to our institutions for the unfortunate some home-like semblance; for we are confronted in our large cities with illustrations of that feeling almost every day. Many such illustrations occur to me, but I might cite the following excerpt from a newspaper which will serve my purpose as well as any. I chanced upon it the other day in re-reading "Sesame and Lilies." Ruskin quoted it as an argument in arraigning the English for despising compassion, but I copy it in abbreviated form merely to show how dear the home may be, even though every comfort be wanting:

"An inquiry was held on Friday by Mr. Richards, deputy-coroner, at the White Horse Tavern, Christ Church, Spitalfields, respecting the death of Michael Collins, aged fifty-eight years. Mary Collins, his wife, a miserable-looking woman, said her husband was a 'translator' of old boots. She went about and bought old boots, which her deceased husband and son made into good ones and resold at shops for very little. Deceased and his son worked night and day to get a little bread and tea and pay for the room, two shillings a week, so as to keep the home together. On Friday night deceased got up from his bench and began to shiver. He threw down the boots, saying: 'Somebody else must finish them when I am gone, for I can do no more.' There was no fire, and he said: 'I would be better if I was warm.' The witness then took two pairs of the boots to sell at a shop, but got only fourteen pence for the two pairs. With these fourteen pence she bought a little coal and some tea and bread, while her son sat up the rest of the night working on boots to get more money, but the father died in the morning. The family never had enough to eat. The coroner said: 'It seems to me deplorable that you did not go into the workhouse.' Witness answered: 'We wanted the comforts of our little home.' A juror asked what the comforts were, for he saw only a little straw in the corner of the room, the windows of which were broken. The witness began to cry, and said they had a quilt and other little things."

Now I should be the last to indulge in over-sentimentality in the arrangement and management of our charitable institutions, but it seems to me that an instinct so deeply engrafted in human nature is entitled to profound respect and consideration. The assembling of numbers of patients in large dormitory buildings, wards, and pavilions is more destructive of the home-feeling than anything else, and our attempts at decoration and furnishing detract little from the comfortless atmosphere. In institutions for children, in prisons and reformatories, and in general hospitals, we have a wholly different status of the inmates to deal with, and with them large numbers under one roof are not so objectionable. The chronic insane, on the other hand, are neither children in whom the home-instinct is small, nor so ill that this instinct is diminished or absent, nor are they delinquents in duress for punishment. The essential feature, then, of the agricultural colony for the chronic insane is separation into small family groups, the construction of cottage homes scattered among the various centres of industry. Methods of lighting and steam-heating from central plants have now become so successful that the old economical arguments against a true cottage system of care have less weight than formerly. The distribution of food supplies in a colony of this kind, where the provender in the main is of the simplest description and chiefly home products, presents little difficulty, comparing favorably in cost with more elaborate methods of food distribution by means of underground corridors, food-cars, lifts, etc., which are necessary in our large mixed asylums, where all classes of the insane, the acute, the bed-ridden, the infirm, the chronic, and the able-bodied, are mingled together.

It is in the matter of the immediate care-takers, the attendants, that most patients find their greatest grievance. It is not strange that the vocation of attendant should present few charms, and that young men and women seeking a livelihood as a rule prefer to follow almost any other calling than this. It does not attract the best classes. At one time it was thought that increase of wages would improve their quality, but it is doubtful if such increase as has been made has worked any great change. The general establishment of training-schools for nurses or attendants in asylums has marked one phase of progress in recent years, and this has without doubt raised the standard of efficiency in certain respects, but the training which would avail the most, viz., training in ethics, is still a problem awaiting solution. Some countries are more favored than others in being able to secure the services of men and women with ethical training in the capacity of care-takers for the insane. I allude to certain religious bodies, such as deacons and deaconesses, in which vocations are chosen with motives and standards of a high order. Perhaps the time may come when the mass of attendants now with us may at least be leavened by the introduction of a few of these in each psychopathic hospital and colony. I have often thought that work among the insane would afford excellent practical training in patience, benevolence, tolerance, and self-control for struggling divinity students.

Architecture and Landscape Gardening.—We have never been deficient in our sense of fitness when selecting the sites for our great hospitals for the insane. Nowhere in the world are there more beautiful envi-

ronments than have been chosen for these great public foundations. And we may well pride ourselves on the instinct that has guided us in this selection, that instinctive love of the beautiful in nature, the pleasing prospect, the agreeable "view," which no sordid motive has obscured or made us forego. In the matter of architecture, however, we have often been at the mercy of mediocre architects and of politics, or have been influenced by inordinate demands for magnificence on the part of communities in which asylums were to be located. I had frequently pondered over the origin of the prevailing styles of asylum architecture in this and other countries, the character of which was once described by the late Dr. Godding, if I remember rightly, as the "cathedral" style of architecture, until an asylum superintendent enlightened me. He told me that in the ages when the insane were as yet in jails and prisons, and when physicians first awoke to the necessity of a different method of care and treatment, the patients were in the beginning transferred to abandoned cloisters and monasteries, and that these structures consequently became the type upon which the new asylums built in later years were modelled, both in Great Britain and upon the Continent. Modifications naturally came with time, but it is still easy to trace the evidence of such origin and to prove the truth of the assertion. Just as in the evolution of plants and animals we observe the effects of modification from century to century, the types remaining much the same, so in the evolution of the asylum we see the gradual changes brought about by time and circumstance. We have unonsciously followed a distinct line of evolution, commonly making use of some existing prototype as a model, seldom breaking away freely from standards already established. Thus too frequently has the natural beauty of the landscape environment been marred and sacrificed.

In the designing of public buildings of whatever description, for whatever purpose, we should keep before us ever a certain ideal, a certain duty. We have a public duty to perform, not only for the benefit of the present generation, but for posterity. Our public architecture should express our highest ideals of what is beautiful in this art, should be an inspiration, a delight, a source of education, to the thousands who look upon it now and who will hereafter look upon it in centuries to come. True beauty in architecture does not lie in ostentatious display of domes and minarets and towers, but in the simplest adaptation of means to an end. Simplicity and temperance have more than once been stated to be the true principles of construction, and buildings reared on these principles are far less costly than many of the ornate but ugly structures we have raised. A great English critic[1] said years ago:

"You cannot command grandeur by size till you can command grace in minuteness; and least of all, remember, will you so command it to-day, when magnitude has become the chief exponent of folly and misery, co-ordinate in the fraternal enormities of the factory and poorhouse, the barracks and hospital. And the final law in this matter is, that if you require edifices only for the grace and health of mankind, and build them without pretence and without chicanery, they will be sublime on a modest scale, and lovely with little decoration."

As in the construction of our buildings on these lines of simplicity and temperance, so too in the landscape design must we show our regard for the same principles, seeking ever that beauty which comes from harmonious adjustment of buildings to the environment. Bacon begins his essay on Gardens with these words:

[1] Ruskin: "The Crown of Wild Olive."

"God Almightie first Planted a Garden. And, indeed, it is the Purest of Humane pleasures. It is the Greatest Refreshment to the Spirits of Man; Without which, Buildings and Palaces are but Grosse Handyworks: And a Man shall ever see, that when Ages grow to Civility and Elegancie, Men come to Build Stately, sooner than to Garden finely: As if Gardening were the Greater Perfection."

That there is a gradual awakening everywhere to the importance of beautifying public structures and grounds is shown by the attention now paid to matters of this kind in many of our cities, and it was to me a source of much gratification to read not long since in the *Review of Reviews* of the extension of this idea of beautifying to even such prosaic objects as factories and factory homes. A manufacturer should be nothing if not practical, and yet this factory owner of Dayton, Ohio, employed one of the greatest landscape architects in America to draw up a design for the transformation of his barn-like buildings and the adjacent desolate quarters of the operatives from what was once called a "penitentiary" to what is now designated as a "paradise." But the capitalist was more practical than his commercial critics at first divined, for there has been a decided increase in the value of his property, and the factory street has been pronounced "one of the most beautiful streets in the country, when the value of the lots and the size of the houses are taken into consideration."

Thus we see, as far as the practical problems in the care of the insane are concerned, we are to-day confronted with a tendency to the establishment of psychopathic hospitals for acute cases in our cities, and colonies for the chronic insane in the neighborhood of centres of population. And in the upbuilding of this ideal class of institutions for the commonwealth or State, we are not to lose sight of the scientific side of our work, nor of the humane side in making the colony a home-like community with a better class of care-takers, nor of the art side in securing the best architect and the best landscape architect that the country affords. I say "a tendency to the establishment of psychopathic hospitals and colonies," for I am sure I read the signs of the times aright, and that the drift of asylum evolution is in this direction. There are all over the world sporadic indications that point this way. Both the psychopathic hospital and the colony have already long passed the experimental stage, and I have myself seen them both in successful operation. There have been psychiatric clinics, or, as I here call them for want of a better term, "psychopathic hospitals," in a number of German cities for many years. Indeed there is only one university town in Germany now without one. They were in existence during my student days in Strasburg, Leipzig, and Vienna. Since then many others have been founded, and I have just read a volume of one hundred and twenty pages on the newest of them all, the Psychiatrische Klinik at Giessen.[1] This hospital was opened for patients in February, 1896, and was created quite closely upon the ideal plan of a clinical institute for the insane, as outlined by Griesinger over thirty years ago. It is in the town of Giessen, near the other hospitals used for teaching purposes, adjacent to the pathological institute, and consists of ten or eleven cottages for one hundred and sixteen patients, in a beautiful garden. The central building contains pathological, chemical, microscopical, photographic, and psychophysical laboratories, besides a mechanical workshop, clinical auditorium, library, and a dispensary or polyclinic for outdoor patients. The necessary administrative offices and rooms for the director and assistant physicians are also here. There are cottages for private cases, and for quiet, suicidal,

[1] Published by S. Karger. Berlin, 1899.

restless, and disturbed patients of each sex. This is probably the most complete hospital of its kind in existence at the present time.

The colony system of care for the chronic insane has also long passed its period of trial. "A satisfactory experiment on a large scale was first made with a colony at Einum near Hildesheim in 1864; another was made in 1868 at Zschadras, near Colditz. Nowadays most asylums in Germany are connected with rural colonies."[1]

The best example of a colony for the insane is, however, that of Alt-Scherbitz, near Leipzig, which I visited twelve years ago and described in an article on "Some European Asylums" in the *American Journal of Insanity* for that year (1887). The following brief extracts from that article will give an idea of its character:

"A few miles from Leipzig is the asylum of Alt-Scherbitz, which to me seems in the van of all on the cottage or village plan. It is a newer, cleaner, more modern and more perfect Gheel. . . . The freedom of the patients is very great, and there is no depressing aspect about the colony at all, nothing to constantly remind outsiders and insiders of the usual coercive nature of such institutions. All of the villas for both men and women and all of the dormitories connected with the dairy, the laundry, the kitchen, the workshops, and all of the houses of the little farming hamlet, have unlocked doors and unguarded windows. There are no bars on any windows in the whole establishment. . . . On the day of my visit there were five hundred and thirty patients."

Now hear what is said by the latest authority on insanity and the care of the insane on the colony system. I quote from the sixth edition of Kraepelin, 1899:

"It is now sought everywhere to give the exterior of asylums, by the segregation of patients in separate home-like villas, rather the appearance of hamlets for workingmen than prisons for the insane" (p. 350).

"The construction of asylums has experienced extraordinary progress of late years by the evolution of so-called colonies, in which the patients are as far as possible given liberty and occupation in country pursuits.

"The whole question of the care of the insane for a long time has probably found its solution in this best and relatively cheapest method of support. The first trial of this style of institution, carried out on a large scale to a surprisingly successful issue, and already imitated by many others, was that made at Alt-Scherbitz in Saxony by Köppe, where the entire work of the colony is done by insane workers."

"I have myself had opportunity to see patients, who had lived for years in a large closed asylum, improve in the most extraordinary manner, under the influence of the freer movement and more independent occupation of colony life."

Thus Kraepelin; and even here in our own country, if we note the changes that have taken place in our institutions for the insane in recent years, we shall observe that slow but sure evolution into the ideal methods here described—the great asylums throwing off here and there separate pavilions or cottages or sometimes even a sort of colony—a gradual disintegration of these massive cloister-like abodes into smaller and more prepossessing units—the opening of the doors which were once always locked for considerable numbers of the inmates—the multiplication of opportunities for employment out of doors. These are the indices that point the way, and it behooves us therefore to augur from these signs the direction we must take, and to hasten rather than hinder this irresistible advance toward psychopathic hospitals for our city and colonies for our country institutions.

[1] H. Laehr, in Tuke's "Psychological Dictionary," vol. i., p. 546.

The Scientific Problems.—We have now considered the practical problems of caring for the insane. They are the ever-present, ever-important problems of to-day and possibly of centuries of to-morrows, for they deal with the welfare and happiness of, shall we say millions, of insane either now in your charge or to be in your charge until the need for asylums shall have passed away. The scientific problems are fundamentally of higher import, for they deal with the prevention and cure of insanity as well as with the expansion of human knowledge in regions pertaining to the most wonderful of all natural phenomena, the manifestations of mind, spirit, soul. The practical problems are the emergencies of the hour; the scientific, the heritage we bequeath to posterity.

Prevention.—Surely we are not sufficiently engrossed with the problem of prevention. We do not sufficiently study and expound the doctrines of heredity, the evils of intemperance, the proper methods of care and education of eccentric and defective children, and the perils of marriage into neurotic families, in order that all men may grow familiar with these matters and be guided by the light of reason. The interchangeability of the neuroses and psychoses (epilepsy, chorea, hysteria, neurasthenia, migraine, somnambulism, dipsomania, criminal tendencies, eccentricities of character, insanity) from one generation to another, hereditary equivalents as they are called, indices of unstable nervous organization, should become matters of common knowledge to all mankind. The family physician, nay, the parents themselves, should be the first to recognize unstable nervous systems in peculiar children and prescribe for them the inexorable laws of prophylaxis, which may be briefly summed up as follows:

1. Cultivate the body of the growing child by careful diet, regular hours, out-of-door life, and efficient systems of exercise.
2. Train his muscles rather than his mind, give him manual training rather than lessons during the years of childhood, youth, and adolescence.
3. Forbid him all nerve stimulants, such as tea, coffee, wine, beer, tobacco.
4. Shield him from the dangers incident to puberty.
5. Develop the resistance of his organism to all external stimuli, hardening his body by the daily cold bath, frictions, exercise, hard bed, and cold sleeping-room; and teach him courage in the endurance of pain and mental stress.
6. Choose an occupation for his later years which shall invigorate his body, work for his muscles rather than for his intellect, an out-of-door rather than an in-door calling, country rather than city life.

Not the least of the benefits that shall accrue to us from the establishment of psychopathic clinics and hospitals will be the diffusion of a knowledge of insanity, its etiology and prevention among all classes of physicians, and through them this knowledge will permeate our whole society. Then the lawyers and the doctors must put their heads together to devise means to prevent what the passion and folly of mankind, even in the light of better knowledge, may fail to restrain—indiscriminate marriage. Truly it is an overwhelming evil that the law allows a marriage such as came to my knowledge recently—that of an epileptic man with an epileptic woman—here in New York, one of the supposed centres of civilization. Who can measure the possible misery or count the possible cost to society of such a union? We need but read a single story, that of the Jukes family, to shudder at the heritage of woe and disease that may go down the line of years. Think you these two epileptics were born in poverty and ignorance? Alas, one was a physician,

the other the daughter of a physician! A mésalliance such as this is fortunately rare, but for one such marriage there are a hundred only a degree less wanton and wretched. I allude to marriages in which one of the contracting parties is epileptic or has been epileptic, or has had an attack of insanity. If my own personal knowledge of the frequency of marriages of this kind is paralleled by the experience of other physicians, then the law should certainly take cognizance of the evil and afford a remedy.

And now, as regards the cure of insanity, what have availed thus far the garnered facts of these recent years of patient investigation? Little, as yet, I fear. The time-worn question is still asked:

> "Canst thou not minister to a mind diseased,
> Pluck from the memory a rooted sorrow,
> Raze out the written troubles of the brain?"

We have discovered certainly a specific for one form of insanity—that associated with myxœdema. Beyond that brilliant achievement we can boast of little gained in the way of actual remedies. Our palliative therapeutic methods are perhaps better than they were twenty years ago, yet though we have gone apparently but a little step toward our ultimate goal, the discovery of the causes and cure of insanity, the step appears little only in comparison with the distance yet to travel; viewed by itself it is a wonderful stride. New vistas have opened, and a hundred trained workers now swarm these new paths, where formerly there was but one. I remember that not very many years ago there was a single pathologist, and he an unskilled one, connected with just one of the hundred and more asylums in this country. Now, a pathologist alone working in these wide fields would feel solitary and inadequate indeed; for his own road is a narrow one, and the specialists in anatomy, histology, cytology, physiology, chemistry, embryology, ethnology, psychology, psychiatry, criminology, anthropology, and the comparative departments of these sciences, must all work together upon the whole man as a biological unit in order to accomplish our purpose. The other day I looked over a bibliography of the cytology of the nerve-cell—a new and relatively small region of science—and counted some four hundred articles and books by two hundred and eighty different authors, contributed to the elucidation of nerve cytology alone, while the average output of articles and books relating to neuropathology and psychiatry is stated to number now something over thirty-five hundred per year. These figures are enormous, and yet, as I say, the good accomplished thereby seems infinitesimal in comparison with the colossal work to be done before the seats and causes of nervous and mental disease shall be determined and the cures discovered. Small is the distance travelled, viewed in this light, and yet the goal draws ever nearer. Each year witnesses some new fact gathered, some new problem solved, some new hypothesis advanced, some new line of study indicated. It is not alone the pathology and therapeutics of insanity we seek to perfect, but there are marvellous riddles in the domain of the normal mind which we are striving to solve. Nearly the whole of our present knowledge of the workings of the normal body and brain has been won by the physician in his dealings with the organism when its functions were perverted or destroyed by disease. The psychologist therefore will make little progress in his laboratories as now operated in conjunction with several of our great universities, for his work therein must lie almost wholly with the normal mind. Such well-equipped psychological laboratories should be associated with clinics for nervous and mental disease, if their directors hope to accomplish much in the way of psychic discovery.

Now each of us can do something to hasten progress in every direction suggested in the foregoing paragraphs. None of us is too busy to lend a hand or voice; we may not, through pressure and multiplicity of affairs, ourselves be able to delve deeply in scientific investigations, for indeed we need to be invincible athletes to master the product of the laboratories for a single year. But we may easily follow and favor the trend of human progress as it relates to our special work. We may speak and write in many places of the need of chairs of psychiatry in every medical school; we may demand the establishment of such professorships and the foundation of psychiatric clinics in conjunction with them. We may behold and acknowledge the drift of the times toward the evolution of the psychopathic hospital in the city and the colony for the insane in the country. We may use our voices and our pens to urge the creation of laboratories in connection with these. We may inspire and direct the young men working with us to take up various lines of clinical and scientific work. We may insist that none of our vast material go to waste. And there is one side of the subject of insanity that the practical alienist, the superintendent of the asylum, even though he be busied with the multiform duties of direction, necessarily becomes familiar with, and that is the clinical side. He can freshen his interest, find a new fascination, and directly benefit science by more careful clinical study and record of his cases, in the light of the most recent methods of psychology, as expounded in the Anglo-American, French, and German schools, by such men as James, Ribot, Ziehen, Flechsig, Wernicke, Kirchoff, and Kraepelin. I am sorry that there is so little time left me to dwell upon these particular problems of the alienist, but they would require in themselves the full scope of an annual address. There is yet another means by which science may be directly aided by those who have not the time for the patient and laborious search after facts. The facts which are gathered together by the unremitting toilers of the laboratories have little value until correlated and compared with the acquisitions of our past experience. As Buckle says, "real knowledge consists not in an acquaintance with facts, which only makes a pedant, but in the use of facts, which makes a philosopher." The country doctor is often superior to the general practitioner of our cities, not only because he must needs become more self-reliant, since he has no consultant to share his problem or responsibility, but because his long reflection upon the facts he observes helps to make of him a philosopher. He who finds a fact contributes to the treasury of human knowledge, but he who discovers a principle advances civilization. So it often happens that the man who reads well and thinks deeply may digest the material collected by laboratory plodders, and build up therefrom some practical truth, brilliant hypothesis, or broad general principle. The light of the imagination may illumine horizons which lie beyond the vision of the ordinary observer, and the eye of the seer and philosopher discern truths unapprehended by "the man with the hoe."

The Surgical Treatment of Acute Articular Rheumatism.—O'Conor (*Annals of Surgery*, April, 1899, p. 469) reviews the somewhat radical suggestion made two years ago recommending arthrotomy and free incisions, with drainage, as "a specific cure for the disease known as acute articular rheumatism," and he illustrates the courage of his convictions by a record of ten cases in which this method was employed successfully. He abjures entirely the administration of salicylates. Early massage and passive movement are avoided, and patients are permitted to get out of bed as soon as their physical strength warrants.

OBSCURE CAUSES OF DISEASE.[1]

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INSTEAD of treating this subject in a general way, I will specialize and present for your consideration briefly a *résumé* of the present knowledge of obscure causes of disease, arising from poisons generated by faulty cell interchange and from poisons generated in the intestinal tract. The direct and indirect outcome of faulty metabolism in the cells of the tissues and organs, in conjunction with the effects of toxic absorption from the intestinal tract, has been the subject of earnest investigation, with a result that we are drawing away from empirical and tending toward rational ideas in therapeutics.

The normal human body, depending as it does upon the exact equilibrium of its cell constituents, has in its cells and groups of cells the power of converting inert food into living tissue on one side; on the other, the breaking down of living tissue into waste products. Faulty action on the part of the cell in this interchange produces abnormal conditions, varying in degree according to the proportion of the cells involved. Gautier has shown that, aside from metabolism and metastasis, we have fermentative properties in the cells of the body, acting independently of the oxygen derived externally, which give rise to the formation of alkaloids and other waste products in the tissues.

It is now abundantly proven that toxins are present in the fluids of the body. The liver, occupying the position it does in regard to obscure causation of disease, necessitates a brief review of its physiological action as bearing upon disassimilation.

Normal assimilative action in the human body is carefully guarded by the liver, while in abnormal conditions this organ exerts a powerful influence in restoring healthful processes. Liver metabolism is imperfectly understood, but conditions of systemic autointoxication can be directly traced to faulty liver metabolism. The liver has the power of converting starch into sugar, the glycogenic function; it also produces bile; and in the liver the albuminoids are changed, and urea and possibly uric acid are produced. Wherever nitrogenous matter is consumed in the body, urea is found. In normal conditions complete combustion of all oxidizable nitrogenous substances takes place in the liver. The leucomains, creatin, xanthin, toxic in their effects on the system, are thought to be converted into urea in the liver, and the body is protected by this elimination. Jaques holds that a large proportion of the toxins, including vegetable alkaloids, that circulate through the liver in health, are destroyed by that organ. The poisons that are consumed and excreted by the liver are absorbed mainly from the intestinal tract. Decomposition of food products frequently begins in the stomach. In the small intestines we get lactic acid from carbohydrate fermentation, also succin, carbonic acid, ethyl alcohol, etc.; in the large intestines, decomposition of albuminoids, indol, skatol, leucin and tyrosin, phenol, fatty acids, gases, etc., also the results of proteid decomposition, and probably potassa and ammonia from the fæces. These products are absorbed from the intestinal tract with bile, and carried by the portal circulation to the liver, and converted into urea and extraneous products. What the liver fails to change is carried by the blood to the kidneys, acted upon, and cast from the system.

Bile.—The bile is non-bactericidal, but is aseptic; bilirubin and biliary salts are its toxic constituents. Under normal conditions the system is protected against the poisonous effects of bile by reabsorption, but in passing into the blood in ill health it is at first taken up by the white connective tissue, and from there drawn off by the urine; but when that barrier is passed, the toxicity of the bile is appreciable in its supreme effects. The hepatic effects of biliary retention are, first, gradual paralysis of its cell action, and, if prolonged, finally fatty degeneration. The sudden injection of bile into the blood kills animals without producing jaundice. The slow injection of a corresponding amount of bile causes jaundice but does not kill. If the kidneys act freely in jaundice, the system is comparatively safe; but if the integrity of the kidneys is affected there is danger, for the paralysis of the hepatic cells throws into the blood the waste products of nutrition imperfectly acted upon and unfit for excretion, urea is not formed, and both assimilation and disassimilation are influenced.

When the liver thus fails to protect the system against the invasion of these poisonous elements, and the compensatory depurative action of the kidneys is lessened, a virtual condition of autointoxication is produced, the grades being, according to some authorities, cholæmia, acholia, and uræmia. If, however, the integrity of the kidneys is unaffected under the conditions stated, the system is safe, although the urine may be loaded with toxins. This condition of auto-intoxication with complete suppression of hepatic and partial suppression of renal function with jaundice is the extreme; in the modification without jaundice we have the varied effects of partial poisoning. The kidneys can eliminate all toxic products except gas. The fact of the urine being toxic has been demonstrated only within a comparatively short time, and much is in the experimental stage. Vaughn and Novy state: "It is comparatively easy from the results of the alkaloidal tests to report upon the presence of alkaloids in so complex a fluid as the urine. It is much more difficult, however, to isolate such bodies in a chemically pure condition satisfying the requirements of exact science."

All the alkaloids in the urine come from the blood. The blood is not toxic, however, for the poisons are drawn off by the excretory system, by the organs, or are supposed to be in a degree consumed when coming in contact with the corpuscles. According to Bouchard, the constituent elements of urine are: "Urea, slightly toxic and diuretic; uric acid, feebly toxic; creatinin, toxicity *nil;* coloring matter, poisonous; a narcotic substance, no name, poisonous, sialogenous, produces salivation; two substances, not defined, cause convulsions; and, finally, potassium and alkaloids and salts of soda." It is believed that the most dreaded part of the urinary poisons comes from coloring matter. The urine of uræmic subjects is not toxic, the toxic substances being retained in the system. Bouchard believes "the poisoning in uræmia comes not from any one retained poison, but from a multiplicity of toxins, the one predominating poison exercising the greatest influence, be it either convulsive or non-convulsive." Uræmic symptoms may be pronounced in subjects whose urine is being passed in normal quantities, with normal specific gravity. Complete suppression of urine does not always presage uræmia. It is given on good authority that severe uræmic symptoms may be present without an abnormal quantity of urea in the blood or a diminished excretion of urine. The influence with an excess of uric acid is not accepted as a cause of uræmic symptoms. Oppler holds that an interference with the action of the kidneys associated with chemical change in all parts of the body, with general anæmia, produces uræmia. Traube's blood-pressure theory is not proven by other investigators. The brief or prolonged presence of albumin in the urine, be it either in quantity or simply a trace, is not conclusive of the approach of eclamptic or convulsive

[1] President's address, Newburg Bay Medical Society, March 14, 1899.

seizures. Albuminuria is a warning for increased watchfulness on the part of the physician. A urotoxic coefficient has been established by Bouchard. The coefficient is based on the poisons one kilogram of man forms in twenty-four hours, and what would kill four hundred grams of an animal. The toxic unit or urotoxy is the quantity of toxic matter capable of killing one kilogram of living animal.

The urotoxic coefficient of an individual is the amount of urotoxies formed in twenty-four hours by a kilogram of that individual. Müller, of Marburg, and Bruger, of Berlin, question the accuracy of the urotoxic coefficient. A normal man forms in two days four hours enough urinary poison to kill himself. Toxins are found both in normal urine and in diseased conditions, systemic changes and remedial measures influencing the quantity; their importance is dependent upon their retention.

In the urine we find the leucomains, and the leucomains are defined by Vaughn and Novy as "toxic substances which are formed in the living tissues either as the products of fermentative changes other than those of bacteria or of retrograde metamorphoses." We have the uric group and the creatinin group, and the important members of both groups differ but slightly in their chemical formulæ. Xanthin and paraxanthin of the uric-acid group are the most poisonous. The antecedents of the uric-acid group are held by some investigators to be the cell nuclein. The subtle influence exerted by the absorption of these toxins is a consideration in modern therapeutics. Gautier was the first to make a definite study of these substances, and he considers that "leucomains are formed in the animal tissues continuously, and side by side with urea and carbonic acid, and at the expense of the nitrogenous elements." Kossel believes them to be the end-products of metabolism. Bouchard, as we have stated, considers them formed in the intestinal tract and eliminated from the kidneys. Gautier made a distinction between leucomains and ptomains; leucomains being basic substances which are formed in the animal tissues during normal life, while ptomains were the basic products of putrefaction. This distinction is not so finely drawn by other observers.

Ptomains are generally considered as putrefactive alkaloids, and are formed by the action of bacteria on nitrogenous substances. Brieger classes poisonous ptomains as toxins; non-poisonous simply as ptomains; and the non-basic bacterial poisons as toxalbumins. Pasteur has shown that putrefaction is a disorganizing process produced by the intense action of bacteria, and it is during this transitory process that ptomains are formed. All ptomains are not poisonous; some forms are inert, others slightly toxic. A few of the most important and toxic ptomains are: peptotoxin, from decomposition of peptones and albuminous substances; tyrotoxicon, from cheese, milk, and ice-cream; gadinin, from human fæces and fish; typhotoxin, the toxic product of Eberth's typhoid bacillus; cholin group, from yolk of eggs, bile, human placenta, poisonous sausage, and fatty seeds; muscarin, from toadstools, from hops and beer, and from beet-root sugar; neuridin, found at times in contaminated meat; several unnamed bases, very toxic, and found in analysis of canned meats and fish. Putrefaction being attributed as essential to the production of poisonous bacterial ptomains, that consideration is the factor in tracing the source of infection. Peptones and albumins formed during digestion in health are fully taken up, but when absorbed into the blood act as poisons. Brunton thinks the languor and lassitude in well-fed, inactive men are due to poisoning by peptones.

Gout.—In the attempt to solve the problem of gout, we find the x in the equation is uric acid. The uric-acid group of leucomains, be they either the end products of metabolism, or nuclein products, or poisons absorbed from the intestinal tract and eliminated by the kidneys, certainly have an influence in the system upon intercurrent diseases, aside from being a factor in the incipiency of transitory disturbances. In the solving of obscure conditions an underlying uric-acid diathesis must bear an influence in diagnosis and prognosis. According to the best knowledge we have, based upon the opinions of investigators in this country and abroad, uric acid appears in the blood as a salt of sodium, probably as a quadurate. If the quadurate remains in the blood a certain length of time, it gradually is converted into a biurate, which, being less soluble in the blood serum, is precipitated as soon as the serum is saturated. This biurate is attracted to the fibrous tissues of the joints and all points of the system where there is an excess of acidity or a diminished alkalinity of the fluids and tissues.

There is a variation of opinion among the best thinkers on this subject, as to the cause of the production of an excess of uric acid in the blood. Luff holds that uric acid is normally produced only in the kidneys, and its presence in the blood in gout is owing to deficient excretion by the kidneys and a subsequent absorption of the non-excreted portion by those organs. Luff also holds that gout is always probably preceded by some affection of the kidneys, functional or organic, which interferes with the proper excretion of uric acid; and he believes that in certain blood disorders and disorders accompanied by leucocytosis, uric acid is formed from nuclein. Bohland believes that the increase of uric acid in the blood after the use of salicylates is produced from an increased destruction of leucocytes; these liberate an increased amount of nucleins. Hobaczewski holds that uric acid is derived from nucleins. Sir William Roberts maintains that "the conditions which tend to precipitate uric acid are high acidity, poverty in salines, low pigmentation, and high percentage of uric acid; and conversely, the conditions that tend to postpone precipitation are depressed acidity, richness in salines, richness in pigment, and low percentage of uric acid. The presence of pigment retards the breaking up of quadurates, or else all uric acid would be set free." Professor v. Jaksch, of Prague, holds that increase of uric acid in the blood is due to deficient oxidation. Haig believes that "the increase is due to a retention of uric acid in the body, together with daily introduction leading to subsequent increased excretion, the increase passing through the blood on its way to the kidneys." The excretion of uric acid is greatest in the morning when acidity is low, what Sir William Roberts calls "the alkaline tide." The chief substances which diminish the excretion of uric acid, by clearing it from the blood and driving urates into the joints and tissues, are acids, iron, lead, mercury, and other metals. We have also opium, cocaine, and many substances which raise the acidity of the urine or form insoluble compounds with uric acid. Sir William Armstrong's theory, that the uric-acid diathesis is caused by complex chemical changes brought about by the admixture of red meats with carbohydrates and sugar, and not from nitrogenous foods alone, has clinical support. Brunton has shown that starch certainly produces toxins in the intestines; and Bouchard points out that bread forms poisons in the intestinal tract.

Rheumatism.—The present tendency is to classify rheumatism with the acute infectious diseases. Reinard believes the infection gains entrance to the system through lesions of the mucous membranes, especially of the mouth. Two theories in regard to the internal causation of rheumatism have been advanced: first, the lactic-acid theory; and, secondly, the neurotic. Rheumatic poison is an element produced within the

system, and probably as a result of malassimilation. The formation of lactic acid is probably a result of metabolic change in the muscular tissue. It is an established fact that lactic acid is always present in rheumatism; what causes the increase is the question. Investigation fails to furnish us with a satisfactory conclusion. In regard to the neurotic theory, it is held that the disturbances of the nerve centres which originate the joint inflammations are produced by peripheral irritation applied to surface nerves, and transmitted by them to the nutrition centres of the joints.

Diabetes Mellitus.—In 1890 Mering and Minkowski made a series of experiments upon animals by removing the pancreas, and produced a severe condition of diabetes mellitus in the animals so treated. All carbohydrates were kept from the subjects of the experiment, and the condition of diabetes mellitus continued for weeks or until the animal died. The conclusions deduced were that either some substances collect in the organism after the extirpation of the pancreas, or else there is some substance wanting or some function abolished which under normal conditions serves to facilitate the conversion of carbohydrate bodies. That pancreatic diabetes is one form of diabetes is generally established. There are forms also of diabetes mellitus which upon post-mortems show no pancreatic lesion. Proteid decomposition producing an excess of nitrogenous substances in the blood is held by some to be a cause of diabetes mellitus. Temporary diabetes mellitus can be produced by liver puncture and puncture of the floor of the fourth ventricle of the brain; these effects are but transitory. A glucoside of phloridzin, an extract of cherry and apple bark, has been proven by Mering to produce upon animals a change in the action of the renal epithelium so as to destroy the power of holding back the sugar in the system; and when the blood is exhausted by the unusual demand for sugar, the tissues and, finally, the albumins of the system are forced to give up their carbohydrate elements. The deductions from this experiment suggest that there are poisons that gain entrance to the body which might act as phloridzin.

Acetonuria.—As a result of the decomposition of certain forms of albumin in the system in diabetes mellitus, acetone, aceto-acetic acid, and oxybutyric acid are produced. The change of aceto-acetic acid into acetone may take place in the urine, and also in the tissues and blood. Oxybutyric acid is supposed to be either the first step in the formation of aceto-acetic acid or may come from a different decomposition of albumin. Oxybutyric acid is not always found in diabetic urine, but when it does appear it is of the most serious import, invariably indicating an impending coma and death. Acetone and aceto-acetic acid may appear in diabetic urine many times without fatal consequences, but are important and indicate failing nutrition, either from extreme ravages of the disease or too radical diet.

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RUBEOLIFORM AND OTHER ERUPTIONS: WITH SPECIAL REFERENCE TO KOPLIK'S PHENOMENON.

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The importance which Koplik's phenomenon has assumed since the publication of his latest contribution,[1] has led the writer to present again the subject from a diagnostic standpoint, and to demonstrate the value of these spots in excluding morbilliform eruptions and dermatoses simulating them. My material for observation—drawn from the dermatological and children's departments at the Good Samaritan Dispensary—having been greatly increased and diversified, I have been enabled more thoroughly to observe a great variety of skin lesions, as well as the exanthematous eruptions. The observations were conducted on the same lines as heretofore, and I see no reason to change my earlier views, but rather to add that what was then stated can be doubly substantiated now. Every case of measles which was diagnosticated in the pre-eruptive stage, in some instances seventy-two to ninety-six hours before any suggestion of a cutaneous outbreak had been observed, was corroborated by the subsecutive development of the measles exanthem with all its accompanying symptoms.

In addition to the thirty-five cases formerly recorded, I am now prepared to report some thirty more instances of beginning measles in which Koplik's spots were the crucial test.

The characteristics of these spots, their location, the best method of seeing them, their differentiation from other mouth lesions, their prognostic value, and their significance from a prophylactic standpoint in reference to hospitals, schools, and institutions, are best learned by consulting the original writings of the discoverer. I simply wish to add further observations to "Koplik's Spots as an Aid in the Diagnosis of Skin Lesions."[2]

I would, however, first make mention of a few general diseases which may be ushered in with catarrhal symptoms, and which, therefore, give rise to the thought of an incipient measles, especially if the child has not suffered from a previous attack, or if, perchance, an eruption due to the administration of medicaments (quinine, antipyrin, etc.) coexists.

It is not at all uncommon for the initial symptoms of la grippe to suggest measles: the indisposition, the frontal headache, rise of temperature, catarrh of the respiratory apparatus, the œdema of the eyelids, and in exceptional instances the appearance of a roseola or urticarial eruption (erythema multiforme) justify a suspicion of morbilli. In the presence of such symptoms the absence of Koplik's spots excludes measles; in the absence of any symptoms the presence of this phenomenon proves the case to be a beginning measles.

In the differentiation of measles and influenza Von Leube[3] says: "A positive diagnosis is impossible until the fourth day, when, following a fall of temperature, an increase of the same and the appearance of the exanthem speak directly for the existence of morbilli."

I trust that my observations, which now embrace over sixty-five cases of beginning measles, to say nothing of the advanced ones, place me in a position to judge the true value of this sign and to speak of its great significance.

And what is true of influenza holds good for coryza, tonsillitis, bronchitis, febricula, etc. The absence from the buccal mucous membrane of "minute bluish-white specks on a reddish punctate area" precludes measles. German measles, rubella or rötheln, which is most likely to be confounded with measles, cannot be excluded in any better manner than by the absence of Koplik's spots. The moderate elevation or absence of temperature, the lack of proportion between the cutaneous outbreak and the general symptoms—the patient may be but slightly ill and yet the eruption be extensive (Delafield)—the non-existence or mildness of coryza, the lighter color, smaller size and more concentric character of the eruption, the soft-palate eruption of Forchheimer,[4] and the enlargement of the glands behind the sterno-mastoid, are all of inferior worth as differential factors when compared with these spots.

I have seen a number of cases of German measles in which rubeola was excluded by the absence of this sign and the diagnosis substantiated by the failure of any subsequent symptoms of measles.

This brings up the question of recurrence in measles; that the first does not protect against subsequent attacks has been proven beyond a shadow of a doubt; that it is common to be affected more than once is certainly very questionable. Many of the so-called second attacks of measles are probably rubella. Measles may, however, attack the same individual twice, and that in rather rapid succession. Knospel, of Prague, has recently published observations[5] in which he diagnosticated a second attack of measles in the same patient by the presence of Koplik's spots. It is thus seen that in the subsequent as well as in the initial attack of measles Koplik's spots are present.

Antitoxin rashes may be of the morbilliform as well as of the erythematous, scarlatiniform, or urticarial type. The morbilliform eruption, though not so frequent as the erythematous and urticarial (erythema multiforme), is of interest here. Since the summer of 1898 my duties at the dispensary have necessitated the administration of serum injections, which, though relatively few in number (thirty-six in all), were for some unknown reason followed rather frequently (seven cases) by a "rash." In two instances the eruption resembled measles. I do not mean to say that under such circumstances—especially if the rash appeared from twelve to forty-eight hours after injection—the first thought would be measles; on the contrary, it would place antitoxin and the eruption in the positions of cause and effect. In some instances, however, the eruption may not appear until several days after the injection and may be accompanied by some constitutional symptoms; indeed, it is said that several weeks may elapse before the antitoxin rash makes its appearance. My experience, however, has been that the rash appears on the fourth or fifth day.

Dr. L. E. La Fetra[6] reports a case in which a morbilliform eruption appeared six days after an antitoxin injection. Doubt arising as to whether he was dealing with a morbilliform antitoxin rash or measles developing during the course of diphtheria, the presence "on the inside of the cheeks of a few of the measles spots described by Koplik" caused him to diagnosticate rubeola with positiveness. Needless to say the further course of the disease substantiated the diagnosis.

Before the importance of this phenomenon in the differentiation of antitoxin eruptions was brought to the notice of the profession, various other points had to be relied upon. The history, the occurrence of the eruption as a rule within forty-eight hours after the injection, its irregularity in situation, duration, and distribution, the conjoined appearance of several types —erythema multiforme, measles, and erythema—and the absence of prodromal symptoms were in the main the aids to diagnosis. In the light of recent investigations from all over the world, we must accord the first place to Koplik's spots in the differentiation of measles complicating diphtheria from a rubeoliform antitoxin rash. The two cases of morbilliform antitoxin eruption which came under my observation did not show this sign.

Erythema multiforme is mistaken very frequently by the laity, and occasionally by the physician, for measles or scarlet fever. It happens now and then that one of the surgical assistants hurriedly dresses a case of generalized erythema multiforme and sends it to the desk for exclusion with a diagnosis of scarlatina.

There are some points of resemblance between this disease and measles. Thus Dr. C. W. Allen has demonstrated[7] that in almost all cases of erythema multiforme exudativum in children, the rectal temperature ranges between 100° F. and 101.5° F. In addition the child complains of headache, muscular and joint pains, and malaise. The skin lesion may to the inexperienced suggest measles; when one, however, has seen a sufficient number of cases there appears something characteristic about the eruption which enables him to recognize it at a glance. I am speaking now of erythema multiforme papulatum, annulare, and gyratum, and not of the bullous and hemorrhagic forms which could scarcely be confused with measles.

In children the eruption of erythema multiforme frequently begins on the face, and the presence of this lesion, plus the general symptoms, causes the mother to hasten to the physician with the question, "Is this measles?" This is easily answered by an examination of the buccal mucous membrane, if one has not had sufficient experience with the cutaneous lesion, for the absence of Koplik's spots at once excludes measles.

Erythema multiforme is rather common at the dispensary, and I have yet to see a case in which the pathognomonic measles sign was present. If one must have recourse to the buccal mucous membrane for a negative diagnosis, so to speak, the value of this phenomenon as a positive factor becomes all the more apparent.

The occurrence on the face of bluish-red, elevated, round or irregular, gyrate masses is to the experienced eye characteristic of erythema multiforme.

When the entire body is involved the eruption may suggest scarlet fever. The elevated character and irregular border of the lesions, the occurrence of normal, white intermediate skin, the moderate elevation of temperature, the lesser degree of general symptoms, and the absence of pharyngeal inflammation would exclude scarlatina. I might note in passing the clinical fact that a large number of cases were associated with pediculosis capitis.

Urticarial eruptions, especially when of the erythema-multiforme type, may suggest measles. The sudden appearance, the greater elevation of the lesions, their ephemeral character, the presence of itching, the lack of general symptoms, but above all the absence of Koplik's spots, make the diagnosis simple.

Generalized vaccinia, when of the urticarial and erythema-multiforme character, may also suggest the thought of measles. In a large number of cases seen during the summer months of 1898, for the most part in those whose arms showed deep ulceration with surrounding infiltration and œdema, the buccal mucous membrane failed to show the presence of these spots.

Violent cases of miliaria have been mistaken for rubeola. Under ordinary circumstances no difficulty will be experienced. In severe instances, however, when the eruption on the face is more or less blotchy and confluent, when there are slight conjunctivitis and

perhaps a rise of temperature, diagnosis is not so easy; a normal pale-pink mucous membrane goes with prickly heat.

Measles must at times be differentiated from a macular syphilide. I have elsewhere reported such a case in a boy of fifteen, in whom all thoughts of syphilis were dispelled by the presence of Koplik's spots.

Dermatitis medicamentosa following the ingestion of various drugs is so frequently of the morbilliform character as to render differentiation necessary. I am unable at present to add to my three former cases of copaiba eruption, and will simply state that in cases of gonorrhœa which have been treated with copaiba in any form a measles-like eruption is not uncommon. In such instances, however, the pathognomonic measles spots are lacking.

One instance of rubeoliform antipyrin eruption in a child has come under my notice in which measles was excluded by the normal buccal mucous membrane.

Two instances of suspicious quinine eruption resembling morbilli were subjected to an examination of the mucous membrane of the cheeks and lips with negative results. In two cases of bromide acne following the use of Brown-Séquard's mixture for epilepsy, these spots were lacking. Another patient presented a tubercular fungating mass on the extensor surface of the leg; scattered within these tubercles were little yellowish millet-seed points, making all in all a rather characteristic picture of a bromide eruption. In this case Koplik's spots were also absent. In several iodide eruptions following the continued use of mixed treatment these measles spots were never observed.

Pityriasis maculata et circinata or pityriasis rosea is relatively common at the dispensary. In the ten cases which I have observed within six months I have never seen Koplik's spots. This is usually a disease of adult life, but a number of our patients were children, the youngest being four years of age.

Scarlet fever has in my experience never been associated with this phenomenon. I have time and time again examined the mucous membrane of the cheeks and lips in this affection, but I have never discovered Koplik's spots.

Measles may impress or engraft itself on pre-existing skin lesions and give rise to doubt. Thus Allen says:[7] "In one instance I was struck with the marked inflammatory change which had suddenly occurred in the eruption of a papular eczema (lichen simplex type) which had been under treatment for some days. On taking the rectal temperature it was found to be 105° F. The catarrhal symptoms were slight, and there were no eruption of measles and none of the clinical signs upon which the diagnosis could be established. An inspection of the buccal mucous membrane, however, removed all doubt by the discovery of minute pearly points upon a red base." Knöspel has recorded instances of double infection with measles and scarlet fever in which Koplik's spots were observed five days before the eruption of measles made its appearance. The isolation of these cases, according to the writer, was the means of preventing an epidemic of measles in the scarlet-fever pavilion.

Erythema enematogenes is a term applied to the various rashes which occur in children after the administration of enemata. Dr. G. F. Still read a paper on this subject before the Clinical Society of London, and stated that, though the affection is relatively rare, still it is of great moment on account of the danger in confounding it with the exanthematous diseases of childhood. The eruption may be erythematous, morbilliform, or scarlatiniform, and is usually situated on the anterior surfaces of the knees, backs of the elbows, face, buttocks, and back. This condition must be very rare indeed, for in a large series of intestinal irrigations given by Dr. Koplik during the summer months no instance was recorded. The eruption is said to occur twelve to twenty-four hours after the administration of the enema and to last for from twenty-four to forty-eight hours. It must be differentiated from measles, scarlet fever, and rötheln. While I have as yet not seen an instance of this affection, still in differentiating from measles I should direct my attention to the buccal mucous membrane.

Many of the more common skin diseases, such as eczema (seborrhœal, mycotic, impetiginous, intertriginous, etc.), scabies, varicella, pediculosis vestimenti and corporis, psoriasis, impetigo contagiosa, herpes simplex, purpura, furunculosis, erysipelas, trichophytosis, and acne vulgaris, have been subjected to the test with an absolutely negative result.

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REMARKS ON THE MIDWIFERY QUESTION; THE AVAILABILITY AND SIMPLICITY OF THE MIDWIFE; THE SECRET OF HER HOLD ON THE MASSES.[1]

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NEW YORK.

UNTIL within recent years, four-fifths of the women in civilized communities and all those in semi-civilized and barbarous countries were attended in the act of bringing forth their young by women known as midwives. Even to-day, notwithstanding the forces arrayed against them, more than half the women of great cities, and one-third of those residing in rural districts, are waited on by midwives at the period of their lying-in. There must be some reason why the midwife is still in such demand. What is it? That it is not always a question of cheapness we can see, because the midwife is at the bedside of the high-born as well as the lowly.

In certain countries of Europe, among which may be mentioned some of the Latin-speaking nations, the midwife is in the lying-in chamber attending to the accouchement, while physicians in ordinary and ministers of state are waiting in the antechamber with curious interest and anxiety for the announcement of the glad event, and are prepared to deal with any emergency that may arise during the progress of the case. Two things doubtless contribute to this preference for the midwife: one is the natural or assumed bashfulness of most women and their repugnance to have a man about during the pangs of their labors; the other, that the act of bringing forth their young is a natural function, in which as a rule no medical interference is necessary. Those women cannot be convinced that this maternal act is a bodily condition in which the services of a doctor are at all necessary. The Irish, Italian, and French excel in this bashfulness, or what passes for such. American, English, and German women are not as a rule so bashful and particular

[1] Read at the monthly meeting of the New York Celtic Medical Society, December 29, 1898.

that a woman should attend them in preference to a man. Many of the German women, being economical, engage the services of a midwife for five or six dollars, when she might have to pay twelve or fifteen dollars to a doctor. She, being in fair circumstances, repels and repudiates the counsel given to her by some obliging creature of her acquaintance, that she should make a pretence that she is poor and have the lying-in infirmary furnish her a free doctor. In all truth it must be admitted that the matter of bashfulness among women, if innate, is very unstable, and gives up its affinity on the slightest pressure of circumstance or association.

This question of the bashfulness of women, then, can be easily brushed aside when it is made apparent that their health or their pocketbook is a sufferer thereby. Both the cheapness and the availability of the midwife have contributed to make her a prime favorite with the masses. It is known that she is poor, and that, too, has endeared her and drawn her nearer to them. This poverty is a touch of nature that has made her and them akin. She is not mercenary and is satisfied to live on simple fare and in humble lodgings, in marked contrast to the other midwives, professional people all—the gentlemen and lady physicians. She grows poorer the longer she is in practice; she has no ambition to found a dynasty, a house, and a name, as have the medical midwives of both sexes. She is satisfied to have something to eat while she is here, and the assurance of a grave when she dies, occasionally wet by the tears of those who will remain faithful after she is gone. The midwife then is preferred because she is more easily approached, more easily got at after midnight by the laborer who is aroused by his wife to procure assistance at once. He may have no money to fee the doctor or doctress who may wish pay in advance; besides, he is not skilled in speaking through house-tubes or rummaging around in the dark through the vestibule of a flat for a certain bell, to wake up Miss Doctor Smart. He knows what he will do, though, and straightway runs to the tenement around the corner where the storm door is never closed, and rouses the midwife who attended his mother with ten children, all of whom are alive, save one, for whom the midwife had to summon the family doctor, and he in turn a brother physician.

This laboring-man comes back quickly with his midwife, and he has confidence in her for what she has done for his mother, who spoke her praise a hundred times or more, praise that was sealed by the prayers of old neighbors who were not unmindful of kindnesses in the past.

The Parturient Act, Being Physiological, Should be Permitted to Take a Normal Course.—The parturient act is a normal one, and ordinarily needs no medical interference or treatment of any kind save rest and the bathing of the parts for a few days; even this is not an absolute essential, as scores of cases are known to the writer in which the woman was up and around the day after the baby was born. Only four days before the writing of this article, I was paid and dismissed from a case forty hours after the baby was born, the lady saying she had no further use for my services—this in the face of a protest from me, that her course was not a wise one. It had no effect, however, as she pointed to three healthy children that frolicked and gambolled at her feet, after the birth of each of whom she was up on the second day without any bad result. This woman was the wife of a well-to-do shopkeeper and could remain in bed as long as she pleased, for there were willing and eager hands about to attend to all affairs.

That the parturient act is a physiological function and seldom needs much interference, is just the fact that called the midwife into activity and perpetuated her reign in the lying-in chamber down through the ages. She is the creation of expediency and the link which connects the family alike with traditions and realities. She does not claim to be a M.D., certainly not, and that is just why she is called into the accouchement chamber, but she does claim, and her claim is allowed, to know more than the janitress or the washerwoman who most assuredly would be substituted for her were it possible to legislate her out of official existence. Assuming that they are both evils, the lesser should be chosen by retaining the midwife and allowing the janitress and the washerwoman to pursue their own humble but useful callings.

A great deal has been said, in the indictment drawn up by our profession against the midwife, about her dirty hands; if her accusers took the trouble to examine her hands carefully, they would find that they are not so dirty as they supposed. To be sure, there are great seams running through her palms in all directions, which are made more prominent by the horny epithelium which hard work has left there, for, be it remembered, she does not go about her work with gloves like some of her tenderer sisters; besides, she is a woman who adapts herself to circumstances and is a person of many occupations, one of which is to wait on a sister in travail at short notice in an emergency. Then we will have to consider that most midwives are old, and it is a penalty of age that the skin on the hands grows thinner and assumes a parchment hue that to the near-sighted or prejudiced observer looks like dirty skin; but no, alas! it is only the evidence of accumulating years. There is no end of talk in the ranks of the profession about the ignorance of the midwife on matters pertaining to antiseptics; however, "Where ignorance is bliss 'tis folly to be wise." Better as it is—that she knows nothing of antiseptics.

The lying-in wife of the laborer in need of antiseptic douches wants a doctor rather than a midwife. When the case is any other than a normal, plain, ordinary one, it should pass over from the midwife to the family physician. He may instruct in the quality and quantity of the antiseptic used—otherwise the midwife might make the solution too weak, and it would be ineffectual, or too strong, and it would destroy parts that were whole and in perfect integrity, thus inviting the germs with which the doctor, who is called in to mend what she by her meddlesomeness has spoiled, is so plentifully supplied. He comes in answer to a summons that the parts were sore and the act of passing the water burned like fire. He makes an examination, and, while doing so, leaves fifty millions of bacilli of the genus of diphtheria, which he has just brought out of a sick-room where two children lay ill of diphtheritic croup, behind him in the vagina and around the cervix uteri of this lying-in woman, who is only a little indisposed because of the chafing of the parts. With the application of a little cold cream by the clean hand of the midwife, who knew nothing of danger, this woman's life would have been spared; so could have been the reputation of the midwife.

The doctor, who is the real culprit, is eulogized and spoken of by the women present as the one they are going to have attend them when they are confined. On the doctor's second visit and before he leaves the sick-room, he has on the fly-leaf of his note-book at least two engagements for accouchements by appreciative women who recognize his ability as a diagnostician; for has he not told them what they strongly surmised, that the patient is suffering from blood poisoning from some neglect on the part of the old midwife? He hates to say for certain, but is strongly of the opinion, that the midwife left part of the placenta behind in the uterus. This would account for the high fever, the delirium, the profuse cold sweats, and the rapid pulse. Another death at the door of the

midwife, and an "I told you so" by some seeress who wished to ingratiate herself in the confidence of the family; and a pathological specimen, a theme, and a philippic against the midwife before a medical society by the gentleman who carried the fifty millions of bacilli of the genus diphtheria into the healthy tissues of the convalescing woman who was confined a week previously. The writer recognizes the value and importance of antiseptics when dealing with morbid conditions, in order to excite healthy action in an organ or a part. He is not so sure, however, of their use when applied to healthy tissues with the object of preventing morbid action from developing. This latter is done in the lying-in room in a case of normal labor when we douche to prevent healthy parts from becoming a prey to disease.

A number of old physicians consider that this constant vaginal douching is unnecessary if not harmful, and that the safety of the lying-in woman consists in keeping the external parts clean with diurnal laving, which nearly all the women in the lower walks of life do themselves. They claim that, if the midwife sees to it that the parts are clean, nature does the rest. If this were not so, more than half the lying-in women would be swept out of existence, and puerperal fever would be the rule, not the exception, as now in the child-bed condition. No person, then—certainly not a physician—can claim that a morbid condition exists in a normal labor, the kind of one we usually find the midwife engaged with; and as the act of bringing forth their young is a physiological one, common to all women and animals alike, she may with safety be left in the hands of the midwife, who, if necessary, is sure to summon aid early enough for dealing with obstruction or other unusual condition.

The confinement case becomes a question of obstetric surgery only when it ceases to present elements of normality; then it is a branch of medicine and comes plainly within the jurisdiction of the physician. Antiseptics are indispensable in their way—the inspiration and the sheet anchor of the surgeon, and often the helpmeet of the physician; but facts are hard things to combat, and success is the desideratum and aim of every business or project. If the great majority of parturient women can get along with a midwife and do famously well without vaginal douches, what is the sense of forcing them to dispense with the services of the former and compel them to adopt the latter? It is not sense at all; it is nonsense, and must be abandoned as a proposition untenable and absurd.

Cleanliness is an excellent habit. Sometimes it is a protection against disease, but when it is not, there is a predisposing cause hiding somewhere in the system or clothing of the individual. It is not, however, an absolute essential, nor an essential at all to good health and mental activity, as multitudes of octogenarians can attest.

The healthiest man the writer ever saw is alive and well to-day at ninety-four, and he took a bath only occasionally—once in the Mersey at Liverpool in 1838 and again in the North River in 1878, both of which were accidental, the gentleman being slightly intoxicated when he fell. My curiosity led me to examine this man the other day, after he had put in a hard day's work shovelling snow, and though my olfactories are fairly keen and my sight is good, I could detect no odor and see no skin blemish other than was effected by the hand of time. It may be said that this is an exceptional case, but such argument cannot stand in the face of the fact that almost all people who live to an extreme old age are found to be those who are not overfond of ablutions, but who otherwise are careful in their manner of living. That the animal economy adapts itself readily to the conditions in which it is placed, is certain; for example, two cats of the same litter are separated; one goes to the frozen zone and immediately develops a thick fur, while the other, in the tropics, has a thin, transparent skin.

Hospital Statistics.—A writer and critic, Dr. Rubino, talks about five thousand labor cases per annum in a hospital, with hardly a fatal case. Of course such a statement is absurd on its face and needs no argument to refute it. To say the least, it is careless and slipshod writing. Such statements as this have contributed to make hospital statistics ridiculous; so much so, indeed, that no one now takes such statistics very seriously, and the vital-statistic man of the hospital is regarded as somewhat of a joker. The truth or falsity of the assertion can be decided very quickly if we consider the magnitude of the proposition that Dr. Rubino says has been demonstrated by such excellent results.

Granting the hospital the right to pick its cases and receive no women but those in perfect health, still the accidents of child-bed to be reckoned with when diseases that remain latent in an apparently healthy woman waiting for an exciting cause—the stimulus of labor is just this cause, it is the spark that often fires the gunpowder hidden in some vessel or organ—will make the mortality of the five thousand in spite of aseptic conditions, with or without antiseptics, at least about half of one per cent. This gives a death list of twenty-five, which any insurance company, accustomed to close figuring, will consider rather below than above the true facts.

The midwifery mortality of my own practice is between one-third and one-half per cent., but I take what comes along without regard to the conditions or diseases with which they may be handicapped. The average midwife makes a better showing with a mortality of one per cent., for the reason that, as a rule, those requiring her services are as healthy as wild turkeys.

A word further about the question of expense, that has such deep and important relation to a working-man's home. A matter of three or four dollars is of the first importance to him, therefore his wife has a perfect justification if in her coming lying-in she engages the services of a midwife for six dollars and saves four dollars. This four dollars saved will pay a half month's rent or purchase an overcoat for Jim, who has grown tired of school, and says he is fourteen, though not yet thirteen, because he is anxious to go to work to help his father, who the doctors say has heart trouble.

Now, this woman has six dollars to spend on her confinement and four dollars to put to other use; when an enemy of the midwife steps in under the guise of disinterestedness and advises her to keep the six dollars and he will give her an order on a lying-in asylum which will furnish her with the best medical skill free of charge. True, he will send her a physician, but one who only has seen about two cases of confinement in his own professional experience, but has heard of a great many others in the practice of his friends. He also heard lectures by professors, primed well for the occasion, but in clinical experience he is woefully lacking and is eager for the opportunity to learn, which is furnished by the convenient lying-in asylum. Now, in all fairness, does it not look like a bunco trick on the part of the lying-in asylum which claims to furnish this sort of talent and calls him who is sent a skilled physician? The assumption is ridiculous and would be a subject of laughter were it not pregnant with the most serious consequences to both the laborer's wife and the community. Poor physicians and poor philosophers and economists they would be who would push a physician into a working-man's home with the object of making that home more secure from disease and increasing its wealth. Let them help

to give the laborer employment and then leave him free to work out the social problem of his own household in his own way, and that way will be the midwife to attend to his wife in confinement—if necessary, the doctor. Let him have corned beef or spareribs and cabbage for his dinner, and if the occasion arises when he thinks it necessary to have roast turkey and plum pudding, let him have it. Freedom of action and the gratification of an occasional luxury are his birthright, and such freedom should be respected, when it does not clash with the rights or vested interests of others. The croakers, medical and lay, male and female, who shout in chorus "Hosanna" to the millionaire who gave a million to found a lying-in hospital last year, would better reflect, as the paternalism that will discharge a working-man because his labor now brings only ten per cent. in place of twelve and a half on the capital invested, and will then build a hospital to shelter that working-man's wife in her lying-in, is not the kind that should be encouraged in a free republic like ours. It is a relic of the feudalism of old Europe and should not be permitted to take root in our soil. Every hospital that is built for this purpose proportionally increases the per cent. of paupers and diminishes the wealth of the state.

The Faith-Curist and the Midwife—How They Differ from Each Other.—Some enemies of the midwife and thoughtless critics have compared her to the faith-curist, and claim that of the two she is the greater evil. Now, the midwife differs materially from the faith-curist or so-called Christian scientist and quacks generally. The midwife, it can be seen, has a definite appreciation of what constitutes her duty in the lying-in room. She is able to define her position there, and, as a rule, acquits herself well; she simply is the handmaid of nature and awaits her commands with humility and hope. If nature is handicapped by some accident or abnormality she quickly sounds the alarm—apprehending danger, she apprises the family of such. She operates under no false pretences and flies no flag but her own. In marked contrast to her is this so-called Christian healer—an ignorant impostor who is unable to explain the tenets of his own creed, if creed he has; since any two of this precious cult are not able to define alike or expound the scientific aspect of their religion, if aspect there be, though they grandiloquently proclaim it a science exalted and practised in the light of spiritual manifestations.

It appears in brief, divested of all nonsensical ceremonies, that the Christian healer's only claim to notice, to whom some of her enemies have the hardihood to compare the honest midwife, is that by the exercise of great faith and a concentration of will power, under the direction and control of a high priest of that calling, a sick person may buoy himself up until the disease, which they claim he has not, has spent itself, or exhausted its force. The specialist in this art of healing says, "It is a fight between the physical and the spiritual life," and that the combatant who is defeated deserves to be, as it shows he was lacking in faith and qualities that would entitle him to the consideration or the clemency of Heaven. That there is a latent energy in the human system that can be whipped up and called into activity by the exercise of one's own will power, or that of another acting on it, is certain. There is no doubt that other may have a special fitness for a particular case, and impart potency through individuality to him. This is the sum total, body and spirit, of the faith-curist's creed when reduced to the equation of scientific exactness. It is not appropriate for the cure of disease, nor sufficient to entitle one to the title of doctor of philosophy or doctor of medicine either. There are diseased conditions, however, that we will consent, if he is so disposed, to have him try his hand on. They are certain forms of dementia, melancholia, and chronic hysteria; they may be, and doubtless are, legitimate subjects of medical investigation, but the profession will not complain much if the Christian healer makes of them a special study, and leaves the cure of acute and general disease to the physician who is supposed to be qualified in such matters. Now, if the Christian healer has any skill in his art, or is the instrument of some occult psychological force working through him, the aforesaid class of cases, in which drugs have little avail, might receive some benefit at his hands; but of course this is begging the question at our expense, as the humbug has no power or influence on disease of any form, any more than have hundreds of our Italian fellow-citizens, who are eager to make a living by being given a chance to clean the streets of our metropolis.

Now, what must we say of the government which will tolerate the Christian healer and permit him to put his fanatical theories into practice on a human being who is afflicted with acute pneumonia or typhoid fever, while it claims the right to put a man in prison—depriving him of his liberty, which means about the same thing—the moment he steps off the gang-plank of a steamer hailing from a tropical port, in the belief that in his person he has hidden germs that may work mischief to the community? The government must bring the faith man to book, and quickly; if it fails in this, it is unable to recognize or appreciate the chief function for which it was called into existence.

As these so-called Christian healers are a sleeky lot, men and women, with sanctimonious manners and clerical pretensions, they have no difficulty in gaining converts among an otherwise intelligent community. They pose as high priests and masters of ceremonies in the household of Faith, and recognize no authority nor law in the practice of their profession but that of their Master on high, the servants of whom they are. In contrast to this array of insolent pretensions, the midwife has only to offer a successful career, an honest heart, and a rugged hand. Which is better?

How the Midwife Compares in Availability with the Lady Physician, and Even with the Doctor.—It is conceded that a woman has natural ability and talent sufficient to justify her in aspiring to the degree of doctor in medicine, if she has the time or disposition to qualify for that calling. We will not go into the question of the weight of her brain, or the number and arrangement of its convolutions. We all know what has been said on this matter by hard-hearted scientists and cruel physiologists, but that isn't here or there just now, and we will let it go for what it is worth. Now, the matter of availability and fitness being allowed to women to qualify and practise medicine, the question will come up, Is she available? Can she be reached after midnight as easily as the midwife, whom she claims to be able to supplant?

The lady physician is reading her list of calls for the morrow. The fire on the hearth is glowing. The beams from the electric lamp are dancing joyously and playing with the curtained and neatly draped windows within. It is night, and nature has let loose her pent-up forces. The winds are howling angrily with plaintive moans at intervals from the chimney, as if it were tenanted by some elf or demon distressed or in despair. The night is dark. The sky has a leaden hue and the snow is piled up in the streets and passageways. Click, click, goes the electric bell. From out of the speaking-tube the lady physician recognizes a voice. It says: "Please come at once, my wife was taken ill an hour ago; she did not look for the event so soon; she is dreadfully anxious, and I am worried to death. Do come quick." Miss Dr. Goodspeed was obliging and the soul of good nature. She responded down through the pipe: "Mr. Trueman, really I would be happy to oblige you and do a kind-

ness for Mrs. Trueman; but the night is awful, the moon has set, and it is snowing. If I go, I am sure to be blown off my feet; besides I have a splitting headache. Mr. Trueman, I feel I should go, but it is impossible." "There is nothing impossible," came to her ear from the lips of Mr. Trueman, who was speaking from his heart. He was a man of intelligence, resource, and strong convictions. He spoke again: "Come down and I will carry you. It is only eight blocks." The obligation of her calling and the emergency gave strength to Miss Goodspeed, who was naturally delicate and often ailing, from an overflow of nervous force that could not find a ready outlet in a frame and constitution that were too small and too fragile for the full play of the forces within; so she hastened down the stairs. The only thing of note that transpired during her journey on the back of Mr. Trueman to the sick-room was when in a snow-drift they ran into and collided with the village midwife, who was afoot and in a hurry to attend the wife of a blacksmith who needed her services, and lived two miles away, at the further end of the town. The accident, however, was without interest, as there was only a recognition, a hasty greeting, and an immediate resumption of the journey.

When Miss Dr. Goodspeed reached the bedside of Mrs. Trueman, her ears were greeted by the discordant chimes from the capacious mouth of a baby boy who was born one hour previously. Thanks to the ministrations of an old woman who was aunt of the janitress in the house, and who was only there by chance, no harm came to Mrs. Trueman, who laughed as they came in and apologized for causing Dr. Goodspeed such annoyance and at so late an hour. In the mean time the old midwife slipped out, that Miss Goodspeed might have the freedom of the lying-in room unhampered by her presence.

That there are limitations to the general practice of the female physician, and that her actions are controlled by these limitations, is certain. Leaving inclement weather and unseasonable hours out of the question, there is another cause that militates against her—namely, at certain periods, once a month, nature has enjoined her by reminding her of a thing she sometimes forgets: that she is a woman—for in her race for success and supremacy with the male physician she is apt to forget this fact. During this quarantine of nature, or, according to the law of Moses, the days of her purification, she may be ill of body, morose in mind, and altogether disqualified for the practice of her profession, for hours or days. During this period she is not able, alone at midnight, nor even in day-time, to walk a half a mile or a mile when the street cars are running on long headway, or perhaps not running in her direction at all, to attend a sister on the fifth floor of a rear alley, suffering from the pangs of labor. Has she a substitute? If so, it may be possible that this substitute is a sufferer as she is. As she is at outs with the midwife, she will hardly ask her to go. Can she get a male physician of her acquaintance to help her out in this emergency, remembering that she is strong-minded, wears her hair short, and snubbed him on a previous occasion, when manly instincts, as much as gallantry, prompted him to offer assistance when she was set upon by some street urchins who, for some peculiarity of dress or manner, chided her and pelted her with snowballs? He is not very likely to respond to her bidding now.

The man who rang up a lady physician the other night had a little milk route. It was imperative he should be at the wharf early to receive his milk supply for the morning. He quickly apprised the physician of the nature of his errand, got an affirmative reply, and hurried off. Mrs. Love had an afterthought; she recollected that Hell's Kitchen was not a pleasant neighborhood after midnight for a lone woman, and, as there was no man around to accompany her, she concluded not to go. To the demand of a woman in distress, an old lady in a basement jumped into her scanty attire, and, half clad, ran out into the darkness and up to the garret; she was none too soon, for the baby was born and nearly strangled by several twists of the cord which was pressing on the tender trachea. The women present said this was caused from overreaching, and advised her not to do so again. The midwife tied the cord, expressed the placenta, bandaged the abdomen, and then, before washing the baby, adjusted her bodice, it being open, which was a subject of pleasant banter by one or two young women who stood by; but the old lady put the bridle on their laughter by saying with sober air, "Business before pleasure—action before everything in an emergency."

One of the reasons for this activity and ubiquity of the midwife undoubtedly is that she practises midwifery, not in the flush of early youth, but in halcyon days and the happy period between forty-four and seventy. She passed the menopause, the rock on which so many women perish, and the period of so much worry and anxiety to her sex, with safety. Her exemption from disease after passing through this ordeal makes her happy, and she is determined to be useful in gratitude for such exemption. That is why she smiles under difficulties and is so ready to help a sister in distress. Having cleared the dangerous shoals in her journey through life, she has a reasonable expectation of twenty-five years of good health now, as Nature has lifted her embargo and permitted her to go free. Though perils beset her, and the waves of adversity dash against her breast, her brow is crowned with the laurel wreath of health. We repeat, this matron is happy. Since she pays no further monthly tribute, she is now subject to none save the one common to all, to offer up her life at the end.

In the hurdle race of life the good horse jumps the ditch, the laggard and incompetent is left hopelessly in the mud. So, at the menopause of women, the healthy ones pass without challenge; all others are arrested in their course, nature refusing them clearing-papers as their vessel is leaky and uncertain. No doubt this is a wise course, and, further, it means the survival of the fittest.

Can the Lady Physician in the Practice of Her Profession Ignore the Womanly Proprieties of Her Sex?—Now it has been shown pretty plainly that the lady physician is not at all times, and under all conditions, prepared to attend cases presented to her for treatment. It has also been made apparent that the midwife is very alert and ready alike to attend a case in sunshine, storm, or darkness. In surmounting difficulties in transit to the lying-in room, she is peerless. When duty demands her presence, she knows no danger, and brushes away like cobwebs obstacles insurmountable to the lady physician.

Since the question of the lady physician's fitness has been allowed and the degree of her availability determined by practical tests, we will go briefly into the question of propriety. By nature, woman is the weaker vessel — at least this is so recognized in civilized society; her nerves are finer, and their tension is lower, they but lack the ductility and endurance of those of men. Her nerves give out with a bang and she flops, while the man's go gradually; and often, while they are thus going, he has an opportunity to reinforce them by a quick flank movement of his will power.

It appears that in the field of specialism is the only hope for the lady physician. It is apparent to all others, if not to herself, that as a general practitioner she is a failure. Now, in order to be a good specialist, one must first be a good general practitioner, but

since it has been demonstrated that she is a poor one, how can she hope to succeed as a specialist? This proposition was presented as a hypothesis, but it is proved to be founded on facts, and facts are inexorable. If a woman puts herself in competition as a general practitioner with a man, she is supposed to take all classes of cases that come to her door, whatever they may be. The man with specific stenosis of the rectum, and the man suffering from spasmodic or strictural affection of the urethra, and perhaps a strangulated paraphimosis thrown in, are included in the list.

Just imagine the patient standing up, the lady physician on one knee before him, as some surgeons direct, reducing the strangulated organ. Then again, she must be ready after midnight to relieve the necessities of a toper who is suffering intense agony from a distended and paralyzed bladder after the debauch and revelry of the evening. It will not do, after learning the nature of his mission, to tell him she does not treat such cases as his and turn him out into the street, as he came in good faith and in obedience to the sign on the door, which read, "Dr. All." If she refers him to a male physician or to a hospital he may die before he gets there. If so, on whose head will his blood be, and is the lady physician free from legal responsibility? If the lady dismisses those patients with a "No," she is cruel; she may be even a murderess and should answer before the law. If she does not dismiss them, but invites them into her consulting-room, the toper may be hilarious after he is relieved from his pain and proceed to take liberties with his fair physician. The other man, being saturated in vice, has no respect for women, and may openly denounce her as being of the class which has brought him trouble and ruined his life. We can see now the difficulties which surround that good lady and that she is on the horns of a dilemma. We may be able to sympathize with her and hope she will come safely through the meshes of the law; but if she admitted the aforesaid man into her consultation-room for treatment, without a flush on her cheek (that is, if there was no powder there before) and a lump in her throat, she is destitute of the shame Eve felt in the garden when she clothed herself with fig-leaves, and which is ever since the glory and the pride of women.

While the author is quick to recognize the obligations imposed on the practice of medicine, that that profession is catholic in its widest sense, knowing no race, creed, or color, he still maintains that the calling that will bring a woman face to face with vice is not the one best calculated to spread her influence among men, or enhance her usefulness among women. The woman doctor who would take advantage of her prerogative to treat those men may be a noble and good woman, and, if she has not already a husband, may be worthy of one; still there are men who would hate to marry her, I myself included in the number.

Now it has been pointed out before that the lady physician is not so available as the midwife, and it is shown here that she is not, by the recognized law of propriety which has been always so binding on our community, so competent to attend a general practice as is her brother the male physician, whom she foolishly thinks she can supplant by arguments consisting mainly of sentiment, poetry, and dewdrops. There is a place for her, though, in our profession, but it is so circumscribed and subject to limitations, and requires so much discretion and tact to observe the conditions that bring success, that we have not the slightest fear of her competition.

On the Justice and Wisdom of Government in Compelling the People to Employ the Services of Physicians, Male or Female.—A woman is about her household duties in the best of health and spirits, when suddenly she is seized with labor pains; she is not sick, she knows she is not, as between pains she is all right and laughs merrily when the midwife and a lady friend, who may probably be pulling on her hands, guess happily at the future and exchange opinions as to the likelihood of a boy or a girl. They have read of Schenk and his system in the papers, but he and his doctrines are repudiated and talked of with derision by these sturdy friends of the expectant mother. All three are now laughing at the expense of the Schenk humbug, when suddenly a knock comes at the door. It is a policeman who brings with him a physician, who enters the bedchamber of an American citizen's wife, unbidden and unannounced, and forthwith proceeds to read a paper authorizing him to enter and take charge of the lying-in woman, in spite of opposition. He is a young man, past twenty, who is in the service of a neighboring lying-in asylum, in order that he may learn all he can of midwifery before opening an office for himself on Lexington Avenue or Oliver Street (we admire his energy, especially his good resolve to be well-versed in his art before he deems himself worthy of a fee from the lady in the flat, who will probably need his services in the spring), and while he is making preparations to do so, the policeman arrests the husband—who, being apprised by a messenger of the turn affairs had taken at home, hurried to investigate—for disorderly conduct and interfering with an officer in the discharge of his duties, and drags him away to a cell. The midwife and the neighbor, being in mortal terror, fly from the room and take refuge in the cellar, while the parturient woman falls in a swoon. The physician, thus finding himself antagonized and alone, abandons the case and rings up an ambulance, in which the infant is born before the hospital is reached, but is born dead.

The common-sense of the community would cry out against such interference as this with the domestic affairs of an American citizen, and the people would refuse to be placated by the soft words of the president of a medical society who would argue that it is an advance in therapeutic methods and a protection against the spread of the puerperal fever that clings to the hands and the old shawl of the midwife with such marvellous pertinacity, and they would hurl denunciation at the head of the legislative body which enacted such an infamous law, and speedily wipe it out out of existence. While they hailed with acclamation the hour that consigned it to political oblivion, they would shout, "Vox populi vox dei!"

The midwife is not then an impostor or nuisance to be suppressed, neither is she a fashion or a fad

> That a breath can make
> As a breath has made,

but a necessity, a comforter, and a joy forever to the toiling masses, who can make and unmake governments at will. Vivit post funera virtus.

51 Charlton Street.

Tuberculosis of the Bladder.—Gordon (*Dublin Journal of the Medical Sciences*, May, 1899, p. 344) reports a case of probably primary tuberculosis of the bladder, and points out that this condition may in its symptoms closely simulate vesical calculus. He holds that the diagnosis can and should be made without resort to instruments. In treatment general measures are more likely to succeed than local. In cases of tuberculosis of the testicle the only treatment admissible, by reason of the dangers that attend failure, is castration. If, in addition to the testicle, the vas, the seminal vesicles, and the prostate are involved, but not the bladder as yet, extensive operation is legitimate.

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THE PROBLEMS OF THE ALIENIST.

THERE is probably no specialty in medicine that is so little studied by the general practitioner, and yet so important to the body politic, as psychiatry. Living for the most part in isolated institutions, with their materials gathered about them, the alienists do their work away from the view of the public as well as from the family doctor. Therefore occasions like the recent meeting of the American Medico-Psychological Association (late Association of Medical Superintendents of American Institutions for the Insane), held in this city, May 23d, 24th, 25th, and 26th, are of great interest, for they give to the general and medical world the results of recent studies in their specialty.

The programme announced thirty-five papers, of which, however, some half-dozen or more were not read or were read by title only. It is of interest to note that, of these, five were concerned with the discussion of the etiological factors of insanity, six or seven treated of the underlying pathological conditions, eight were clinical studies, four or five took up the legal aspects of insanity, three or four were on general topics, as the relations of the study of psychology to insanity, and at least ten papers were on the treatment of the insane. Thus most of the general field of psychiatry was tilled.

To single out special papers as deserving of more attention than others would be impossible, since most of the contributions were able and valuable; but coming into the foreground of this meeting were a few general ideas which indicate in a way the trend of the thought of these workers in their chosen line. The very able address of Dr. F. Peterson brought prominently before the association the need of clinical psychiatry for a broader and deeper study into the complex phenomena of both physical and mental life. That a closer co-operation should exist between the various departments of science in mastering the intricate problems of insanity is becoming appreciated more thoroughly than ever before, as was manifest from the address and discussion.

In the field of technical pathology little new can be credited to the present meeting. Dr. H. J. Berkeley presented an excellent paper on the vascular changes in paresis and brain syphilis, but the limitation of the study to vascular lesions alone, rendered it too narrow for more than a detail in the general relationships of nervous pathology. The papers of Drs. Carlos MacDonald, J. T. Searcy, and George Villeneuve once more brought forward the ever-important questions of the relationships of the legal and medical points of view on the subject of certain types of insanity. It is certain that the legal aspect is quite inadequate, and, if society is to be protected from some of its worst delinquents, modifications of the legal tests for insanity are necessary.

The "retraction theory" received a greater share of attention than its merits would seem to warrant. From the histological side Dr. Ira Van Gieson showed how, from the modern ideas of the structure of the nervous system, such a theory was compatible with the facts, while Dr. S. Paton took a diametrically opposite position, claiming that the work of Apáthy and Bethe negatived such action. From the clinical and therapeutic standpoint, Dr. W. A. White, of Binghamton, discussed the same theory in a thorough and temperate manner. His paper was conservative and stimulating, and deserves a high place among the contributions to this year's meeting.

One further point of interest, contributed by Dr. G. Alder Blumer, was the desirability of treating certain classes of the insane by the "boarding-out system." His position was well taken, and it is beyond cavil that some of the insane might be better cared for and treated in this manner than by the present method of herding them together in large general wards.

TRANSPLANTATION OF THE HUMAN OVARY.

WHILE the unpleasant manifestations usually associated with the menopause have perhaps been unduly exaggerated, especially by neurotic women, there can be no doubt of the desirability of avoiding them, so far as this is possible. The symptoms present seem in part related to loss of vascular tone, and the remedies that have proved most serviceable include, in addition to a regulation of the mode of life, such agents as increase vascular stability, *e.g.*, ovarian extract, adrenal extract, and ergot. It is not unreasonable to assume that these sometimes distressing accompaniments of the menopause are dependent upon withdrawal of the activity of certain organs, as for instance the ovaries, that either add to or remove from the circulation something that plays a definite part in the maintenance of the metabolic equilibrium.

These considerations are accentuated by the phenomena of the menopause induced artificially by surgical removal or destruction by disease of the ovaries early in sexual life; and gynæcologists have come to appreciate the wisdom of retaining, whenever possible, a certain amount, however small, of ovarian tissue, in order to prevent the development of the annoying symptoms. A remarkable illustration of this conservatism, and of the good results accruing therefrom, is afforded by the unique experience of Glass (*Medical News*, April 29, 1899, p. 523), who transplanted into a woman upon whom bilateral oöphorectomy had been

previously performed a healthy ovary from another woman whom it was deemed necessary, with her consent, to render sterile.

The first patient, a housemaid, thirty-nine years old, had suffered greatly from symptoms of the artificially induced menopause, while in the second, a woman seventeen years old, the vaginal canal was so constricted as a result of previous sloughing and cicatrization that it was feared, in the event of further pregnancy, Cæsarean section would be necessary. The conditions having been explained and consent obtained, resection of one tube and amputation of the other ovary were practised in the second case, and the healthy ovary was introduced through the vagina into the peritoneal cavity in the first case, in which subsequently sexual desire and menstruation returned, while the symptoms previously complained of disappeared.

Of course the conditions are not often present that would render possible such a double operation as has been described, but the results obtained in this case emphasize the importance of the function of the ovary apart from the rôle that it plays in the process of reproduction, and they also more than justify the conservatism that leaves, whenever possible, any healthy portion of a diseased organ probably possessing an internal secretion—and who shall say what organ or tissue has not, for in speaking of internal secretions we comprise virtually substances either thrown into the circulation or abstracted from it—and this function is probably subserved in varying degree by all organs and tissues.

THE ETIOLOGY OF LOCOMOTOR ATAXIA.

"The change of conditions, which the high development of industrial and commercial intercourse has produced, has raised in a formerly unknown manner the demands on our nervous system. For the masses, this has been brought about by the struggle for existence through the insufficient and unhealthful manner of living, and for the higher classes by reason of their sybaritism and pride of position. These explain, in large part, the constant increase of neurological disorders in our day."

This is the opening sentence of an able paper on the etiology of tabes ("Die Aetiologie der Tabes dorsalis," by Dr. Moritz Kende, in the *Zeitschrift für klinische Medicin*, vol. xxxvii., 1899, p. 49). It is becoming evident, we believe, that in this disease a polygenetic rather than a monogenetic origin is to be traced. Fournier's dictum so thoroughly and unabatingly championed by Möbius, that this disease is one of syphilitic origin, a meta- or parasyphilitic manifestation in the nervous system, is slowly undergoing considerable modification. The various theories with reference to the underlying pathological conditions show a similar condition of incompleteness. Recent writers, Moxter, Massary, Dejerine, Jellinek, Meyer, Obersteiner, Hitzig, Redlich, Eulenburg, Goldscheider, Strauss, Rosin, Leyden, Nageotte, Borgherini, and others, have all given descriptions of the pathological lesions which by their variations must lead to the conclusion that not only is the affection polygenetic in origin but polymorphic in its pathological features. Trepinski's embryonal investigations have tended in small part to clear up a certain amount of the pathological uncertainty, yet it is evident that the time is not far off, if not now actually present, when certain clinical types with a settled pathogeny must be differentiated.

Kende discusses a number of etiological factors, and shows for all of them that they may be the predisposing if not the exciting cause of the malady. Heredity, neuropathic disposition, chemical toxæmias (lead, ergot, tobacco, alcohol), cold, trauma, syphilis, gonorrhœa, excessive sexual indulgence, and extreme fatigue are treated *in extenso*. The conclusions that the author reaches are about as follows:

(1) Syphilis is not the only true cause of tabes.

(2) In many cases it can be shown that it does not even act as a predisposing cause.

(3) The opinion that cures would result if the inunction methods of treatment were carried out more systematically is not true.

(4) Inunctions usually, on the contrary, are apt to do more harm than good in cases of simple tabes. In those cases in which cures have been reported by this means of treatment it is highly probable that the diagnosis was doubtful.

(5) Tabes is more common among civilized races than among primitive peoples.

(6) Tabes has probably at its foundation some developmental defect of the nervous system, or it may be an acquired defect due to extreme fatigue or overexertion in the struggle for existence.

THE SLEEP PROBLEM.

In these days of rush and excitement, when the nervous system is too often stretched to its utmost tension, and when neurasthenia is rampant everywhere, the question of rest and sleep must be considered. The mode of living has so altered, even within the past thirty years and especially in this country, that the sleep problem is a matter of the first importance. This being the case, the fact that little is definitely known as to the cause of sleep is decidedly curious. Sleep—perhaps the most marvellous phenomenon in the world—may rightly be termed a mystery. But, as with everything to which by long use we have become accustomed, we regard it with indifference. In some journals and magazines in this country and in Great Britain instructive articles have been of late contributed in regard to sleep. Dr. Andrew Wilson, in the April issue of *Harper's Magazine*, takes the popular view that it is in the brain cells that we shall probably find such explanation of sleep as science can afford. Madame de Manaceine, who has in an essay published some few months ago collected and presented in an attractive form the principal facts dealing with the causation of sleep, says: "The truth is that although the problems of sleep have exercised some of the greatest intellects of ancient and modern times from Aristotle downward, all that we really know of sleep is due to the labors

of a comparatively small number of workers." The vasomotor theory of sleep is the one most widely accepted. Cerebral anæmia is one of the most potent predisposing factors. Fluger contends that carbonic acid plays a very important part in the causation of sleep. Nerve histologists have put forward the principal theories with regard to sleep, of which those advanced by Howell, of Johns Hopkins, have perhaps obtained the most credence. Leonard Hill thus summarizes the facts which are known concerning sleep: 1. Respiration. (*a*) The number per minute remains unaltered, the movement becomes shallow and thoracic in type; (*b*) the amount of inspired air per minute is lessened by from one-half to two-thirds; (*c*) the output of CO_2 is diminished by one-half to two-thirds. 2. Circulation. (*a*) The blood congests in the limbs; (*b*) the venous system is engorged; (*c*) the arterial pressure falls; (*d*) the pulse rate diminishes; and (*e*) the velocity of blood flow decreases. 3. Temperature. The temperature falls during the night. The production of heat is estimated to diminish by from half to two-thirds. 4. Nervous system. (*a*) The blood flow through the brain is diminished; (*b*) the acidity of the cortex decreases; (*c*) the excitability of consciousness to external stimuli steadily decreases during the first one to two hours of sound sleep. After that period the excitability rapidly becomes almost as great as it is toward the end of sleep; and (*d*) consciousness alone seems to be abrogated during sleep. The nerves and the special senses continue to transmit impulses and produce reflex movements. Cerebral anæmia is the theory which has the most wide acceptance, but, as Leonard Hill remarks, such speculations do not carry us far, and the causation of sleep must still be regarded as metaphysical. While, however, the cause of sleep still continues to be enveloped in more or less mystery, of one truth we are much too frequently cognizant in the present age—that of insomnia—possibly the worst misery to be imagined. Highly wrought nervous organizations, produced by the high-pressure living of our times, are in this country rather the rule than the exception. Therefore the absolute need for a period of repose spent among healthy, invigorating surroundings, which should be a *sine qua non* with the fagged-out brain-workers of our cities. This question is undoubtedly one of the most serious confronting the rising generation, who dwell in the busy centres of trade, and becomes more and more menacing as the years roll on.

Smallpox in Germany.—For many years, owing to the rigid enforcement of vaccination, which is possible under a well-inspired paternal government, Germany has been singularly free from smallpox. Recently, however, there have been a few cases, some twenty in all, reported from Würzburg and Hanover, and the excitement they have caused might have been justified by an epidemic of the black plague. Most of the cases occurred among some recently arrived Russian laborers who brought the disease with them. Very few Germans have suffered, and they only in mild form.

News of the Week.

More Christian Scientists in Trouble. — A man and his wife were recently arrested in Buffalo on warrants charging them with manslaughter in causing the death of a boy, nine years old. He, with his parents, had been visiting an officer of the Thirteenth infantry at Fort Porter. Warrants on the same charge were also issued for the parents of the child. The arrest was made under the United States laws, as the death occurred on federal ground. The boy is said to have died of pneumonia and without medical care.

A Slight to English Oculists.—The London *Truth* says that Dr. Pagenstecher, of Wiesbaden, who has been consulted by Queen Victoria concerning her eyes, recommends a speedy operation for the removal of the cataract with which Her Majesty is afflicted, and even goes so far as to guarantee that the operation will be successful, and that after it the Queen will entirely regain her sight. As once before, the curious are asking what is the matter with London ophthalmologists that Her Majesty should look to a German for advice and treatment.

The Maine Medical Association.—The forty-seventh annual meeting of this association will be held at Bangor, on June 7th, 8th, and 9th. A full programme is offered. The annual oration will be delivered by Dr. Maurice H. Richardson, of Boston, on Thursday evening, June 8th, the subject being: "Acute Abdominal Symptoms Requiring Immediate Surgical Intervention." The president of the association is Dr. C. O. Hunt, of Portland, and the secretaries are Drs. Charles D. Smith, of Portland, and Hannibal Hamlin, of Orono.

Dr. D. G. Brinton has presented to the University of Pennsylvania his entire collection of books and manuscripts relating to the aboriginal languages of North and South America. Dr. Brinton is one of the foremost authorities on this subject, and his library of works on American linguistics is perhaps the most complete in existence. Dr. Brinton was formerly editor of the *Medical and Surgical Reporter*, at a time when some real medical journals were published in Philadelphia.

Shorter Hours for Drug Clerks.—The secretary of the Druggists' League for Shorter Hours has issued a letter relative to the bill now in Governor Roosevelt's hands, in which he charges that intimidation is being used to compel the drug clerks to oppose the bill. He says that emissaries of the board of pharmacy have called upon the clerks and requested them to sign a petition against the bill. "Many clerks refused to sign the petition under duress, and were told that they were marked men, that they will be put upon a black list, and that they would have more difficulty in finding a job later on."

The International Tuberculosis Congress was opened in Berlin on May 24th. At the inaugural session in the Reichstag building in the morning, two thousand members, of whom two hundred were dele-

gates from German and foreign governments, were present. The Empress of Germany, as patroness of the Congress, was seated in the royal gallery. The minister of the interior, Count Posadowsky-Wehner, made the inaugural address, and an address of welcome was delivered by the mayor of the city. Remarks were also made by Drs. von Leyden, Waldeyer, and the representatives of the United States, France, Great Britain, Italy, Austria-Hungary, and Russia. Dr. J. C. Boyd, surgeon United States navy, was elected chairman of the United States delegation.

Homœopathic Pharmacists.—The manufacturers of homœopathic medicines have formed a national organization under the name of the American Homœopathic Pharmaceutical Association. At the first meeting of the association, held recently in Cleveland, Ohio, J. W. Clapp, of Boston, was elected *President;* F. A. Boericke, of Philadelphia, *Vice-President;* and William G. Jennings, of Chicago, *Secretary* and *Treasurer.*

Municipal Tuberculosis Hospitals.—Governor Roosevelt has signed Assemblyman Henry's bill to allow cities of the first class to establish, equip, and maintain outside of their corporate limits, with the approval of the State board of health, hospitals for the regular treatment of those afflicted with pulmonary tuberculosis.

Incorporation Refused for a Cancer Home.—The State board of charities has refused the application of Mrs. Rose Hawthorne Lathrop for articles of incorporation for the cancer hospital for women, which she has been conducting in this city for several years. Dr. Stephen Smith, of this city, to whom the matter was referred for consideration, reported against the granting of the incorporation papers. He says that the department of charities hospitals can care for all such patients as Mrs. Lathrop seeks to reach, and can do it better than she, for the reasons that there are in the hospitals trained nurses and competent attending and resident physicians, and what patients of this kind need principally, he says, is careful and skilful attention.

Aseptic Duelling.—Acting as principal in a French "affair of honor" has always been regarded as one of the least hazardous of occupations, but now it is rendered still safer by means of antisepsis. Since accidents may always happen, a combatant occasionally receives a scratch, so it is necessary to insure against the introduction of pathogenic microbes. At a recent encounter, brought about to decide whether Hamlet was fat or thin, it is reported that whenever the weapons used touched the ground the combat was immediately suspended until the blades could be passed through the flame of an alcohol lamp, in order to destroy any tetanus germs that might possibly be so taken on the tip of the sword.

Insanitary Coney Island.—In a report on the sanitary condition of Coney Island, the assistant sanitary inspector for the borough of Brooklyn says that a part of this health (?) resort is practically an open cesspool, and a menace to the health of the residents. The board of health has done everything possible to relieve the situation, but, owing to the absence of sewers, the place cannot be put into a sanitary condition. The approach of hot weather and the expected influx of visitors make immediate attention necessary, and it is suggested that the board of health ask the co-operation of the department of sewers, in order that something may be done at once.

Miss Florence Nightingale recently celebrated her eightieth birthday. She is said to be in very feeble health.

Home for the Aged in Northern New Jersey.—A meeting was held recently in Jersey City to discuss ways and means of establishing and maintaining in northern New Jersey a home for worthy aged people. A site for the home has already been donated at the head of Lake Wewarra, in New Orange, on the New Jersey Central Railroad.

Smallpox in Philadelphia.—The health authorities of Philadelphia recently discovered many cases of smallpox among the negro population of a section of the city most inappropriately called Nicetown. There is said to have been an epidemic prevailing in the place for weeks, but it was discovered only accidentally through the remark of a deacon of a negro Baptist church, who told a physician that negroes whose faces were covered with ugly blotches were attending the services of the church. The disease is thought to have been brought from Virginia.

The Plague is increasing in Hong Kong, the official reports for the first three weeks in May showing three hundred and thirteen new cases and two hundred and fifty-four deaths. In Egypt also the disease is spreading, more cases having been discovered in Alexandria and several also in Ismaila and other towns in the vicinity. Constantinople and other Turkish ports have declared a quarantine against Alexandria, but the plague is more likely to be introduced there by pilgrims returning through Asia Minor, or by travellers from Turkestan. The French minister of the colonies has announced that Grand Bassam, on the African Gold Coast, has been evacuated, owing to the ravages of yellow fever. It is believed, however, that the sickness at Grand Bassam is really the plague.

Antistreptococcic Serum in Tuberculosis.—At a meeting of the Orleans Parish (La.) Medical Society on May 13th, Dr. T. S. Dabney made a preliminary report on the treatment of tuberculosis by means of antistreptococcic serum. The first case was seen February 5th. The patient had been confined to bed for five weeks. A cavity in the lungs was well marked and tubercle bacilli were abundant in the sputum. A prognosis of death within a few weeks was given. On the date of the first injection of 10 c.c. of antistreptococcic serum the temperature was 102.4° F., the pulse rapid and thready, and marked anorexia and bronchorrhœa were present. The temperature was only 99° F. on the following day and normal the second day, and all the other symptoms

improved. Four injections were given on successive days, and the fifth and last one was given on the sixth day. The patient, a saloon-keeper, has gained thirty pounds in weight, looks well and eats well, and repeated examinations of his sputum have revealed no bacilli. Two other cases with similar results were reported. A fourth case, one of laryngeal tuberculosis of eight months' standing, was not benefited. The man died from starvation. The serum was tried in no case in which the life expectancy exceeded sixty days, or in which the diagnosis was not confirmed bacteriologically.

A German Hospital in Brooklyn.—The new German Hospital in Williamsburg was opened with appropriate ceremonies on Sunday afternoon last. The institution is on St. Nicholas Avenue between Stanhope and Stockholm streets.

Home for Aged Germans.—The new Fritz Reuter Alten Heim, a home for aged and indigent Germans, built by the members of the Plattdeutsche Volksfest Verein of New York and New Jersey in Schuetzen Park, Union Hill, N. J., was dedicated last Sunday afternoon. The home is a three-story brick building, with accommodations for seventy-two persons.

Drug Smugglers.—Special custom-house officers recently arrested four men charged with smuggling some $5,000 worth of drugs. On the premises of one of the prisoners was found a portmanteau containing a number of pound packages of phenacetin and opium, and in his pockets were found a number of invoices from merchants in Canada, of consignments of contraband drugs, together with a list of names of houses to whom these goods had been or could be sold, as well as the names of the men through whom the drugs were sold.

The Pennsylvania Society for the Prevention of Tuberculosis.—At the April meeting of this society the following officers were elected: *President*, Guy Hinsdale, of Philadelphia. *Vice-Presidents*, H. S. Anders, J. Solis Cohen, Benjamin Lee, health officer, Miss E. W. Redfield, Talcott Williams, and Major Moses Teale, of Philadelphia; S. A. Knopf, of New York. *Secretary*, A. H. Davisson, of Philadelphia. *Treasurer*, (Mrs.) Helen C. Jenks, of Philadelphia.

The Khalifa has Leprosy, according to the London *Daily Telegraph*. So far the disease has not made much progress, but the nails have fallen from his toes and the marks over his eyebrows are conspicuous. Latterly he has taken to wearing a veil. It is said that the malady was caught a few years ago through the Khalifa taking the wife of Faded Abed, a black emir and leper, who has since died. The name of the lady's former husband would have been, to English ears, warning sufficient against wedding the divorcée.

Smallpox in Public Institutions.—A case of smallpox was discovered last Sunday in the almshouse on Blackwell's Island, and, as a result of the investigation by the officials of the board of health, the place was put under quarantine. In the institution there are about two thousand persons, while on the island, in the various institutions, there are in all something like ten thousand. The patient, who was a clerk in the receiving office, had not been off the island for many months. As he examined almost every inmate admitted, it is thought that the contagion must have been brought by some late arrival at the almshouse. On the same day a virulent case of smallpox was found in the person of a man applying for relief at Bellevue Hospital. The man said he had been in the pest house in Buffalo with smallpox, but was discharged as convalescent on Saturday, and was provided with money enough to bring him to this city.

A Temporary Falling-Off in the Number of Graduates.—This is the first year that the requirement of the Association of American Medical Colleges for graduates to have taken a four years' course goes into effect, and, inasmuch as the students who matriculated four years ago found it possible to complete their course of study in three years, the number of medical graduates this year is markedly small. Starling Medical College, of this city, had but two graduates; the Ohio Medical University, four; Louisville Medical College had nine; and the medical department of the University of Louisville thirteen. Reports from other institutions show correspondingly small classes.—*Columbus Medical Journal.*

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending May 27, 1899. May 19th.—Surgeon F. Rogers ordered to the marine rendezvous, Philadelphia, Pa., May 23d, for duty in connection with recruiting. May 22d.—Assistant Surgeon C. H. DeLancy detached from the marine recruiting rendezvous, Savannah, Ga., and ordered to the *Amphitrite*. Assistant Surgeon Barton L. Wright appointed May 16th. May 23d.—Surgeon E. H. Marsteller detached from the *Raleigh* when put out of commission, and ordered home to wait orders. Passed Assistant Surgeon J. M. Moore detached from the *Raleigh* when put out of commission, and ordered home to wait orders. May 24th.—Passed Assistant Surgeon W. F. Arnold, sick leave extended two months.

The Plague in Egypt.—It is reported that the quarantine board at Cairo has declared the city of Alexandria to be infected with the plague. Two cases have occurred there. This is a realization of the fears of certain members of the Russian Society of Hygiene, who had information that the disease prevailed at Mecca, and apprehended it would be brought to the shores of the Mediterranean by returning pilgrims.

Obituary Notes.—Dr. Charles W. Pfeiffer died at his home in this city on May 23d, after a brief illness. He was born in Philadelphia in 1854, and was graduated from Bellevue Medical College in 1878. He became connected with the board of health, but resigned to accept the appointment of examining-physician to the street-cleaning department. A widow and four children survive him.

Society Reports.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Twenty-Fourth Annual Meeting, Held in Philadelphia, May 23, 24, and 25, 1899.

JOSEPH TABER JOHNSON, M.D., WASHINGTON, D. C., PRESIDENT.

First Day—Tuesday, May 23d.

THE meeting was called to order by the president, DR. JOSEPH TABER JOHNSON, of Washington, D. C., in the Hall of the College of Physicians, Philadelphia.

Address of Welcome.—DR. EDWARD L. DUER, of Philadelphia, delivered the address of welcome. He said that it must be claimed that gynæcology was of American parentage; certainly the American Gynæcological Society had become the sponsor of this special field of medicine while it was yet in its infancy.

Sixty-Five Consecutive Abdominal Sections without a Death; with Clinical and Pathological Reports.—DR. HUNTER ROBB, of Cleveland, read a paper with this title. The cases on which the paper was based were entirely unselected. After describing the organization of the surgical staff and the preparation of the patient, he called attention to a matter often overlooked, to the great detriment of the patient—*i.e.*, the use of proper clothing to protect against chilling. It was his custom to use gauze pads instead of marine sponges, and to dust the wound with a powder composed of one part iodoform and seven parts boric acid. When nausea and vomiting persisted after the first or second day, it could often be controlled by giving two tablespoonfuls of very hot water containing ten grains of bicarbonate of sodium, and repeating this at intervals of an hour. It was exceptional for him to use morphine after operation. The bowels were opened by calomel, assisted by enemas of glycerin and soapsuds. The immunity from serious sepsis in this series of operations he attributed to the technique, laying special stress on the use of saline solution in the abdominal cavity and the wearing of rubber gloves while operating. In only one case had drainage been used. Suppuration of the abdominal wound had occurred three times. The average stay in the hospital had been thirty-two days.

DR. J. M. BALDY, of Philadelphia, said that he had found it useful to give morphine on the first night after the operation. His results with gauze pads had been fully as good as those of his colleagues who had used sea sponges. He objected to rubber gloves, not only because of the difficulty of operating with them, but because they seemed to him unnecessary. It was a good precaution, however, for the hospital internes to use them.

DR. J. E. JANVRIN, of New York, said that he had seen Dr. Peasley use salt solution in the abdominal cavity as much as thirty years ago, and he thought it but right that to him should be awarded the credit for priority.

DR. A. PALMER DUDLEY, of New York, said that unless one drained through the vagina, gauze could not be depended on to do this work efficiently. One advantage of such a drain over a tube was that it did not afford the same opportunity for the entrance of air into the abdominal cavity; it also prevented the formation of adhesions of the intestine to raw spots in the pelvis.

DR. W. H. WATHEN, of Louisville, Ky., expressed himself as thoroughly in favor of vaginal section. It was quite exceptional for him to remove pus tubes by the abdominal route, and his results seemed to justify this practice. He believed that many lives had been sacrificed to the notion that the peritoneal cavity should be flushed out with salt solution.

DR. A. LAPTHORN SMITH, of Montreal, believed that the moderate use of opium after abdominal operations was useful, and that lives had been saved by irrigation with saline solution. He relied upon drainage through the vagina by means of a rubber tube in Douglas' culde-sac and in the vagina.

DR. J. WESLEY BOVÉE, of Washington, D. C., said there could be no question regarding the value of salt solution in these cases. It had been repeatedly demonstrated that it was impossible to render the hands perfectly aseptic, and keep them so for any length of time while operating, and consequently the use of rubber gloves by surgeons seemed to be imperatively demanded. Again, if such gloves were worn while operating on pus cases, the safety of the next clean case coming for operation would be materially enhanced.

DR. J. RIDDLE GOFFE, of New York, said that he did not hesitate to give morphine on the first or second night after an abdominal operation, but there would not be much need for it in the great majority of cases if the patient was allowed to assume a comfortable position on one or the other side, and in this way reduce the nervous strain.

DR. HUNTER ROBB closed the discussion. He said that it was not unusual for the drainage tube to become clogged in a short time with coagulated blood. Drainage, in his opinion, was not often required in pus cases. The rule given by some of the speakers, that the gloves need only be worn in septic cases, was of no practical value, for not infrequently the surgeon did not know at the time that the case upon which he was operating was really septic. Thus, he might operate on a cervix under the belief that the case was a clean one, and not know to the contrary until a microscopical examination had demonstrated the presence of gonococci. If rubber gloves were worn by the operator and his assistants, the only part which could not be made absolutely sterile was the skin of the patient. After a little practice it was possible to operate almost as rapidly with the gloves as without them.

Early Abdominal Sections for Fibroid Tumors with a Tabular List of All Operations Prior to 1863.—DR. CHARLES P. NOBLE, of Philadelphia, read a paper with this title. The paper was an historical sketch of these operations. The author said that the first English myomectomy had been done in 1863. The first American surgeon to perform this operation successfully was W. L. Atlee, who had operated in 1844. The paper closed by presenting a tabular analysis of the cases collected.

DR. CHAUNCY D. PALMER, of Cincinnati, said that in 1880 he had succeeded in collecting one hundred and sixty-five cases, and in these the mortality had been fifty per cent. About eighty per cent. of them had been operated upon under the mistaken notion that they were ovarian tumors. Dr. Thomas Wood, of Cincinnati, had been one of the very early operators in these cases, as he could personally testify. At that time Dr. Wood had been ignorant of the work of others in this field.

DR. T. A. REAMY, of Cincinnati, also recalled having seen Dr. Wood operate, and remembered that he had used only the instruments in his pocket case.

A Case of Spondylolisthesis, with Demonstration of the Pelvis.—DR. J. WHITRIDGE WILLIAMS, of Baltimore, reported this case. The patient was a colored woman, twenty-two years of age, who had advanced in pregnancy nearly to term. The abdomen was very pendulous, and there was slight asymmetry of the hips. There was also a slight scoliosis of the dorsal and lumbar vertebræ. On vaginal examination, what was supposed to be the sacral promontory was felt as a

sharp angle, but on further investigation this proved to be the fifth lumbar vertebra dislocated downward. The diagnosis of spondylolisthesis had accordingly been made. This woman had fallen on the ice, striking her back, some years before. She had also passed through a previous labor without special incident, so that it had been decided that symphyseotomy would probably be the proper procedure in her approaching confinement. This operation had been resorted to on the occurrence of labor, and a living child was delivered, but the mother had not done very well immediately after delivery. She had suddenly expired a few days later, presumably of pulmonary embolism. On post-mortem examination, the narrowest part of the superior strait was found to measure 7 cm., and there was considerable lateral narrowing at the inferior strait. The maximum contraction, however, corresponded, not to the sacral promontory, but to a point between the posterior margin of the symphysis and the lower margin of the third lumbar vertebra. Ankylosis existed between the superior articular process of the sacrum and the inferior articular process of the last lumbar vertebra. The articular processes were separated 2.5 cm. Dr. Williams said that Franz Neugebauer had been the first person to point out clearly the cause of spondylolisthesis, *i.e.*, that it resulted from a lengthening and separation of the articular processes of the vertebræ. Although in his earlier writings the view had been expressed that the condition was caused by fracture, he subsequently retracted this statement, and declared that spondylolisthesis was of congenital origin. In the case just reported, the congenital origin seemed apparent, the fall on the back having been only an exciting cause. When Neugebauer had published his first article, in 1881, he had been able to collect only twenty-six cases of spondylolisthesis, but at present there were one hunded and twenty on record. The present case was the first one in this country that had come to autopsy, in which the nature of the condition had been ascertained, and the second one in which symphyseotomy had been performed. While it was evident that symphyseotomy was not the operation of election in these cases, and that in the present instance Cæsarean section should have been done, it should be stated, in extenuation, that those in attendance had been misled by the assertion of the patient that she had already been delivered, without difficulty, of one living child.

Dr. E. P. Davis, of Philadelphia, referred to a case, seen in consultation, when the patient was already in labor, in which the typical deformity of spondylolisthesis had been discovered while manipulating the uterus immediately after a forceps delivery. He thought it was not uncommon, for one who examined a large number of women by pelvimetry, to find mild degrees of spondylolisthesis. Regarding the mode of delivery, he said that statistics showed that vertex delivery should be the rule in symphyseotomy cases, as version after this operation greatly enhanced the danger to the maternal parts.

Report of the Committee on Antistreptococcic Serum in Puerperal Sepsis.—Dr. J. Whitridge Williams, chairman of the committee, presented the formal report. He stated that it was necessarily a preliminary contribution, based on a critical review of the literature, as the experiments undertaken by the members of the committee had not been completed. The history of antistreptococcus serum dated back to February 23, 1895, when Marmorek had presented his first communication. This investigator had demonstrated that the virulence of streptococci could be preserved by cultivating them in a medium composed of two parts bouillon and one part human blood serum. He had also shown how immunity to streptococcus infection could be secured. A few weeks later Marmorek had presented a second communication, in which he had stated that he had used his serum in forty-six cases of erysipelas, with the most beneficial results. He had also treated sixteen cases of puerperal fever by this method. In seven of the latter there had been a pure streptococcus infection, and all of these had ended in recovery. In the four cases in which the streptococci had been associated with the colon bacilli, death had occurred. Marmorek had concluded that the first essential in carrying out this treatment was the determination, by bacteriological examination, of the presence or absence of streptococci, and that it was equally important that the treatment should be instituted quite early. In April, 1896, Charpentier had reported forty additional cases of puerperal infection, in which the antistreptococcic serum had been employed. Of this number, only twenty-four had terminated in recovery, but it should be said five of these had been moribund when first seen. This would make the mortality 35.25 per cent. All of these cases had, however, not been examined bacteriologically, and of the sixteen in which a streptococcus infection had been demonstrated, seven had been fatal. These poor results, accentuated by one or two cases in which the physicians in attendance had been of the opinion that death had been hastened by the use of the serum, had led most physicians to believe, with Charpentier, that the method had but little value. The committee had collected, up to the present time, 354 cases in which the antistreptococcic serum had been used. In France, twenty-seven observers had reported 214 cases; in Germany, one observer had reported 15 cases; in Great Britain and this country, 125 cases had been reported. Of these 354 cases, 281 had ended in recovery, so that the mortality was 20.6 per cent.—certainly not a very encouraging showing. Eighteen French and German observers had treated 70 cases in which the existence of a streptococcus infection had been demonstrated. Of this number 24 had been fatal, giving a mortality of 34 per cent. Sixteen English and American observers had treated 42 streptococcus cases with the serum, with the result that 13 were fatal, or a mortality of 31 per cent. Combining these cases, one had 112 streptococcus infections treated with the serum, with a mortality of 33 per cent. In the series of 242 cases treated with the serum, in which no bacteriological examination had been made, the mortality was 14 per cent. This low mortality was evidently to be explained by the assumption that many cases not due to streptococcus infection had been included, and that, in all probability, they would have ended in recovery without the serum treatment. It was probable that not more than one-third were streptococcus infections. Assuming this to be the case, and that all the deaths occurred in this group, one had 81 cases with 36 deaths, or a mortality of 44 per cent. Seven observers had reported 196 cases, in 55 of which the presence of streptococci had been proved by bacteriological examination. The mortality in these 55 cases had been 36 per cent., whereas the mortality in the remaining 141 cases had been only 8.5 per cent. The work of the bacteriologists seemed to show that while there were marked differences among the streptococci, these were not sufficient to admit at present of dividing them into distinct groups. Many experimenters stated that while a serum could be prepared which would be potent against that special variety of streptococcus, it would be found practically inert when used to combat infections by other streptococci. The speaker said that he believed Marmorek's work had been useful as far as it had gone, but his results had been obtained with a special form of streptococcus derived from a case of angina. It was evident, therefore, that the results were very contradictory, and that if this serum was to be of avail

it must be possible to identify the different varieties of streptococci, and treat each with a special serum. As this would be practically impossible, both at the bedside and in the laboratory, the outlook for the antistreptococcic serum treatment was quite discouraging. A statistical study showed that the results obtained were not, so far, any better, if as good, as those obtained without it in the treatment of puerperal fever. The results in experimental laboratories had been exceedingly contradictory. Our only positive knowledge on the subject was that it was possible markedly to increase the virulence of streptococci. Dr. Williams said that during the past three years he had seen 93 cases in which, during the puerperium, there had been a rise of temperature to 101° or 102° F. In all of these cases cultures had been taken from the uterine cavity, under suitable precautions, and in 23 there had been a streptococcus infection. Of this number, 18 had been pure infections with the streptococcus. All of these 23 cases had been kept on the verge of strychnine and drunkenness. After a thorough irrigation of the uterine cavity with sterile salt solution the uterus had been left severely alone. Although many of these women had been very severely ill, only one had died, giving a mortality of 4.35 per cent. The great point in the treatment was not to use the curette in these cases. It was evident from the foregoing that the treatment employed by the members of the committee had had little or no influence on the results. The high mortality credited to the antistreptococcic serum was probably to be explained by the use of the serum in only a comparatively small number of very severe cases. Another explanation was to be found in the custom of the French observers to curette these cases of streptococcus infection. It should be stated that the serum exerted no deleterious effect on the patient; consequently its trial was justifiable, but there was no guarantee that its use would materially improve the results already secured in the treatment of streptococcus infection by other methods.

Dr. H. D. Fry, of Washington, D. C., another member of the committee, described his experience with the serum. He had begun the treatment in his eight cases so soon as the bacteriological diagnosis had been made. In one case, in which the patient had received altogether 140 c.c. of the serum, it should be noted that the attendant had developed a facial erysipelas. The use of the serum had promptly checked the erysipelatous process. Three of his patients had died, two of them of infection following criminal abortion.

Dr. W. R. Pryor, of New York, said that as a member of the committee he had confined his labors to a review of the English literature on the subject, and had carefully excluded all cases in which the presence of streptococci had not been demonstrated by a proper bacteriological examination. He had personally adopted a special plan of treatment for these cases, embodying thorough curettage, evacuation of all fluids in the pelvic peritoneal pouch, isolation of the uterus by iodoform gauze packing, and securing a rapid absorption of iodine through the lymphatics. Saline infusions had been given with a view to hastening this absorption. He had noted that the specific gravity of the urine had risen proportionately to the quantity of iodine that had been absorbed.

Dr. Fernand Henrotin, of Chicago, opened the general discussion by emphasizing the bad results following curettage in these puerperal women. He was convinced that women were tampered with altogether too much. When the presence of streptococci had once been demonstrated, local treatment was unnecessary and was, in all probability, decidedly harmful.

Dr. Henry T. Byford, of Chicago, said that while it was proper to refrain from curettage, this did not mean that foreign matter should be allowed to remain.

The Abuse of the Curette in Puerperal Fever.—Dr. Robert A. Murray, of New York, instead of reading his paper on this subject, asked permission to incorporate its essential features in the present discussion. He advised that when there was an elevation of temperature in a puerperal case, the interior of the uterus should be explored with the finger, and any foreign matter removed by this means. An experience in two severe and protracted epidemics of puerperal fever, which had been checked only by this plan of treatment, had taught him its value. At one time the experiment had been made of substituting for the curetting repeated intrauterine douches, but the results had been even worse than with the curette, and the epidemic had persisted until controlled in the way just mentioned.

Dr. Edward Reynolds, of Boston, said that undoubtedly the curette had been abused, but it was very valuable, nevertheless, in a not inconsiderable number of cases. If the curette was used at all it should be with the greatest skill, and under the guidance of touch. After one thorough and gentle curettage, the uterine cavity should be irrigated and then left absolutely alone. He saw no objection to the use of the curette in those cases of streptococcus infection characterized by slight constitutional disturbance as compared with the local signs and symptoms, provided only that it was done in the first twenty-four hours. It was well to remember that the curette did harm in all cases in which the patient had successfully resisted the septic process for a considerable time.

Dr. A. H. Buckmaster, of Charlottesville, Va., advised that the sterile finger be used for the removal of all pus-producing tissue, following this procedure by an application to the endometrium of a mixture of equal parts of carbolic acid and glycerin.

Surgical Treatment of Acute Puerperal Sepsis, with Special Reference to Hysterectomy.—Dr. H. N. Vineberg, of New York, read this paper. He defined acute puerperal sepsis as an infection taking place in, or shortly before, labor, and manifesting itself within the first week by symptoms of variable severity, and terminating in recovery, death, or the chronic form of sepsis. The thorough and systematic exploration by bimanual palpation as well as by inspection should precede any course of treatment. Sometimes the sepsis did not announce itself until the eighth day, or after the cervix had contracted so much that the use of the finger was out of the question. If the pulse went above 130 and became weak and small, he believed, as a rule, that hysterectomy was indicated. Of course, this was an arbitrary rule, but it was as definite as could be given at present. The bacteriological examination, according to his experience, often proved unreliable in cases of puerperal sepsis. He had practised hysterectomy successfully in three cases of puerperal sepsis. Such cases should be operated upon by the abdominal route, if only because hæmostasis could be made more effective by this method. His conclusions were: (1) Puerperal sepsis was wound infection, and wound infection in the birth canal, as elsewhere, called for free drainage, irrigation, and the removal of exudates; (2) in a given case of puerperal sepsis a thorough search of the whole genital canal should be made; (3) if the source of infection was in the uterus, curettage, irrigation, and drainage should be employed; (4) in ninety-five per cent. of the cases this treatment would be sufficient, while for the others laparotomy was demanded, and in most of them hysterectomy was necessary; (5) when pus collections were favorably situated no time should be lost in evacuating them, but when not so situated it was sometimes wise to wait for some time.

Dr. A. Palmer Dudley, of New York, said that he had learned that the infectious process could usually be limited by the application of an ice-coil to the abdomen. In addition to this, however, he thought it was desirable to give internally the bimuriate of quinine and urea. He objected to the use of the finger, as this necessitated dragging down the uterus—a procedure which was liable to be followed by chill and aggravation of the symptoms. His own practice was to begin the local treatment by gently curetting the uterus with an irrigating curette, under a constant stream of hot bichloride solution, following this by a swabbing with carbolic acid.

Dr. T. A. Reamy, of Cincinnati, said that it was absurd to attempt to introduce one's finger, which was of a certain length, into a uterus of an uncertain length. It was not safe to use the sharp curette after the sixth month of pregnancy. He desired to protest most earnestly against the performance of hysterectomy for the indications laid down by Dr. Vineberg.

Dr. H. J. Boldt, of New York, said that he had employed the serum in quite a large number of cases which had appeared clinically to be streptococcus infections of a severe type. If the serum was used early he believed it was beneficial, but that its tardy use was futile. He did not believe in using the curette until the finger had located the tissue needing removal. If judiciously used by an experienced operator he did not believe the curette was a dangerous instrument. He had performed hysterectomy in some acute cases of sepsis, but with uniformly disastrous results.

Dr. A. Lapthorn Smith, of Montreal, said that he had been led to try the antistreptococcic serum in one case of puerperal sepsis. The first dose of 30 c.c. of the serum had temporarily reduced the temperature, and on the return of the fever he had given the serum three times a day, but in spite of this the temperature had steadily risen to 107° F., and then death had supervened. Prior to six years ago he had used the curette very little, yet but few of his patients with puerperal sepsis had succumbed. After that he had used the curette more freely for a time, but noticing that the mortality rate was higher, he had again largely discarded it, and with a corresponding improvement in the death rate. He made it a rule to give an anæsthetic in all his cases of puerperal sepsis, and determine by careful inspection the lesions present. After local applications to ulcerated spots, and the repair of lacerations, irrigation was practised, and then drainage was secured by means of a twisted rope of iodoform gauze inserted in the cervical canal. Into the vagina he put dry tampons and one ounce of boric acid.

Dr. J. W. Williams said that he had been enabled repeatedly by bacteriological examination of the discharge from a case of puerperal sepsis to state the prognosis positively and correctly. The curette was not applicable to streptococcus infections, though valuable in the other cases. Hysterectomy seemed to be useless in acute cases of virulent septicæmia, and was unnecessary in the milder forms.

Report of a Case of Kraurosis Vulvæ.—Dr. J. Montgomery Baldy, of Philadelphia, in conjunction with Dr. Williams, presented this report. He stated that the disease might be unilateral or circumscribed, and usually first attracted attention by an intense itching of the vulva. This was followed by discoloration of the surface and contraction of the vulva until finally, in the more advanced cases, the labia minora became fused into the labia majora, and the orifice became so small that sexual intercourse was no longer possible. The etiology was obscure, but he was inclined to look upon the cause as a local one.

Dr. Arthur W. Johnstone, of Cincinnati, recalled the fact that some years ago he had pointed out the very great similarity of this affection to trachoma, and that he had found that it was amenable to the same remedies. It had so happened that several cases of kraurosis had come to him in a comparatively short time, and the history of every one of these had shown the existence of trachoma of the eyelids in some member of the patient's family. The trachomatous lid would ordinarily tolerate the application of the yellow oxide-of-mercury ointment in the strength of ten grains to the ounce of vaseline, but in kraurosis its strength should not exceed four grains to the ounce.

Dr. Seth C. Gordon, of Portland, Me., said that he had met with three cases of kraurosis, occurring in women between thirty-five and forty years of age, and in all three the vagina had been practically closed.

Second Day—Wednesday, May 24th.

The Avoidance of Infection following the Operation for Complete Tear of the Recto-Vaginal Septum.—Dr. Howard A. Kelly, of Baltimore, read a paper with this title. He said that the classical method of treating complete tears of the perineum, while in general satisfactory, was occasionally just the reverse. A recent case had led him to consider as an essential part of the treatment the dissection and direct suture of the cut sphincter. It was not infrequent to meet with cases having perfect control both of fæces and gas, and yet there was a complete tear of the perineum. The only explanation of this was that the internal sphincter was responsible for the control. He had, therefore, adopted the plan of separately dissecting and suturing the internal sphincter. This method of separate suture, however, rather added to the danger of infection. With the finger in the bowel, a curvilinear incision was made, and a flap like an apron turned down so as to expose the fibres of the internal sphincter. Three or four buried figure-of-eight sutures were used to bring together the sides. This form of suture took the place of many more sutures of the interrupted variety, and they effectually prevented the formation of the usual "dead space" in the centre, so often responsible for infection and breaking down of the tissues. The fibres of the internal sphincter were caught in these sutures, and brought together. The external sphincter was likewise sutured, and the denuded vaginal surface stitched up in the manner usually adopted for contracting the vaginal outlet. This having been done, the "apron" flap would be found approximated and projecting from the anus as a puckered mass of tissue. By this method of operating the surface which had been in the rectum was thrown entirely outside of the anus, so that the wound surface faced in the opposite direction to the fecal mass. He had operated upon three cases by this method, the last one only a day or two ago. The first two cases had yielded an absolutely perfect result. His first operation of this kind had been performed in December, 1897.

Dr. A. H. Buckmaster remarked that he had been doing this operation for a considerable time, having operated upon about twenty-five cases, and with unusually good results.

Dr. Arthur W. Johnstone said that this operation appeared to him to be nothing more than an awkward attempt to follow the principle laid down by Tait. He had been operating by practically the same method since 1888, with only one failure, and that one due to faulty technique. The ends of the sphincter could be most easily brought together by rolling in the sides of the triangle with forceps.

Dr. Philander A. Harris, of Paterson, N. J., remarked that the "apron" flap seemed to be an entirely novel feature.

Dr. Baldy said that the avoidance of a wound in the rectum was certainly new.

Dr. A. Lapthorn Smith described what he considered to be a simpler method. He attributed many failures in these perineal operations to a neglect of the precaution to insert a rectal tube and so obviate the tendency to the accumulation of flatus.

Dr. T. A. Emmet, of New York, said that, in his opinion, the closure of a lacerated sphincter was one of the simplest of surgical operations. No matter how the sutures were inserted, if the bowels were not moved daily by saline cathartics a certain percentage would necessarily fail. A "dead space" was often produced by reason of the surgeon not denuding far enough beyond the fistula. The flap-splitting method simply meant the invasion of the connective tissue between the rectum and vagina—just what should be avoided.

Dr. R. L. Dickinson, of Brooklyn, discussed, by the aid of diagrams, the anatomy of the parts, and emphasized the fact that the "pit" did not constitute a good guide to the situation of the ends of the muscle fibres.

Dr. W. E. Ford, of Utica, said that experience had taught him the need for dissecting down below the pit in order to reach the ends of the muscle. One theoretical objection to Kelly's operation was the danger of buttonholing the flap while trying to turn down the apron.

Dr. I. S. Stone, of Washington, D. C., said that at one time he had been quite enthusiastic over Tait's method, but he had gradually learned that union occurred with a considerable interval between the ends of the muscle. He now found Emmet's operation entirely satisfactory.

Dr. J. Riddle Goffe stated that the cutting of the sphincter posteriorly greatly relieved the tension upon it, and did not seem to interfere with the control of flatus and fæces.

A Further Use of the Renal Catheter — the Localization of Obscure Pain in the Side.—Dr. H. A. Kelly also presented a brief communication on this subject. He stated that he had been using the renal catheter for the past twelve years to separate the urine from the two kidneys for purposes of diagnosis. It was not infrequently difficult to locate the obscure pain in the side and determine its nature. He was now able to include or exclude the kidney in such cases with absolute certainty by the following procedure. The renal catheter was passed into the kidney and from 8 to 20 c.c. of a bland fluid injected quickly, thus inducing a sharp attack of renal colic. The patient would then at once tell whether or not the pain that had been complained of previously had been located in the kidney, and in which kidney. This diagnostic method had been employed by him in a number of cases, and in some instances the diagnosis had been completely corroborated by operation.

Dr. Reynolds said that he had used with the greatest satisfaction an almost identical method of investigation, although ignorant of Dr. Kelly's labors in this field. His method was to insist upon the patient drinking large quantities of water for the twenty-four hours preceding the examination, and then to insert a renal catheter and block it. This obstruction of its lumen soon gave rise to a renal colic.

The President's Address.—Dr. Joseph Taber Johnson, of Washington, D. C., delivered this address. He said that some colleges had already seen the wisdom of establishing a full professorship, combining abdominal surgery with gynæcology. It was certainly quite natural that gynæcologists, who were compelled to repair the injuries that they had made in the intestine or other viscera, should operate upon similar injuries inflicted in other ways. In this way the field of the operating gynæcologist had steadily and rapidly broadened, and on this account a word of caution seemed proper to check the tendency of the young and inexperienced to undertake abdominal surgery or invent questionable modifications and improvements of well-known surgical operations and principles.

Malignant Disease of the Uterus.—The speaker then took up the consideration of the hopelessness of the average vaginal section for carcinoma of the uterus. Recent statistics, he said, showed that cancer of the uterus was more frequently seen among the better classes, and the reasonable deduction from this was that habits of life and eating must be looked upon as etiological factors. Cancer had increased in England among the better classes, but not in Ireland, where the people were as poor as they had been for fifty years past. Dührssen had stated that twenty-five thousand out of twenty-five millions died of cancer of the uterus, and that only one-tenth of the cases were cured by operation. The need for an earlier diagnosis was insisted upon, and the necessity for a society like the American Gynæcological Society, to take an active part in disabusing the profession and the laity of the false and absurd notions current regarding the hemorrhages and other abnormal conditions occurring about the time of the menopause, was pointed out.

Futility of Vaginal Hysterectomy for Cancer.—In his own experience, with forty-four vaginal sections for cancer, two had died in a week, and forty had died of a recurrence of the disease. Evidence was rapidly accumulating to show the utter futility of vaginal hysterectomy for malignant disease. The reason was probably to be found in the early involvement of the lymphatic glands. This denunciation of the vaginal operation did not deny the right of individual judgment.

Conservative Surgery.—The true meaning of "conservatism" was next carefully considered by the speaker at some length, and the point made clear that there were just as many honest and conscientious operators among the so-called conservatives as among their unfriendly critics. The advantage of resecting the ovaries and tubes, and thus preserving the natural functions as far as possible, seemed to have been clearly demonstrated.

Crural Thrombosis Following Cœliotomy in Aseptic Cases.—Dr. Henry C. Coe, of New York, read this paper. He said that there was a general disposition to regard crural thrombosis as connected with local sepsis. A number of cases were cited to show that this startling complication of abdominal surgery apparently occurred after aseptic and comparatively simple operations. The thrombus was more commonly found in the pelvic than in the crural veins, and gave rise, as a rule, to no symptoms until it had extended into the vena cava. It might be present before or at the time of operation. In the crural veins the clot tended to become organized. The absence of œdema was no indication that crural thrombosis might not be present. A careful review of the literature had failed to establish the etiology of post-operative thrombosis, particularly its connection with sepsis. An inquiry had elicited from Dr. W. H. Welch the reply, that in most cases there was nothing to arouse the suspicion that a septic condition had preceded the thrombosis. He suspected that this complication was more common now than formerly. It must be confessed that its nature was but little understood. Dr. Coe gave brief histories of six cases of crural thrombosis that had occurred in his practice, all within the past year. He said that a rigid review of the technique had failed to show any good ground for the belief that sepsis was the underlying condition. Singer had claimed that in these cases there was an unusually rapid pulse from the time of the operation

up to the development of the usual signs of thrombosis, and other observers had declared that this symptom was the most reliable indication of thrombosis in its early stage. This peculiar pulse had not been marked in his own cases; it seemed to be more especially associated with puerperal sepsis. In the management of these cases of thrombosis it was most important that the patient should be kept quiet on the back for a considerable time, and without manipulation of the limb. The physician was apt to yield to the importunities of the patient and allow her to sit up too soon. Singer had advised that she should be kept recumbent for three weeks, and while this might be somewhat extreme, it was certainly an excellent precautionary measure.

Dr. T. A. Emmet suggested that this form of thrombosis might possibly be the result of undue traction on the pelvic veins.

Dr. H. A. Kelly said that it was of practical importance to recognize thrombosis in three different parts of the body, viz.: (1) crural thrombosis; (2) pelvic thrombosis; (3) axillary thrombosis. In the less marked cases of crural thrombosis the diagnosis could often be made quite early by a careful measurement of the limbs. Pelvic thrombosis was more likely to cause embolism and death. He had met with two cases of axillary thrombosis. The important part of the treatment was absolute and prolonged rest, and even after the patient had been allowed to be up the greatest care should be taken to avoid all straining at stool.

Dr. W. E. Ford spoke of a case of embolism occurring after a simple operation for the removal of a small growth in the round ligament. He had not made much traction on the ligament during the operation. Everything had gone on well for a few days, and then the patient had suddenly expired with the usual signs of a pulmonary thrombosis.

Dr. A. P. Dudley was inclined to accept Dr. Emmet's theory that the thrombosis was dependent in part upon traction on the pelvic veins, although it was probable that another etiological factor was the temporary pressure of artery forceps on the pampiniform plexus of the broad ligament.

Dr. Fry reported a case of fatal thrombosis occurring after hysterectomy.

Dr. Hunter Robb said that he had very recently had a death from what had been supposed to be a thrombosis occurring on the seventeenth day after a vaginal hysterectomy. Much to his astonishment, the autopsy had revealed a large cyst of the brain as the cause of death.

Dr. George Tucker Harrison, of New York, reported a case of crural thrombosis following a laparomyomectomy after an interval of about three weeks. He added that a crural thrombosis was not necessarily dependent upon a septic process, for he had known it to develop in a lady immediately after she had stubbed her foot against a stone. It had eventually caused her death by setting up an embolic pneumonia.

Dr. Reuben Peterson, of Chicago, said that as he had met with thrombosis less frequently since he had substituted catgut for silk, his operative methods remaining the same, he was inclined to attribute the majority of cases of thrombosis to sepsis.

Dr. Malcolm McLean, of New York, said that so far no mention had been made of the probable part played by idiosyncrasy. He thought he had observed such an influence on several occasions. In two instances particularly in which sepsis could be excluded, crural thrombosis had taken place, and inquiry had shown a tendency to thrombosis in the patient's family.

Dr. C. P. Noble said that he had had two cases of thrombosis follow hysterorrhaphy, and here the theory that it was due to the injury of the vessels by the temporary application of clamps could be definitely excluded.

Dr. Wathen referred to a case of simple exploratory cœliotomy in which thrombosis and sudden death had occurred on the fifth day without premonitory symptoms.

Dr. George W. Jarman, of New York, emphasized the occurrence of these cases in minor abdominal and apparently aseptic cases, and stated that although he worked with the same materials and surroundings as Dr. Coe, he had had only one case of thrombosis.

Dr. H. N. Vineberg commented upon the occurrence of the thrombosis at about the time of the absorption of the catgut, and queried as to the mode of its preparation.

Dr. Cushing, of Boston, said that he did not think sepsis had anything to do with his class of thromboses. He had noted their occurrence after comparatively slight operations.

Dr. Coe replied that he had used Leven's catgut.

Inversion of the Uterus, with a Review of the Various Operative Procedures for Its Treatment, and a Description of the Writer's Operation for Chronic Inversion.—Dr. B. Bernard Browne, of Baltimore, read a paper with this title. He said that he had been unable to find a record of any case of chronic inversion of the uterus that had been cured by operation prior to 1847. In that year, one of sixteen months' duration had been successfully reduced. The frequency of this accident was hard to determine because of the great variations in different sets of statistics. Thus, according to the figures of the Rotunda Hospital, during a period of one hundred and twenty-three years, one hundred and ninety thousand eight hundred and thirty-three women had been delivered there, yet only one case of acute inversion had been observed. In exceptional cases the process of inversion undoubtedly began in the cervix. Among the causes of this complication were, the upright position during parturition, a short cord, distention of the uterus by liquor amnii, severe coughing, blows on the abdomen, fatty degeneration of the uterus at the placental site, intrauterine polypi, and lifting heavy weights while menstruating. The case of chronic inversion that had come under his observation was that of a woman of twenty-eight years, who had had hemorrhages for six years following a confinement. A tumor had been discovered in the vagina, but had been thought to be a fibroma. When seen by him in 1883 the diagnosis of chronic inversion had been made, and the more usual methods of treatment had been tried, but without success. He had finally succeeded by making an incision into the uterus, dilating first with a steel dilator and afterward with Hanks' rubber dilators, and then sewing up the opening made, and reducing the inversion.

Dr. Andrew F. Currier, of New York, thought the introduction of the dilator through the cervix, in some cases, might prove injurious.

Dr. H. C. Coe advocated the plan of opening the abdomen as soon as one was satisfied that the manipulations attendant upon overcoming the inversion were likely to prove unusually difficult.

Dr. Chauncy D. Palmer, of Cincinnati, said that he had seen upward of fifteen cases of inversion of the uterus occurring in the practice of midwives. He had endeavored with his thumbs to indent the fundal wall on one side. In the chronic cases, the patient should be kept on the back, and subjected to a course of treatment consisting of vaginal irrigations with hot water and the introduction into the vagina of boroglyceride tampons. This treatment should be continued for several weeks, an attempt to overcome the inversion being made about once a week.

Dr. G. T. Harrison recalled the fact that Emmet's method was to spread the fingers apart in the vagina,

and endeavor to reduce first the part that had come down last. One way of reducing chronic inversions was by the prolonged and steady pressure exerted by a colpeurynter.

Dr. Harwood, of Montreal, was invited to discuss the paper. He stated that he had had only two cases, both acute. One of them had proved fatal; the other had ended in recovery. In both he had performed hysterectomy.

Dr. E. P. Davis remarked that one cause of inversion of the uterus was the misapplication of the Credé method of delivering the placenta. This method did not call for any dimpling of the uterine fundus.

Dr. Noble objected to methods of treatment involving the dilatation of the ring, as the application of force from below not infrequently produced serious traumatism, sometimes so great as to call for amputation of the uterus.

Dr. Maury, of Tennessee, reported a case of chronic inversion in which various methods of treatment, including the use of the colpeurynter, had proved of little avail. Success had been finally achieved by forcible dilatation of the cervix and reduction of the inversion, after which the cervix had been closed by silver wire sutures for five days, as recommended by Emmet.

Dr. Reuben Peterson said that in one case he had recommended treatment of an inversion by the Thomas method of abdominal section, but the patient had declined operation. Two years later he had seen her riding a bicycle, and, on inquiry, had learned that the inversion had given her no special inconvenience beyond a somewhat free menstrual flow, and that she did not think the condition of sufficient importance to demand treatment.

Dr. Browne, in closing the discussion, said that most cases of chronic inversion, except those produced by fibroid tumors, occurred about seven or eight days after delivery. Amputation was very seldom required, and should be looked upon as a last resort. In the past, taxis had been tried too long; it was better to resort to operation earlier.

Is the Sloughing Process at the Child's Navel Consistent with Asepsis in Childbed?—Dr. Robert L. Dickinson, of Brooklyn, presented a communication with this title, the object of which was to advocate primary amputation of the funis and closure of the umbilicus in accordance with modern surgical principles. The principles involved were: (1) Mass ligatures should be avoided, as ligatures should be applied directly to vessels; (2) a hernial opening should not be closed by a granulation scar, but by primary union; (3) if the location of the line of demarcation were known—and it was in the case of the separation of the funis—removal should be practised at or beyond that point; (4) that that form of operation should be chosen which would do away with pus production and sloughing. While the general practitioner usually declared that he rarely, if ever, saw umbilical infection, the statistics of maternity hospitals showed that more or less infection was common—indeed, pneumonias, atelectasis, and various other conditions, developing even as late as two or three months after birth, had been found to be of septic origin, even when the navel had healed kindly. The fact that fifty papers on this subject had been published in five years showed a dissatisfaction with present results. It had been abundantly proved that the elastic ligature, by following down the Wharton's jelly as it contracted, would more securely control the vessels of the stump. The use of Skene's hæmostatic forceps reduced the slough to a minimum, but still the sloughing was not entirely eliminated. Dr. Dickinson said that he had tried various methods. The moment the child was born its abdomen was wrapped in a sterilized towel, so as to avoid external contacts. After the mother's immediate wants had been attended to, the skin around the base of the umbilical cord had been snipped with scissors, and a ligature applied directly to the umbilical vessels at the base of the stump. Another method was simply to cut off the cord, apply a pad and a piece of adhesive plaster. This method had been tried in only a few cases, and the results were as yet inconclusive. Still another plan was to cut off the cord close to the abdomen with scissors, and then suture the surface of the stump.

Dr. E. P. Davis remarked that the much greater frequency of umbilical sepsis in the European maternities than here was easily explained by a comparison between the classes of nurses employed. The ligation of the cord should be preceded by crushing with an aseptic compression forceps. One aseptic ligature, drawn fairly tight, would then be sufficient. The stump should be wiped with a moist bichloride sponge, and covered with a sterile pad. Under this treatment aseptic healing would occur in the majority of cases.

The Use of Compression Forceps in Salpingo-Oöphorectomy and Hysterectomy, with Remarks upon the Angiotribe.—Dr. I. S. Stone, of Washington, D. C., described in this paper a number of cases that he had treated by this means, and dilated upon the freedom of pain after the operation, and the smooth convalescence.

Dr. H. T. Hanks also spoke highly of the instrument.

Dr. J. Duncan Emmet, of New York, could not see any advantage of the angiotribe over Skene's hæmostatic forceps except that of greater convenience when used in private practice.

Dr. P. A. Harris thought it reasonable to suppose that an attack of vomiting might very easily give rise to hemorrhage after the use of the angiotribe.

Dr. C. P. Noble could see no good reason for discarding the ligature, especially for such a large and awkward instrument as the angiotribe. The latter could be used only under exceptionally favorable conditions.

Dr. Joseph E. Janvrin, of New York, said that he had seen Dr. Clement Cleveland use the angiotribe very successfully in a number of cases, but personally he still used clamps in his vaginal operations. In vaginal hysterectomy for carcinoma he had been in the habit of applying one large clamp to either broad ligament for twenty-four or forty-eight hours, but it was reasonable to suppose that there would be an advantage in applying the angiotribe for only a few minutes as against this long application of clamps; certainly it would save much pain and nervous irritation.

Dr. J. R. Goffe said that he had used the angiotribe in two vaginal hysterectomies with entire satisfaction. Two applications of the angiotribe on each side, for two minutes each, would control all the vessels.

Dr. George M. Edebohls, of New York, said that for him it was a question of the use of the angiotribe or of ligatures, as he had discarded clamps. He could apply a ligature more easily in a difficult place than the angiotribe in the same place, and, moreover, he found it difficult to be sure that nothing was included in the grasp of this powerful instrument that was not wanted there.

The Treatment of Broad-Ligament Cysts by Vaginal Incision and Drainage.—Dr. T. J. Watkins, of Chicago, in this paper considered only non-pedunculated cysts. The differential diagnosis, he said, between intraligamentary and other cysts was easily made in most instances by a vaginal incision and the determination of the relations to the peritoneum. The method of operating which he followed involved an incision into the posterior vaginal wall, but not the opening of the peritoneum.

Dr. Pryor said that in 1896 he had recommended

entering the peritoneum in these cases with the object of inspecting the ovary and tube on the other side. By the vaginal method one was able to palpate the interior of the cyst. As these were cysts of retention, their fluid contents were sterile, and would become infected only by a faulty technique.

Dr. Bache Emmet, of New York, said that when these retroperitoneal cysts were of long standing, and there had been an extensive development of vessels about them, it was inadvisable to operate upon them from above.

Third Day—Thursday, May 25th.

Remote Results of Shortening the Round Ligaments by Vaginal Section.—Dr. Henry T. Byford, of Chicago, read this paper. He said that it was his practice to combine shortening of the round ligaments with hysteropexy or suture of the uterus over the bladder. When hysteropexy was performed by abdominal section, the uterus sank down to a lower level than that at which it had been when sutured. As a result of distention of the bladder, and the dragging produced by its own weight, it might be expected to sink somewhat farther. He had followed most of his cases for periods varying from a few months to some years after operation. There had been no complaint of bladder trouble, and he knew of but one recurrence of the retroversion, and of two cases only in which the uterus had sunk low in the pelvis without complete retroversion. The uniformity of the good results in his later cases had exceeded his expectations. His paper was based on thirty-one cases, and showed that there was reason to believe that the uterus would remain in good position, and that it would probably not give rise to complications in subsequent pregnancies. One case of pregnancy was reported in which the operation had given rise to no disturbance whatever, and the uterus had maintained its position after confinement. Many of his patients had been virgins, thus making the operation difficult. He considered his results fully as good as those from Alexander's operation, and there was less liability to failure. The only drawback to the operation was that the exudate around the uterine horns might remain tender for several weeks, necessitating the avoidance of much exertion for two or three months after operation. The method was not offered as a substitute for Alexander's operation, for when the uterus was approximately normal in size and shape there was no operation better than that of Alexander. His own method was somewhat more difficult and dangerous, and should, therefore, be used only in the class of cases that he had indicated.

Vaginal Cœliotomy.—Dr. A. Lapthorn Smith, of Montreal, read a paper on this subject. It was based on eleven cases in which this operation had been done. He stated that vaginal cœliotomy was a great boon for women whose ovaries and tubes required to be removed for minor pathological states. The surgeon was not justified in doing it, however, when there were no adhesions, because Alexander's operation would give better results without opening the abdominal cavity. In two cases he had been obliged to abandon the vaginal route and finish the operation through the abdomen. Before attempting the operation a very careful bimanual examination should be made through the vagina under an anæsthetic. The author's conclusions were: (1) Vaginal cœliotomy was indicated in retroversion fixation, in minor diseases of the ovaries and tubes, and in small fibroid tumors, but the method was, on the whole, more difficult than the abdominal one; (2) if the uterus was movable, and there was no adhesion, one was not justified in opening the peritoneal cavity either by the abdomen or vagina in order to shorten the round ligaments; (3) the operation through the vagina was more difficult for the removal of pus tubes than the abdominal operation except when the uterus was removed at the same time; (4) the vaginal operation was a little safer on account of better drainage, but, on the other hand, was more dangerous in another direction, *i.e.*, the wounding of the ureter; (5) clamps were not desirable, as they prolonged convalescence by inflicting injury on the nerves and tubes; (6) for the removal of chronically inflamed ovaries and tubes vaginal cœliotomy presented decided advantages, viz.: (*a*) it was less dangerous; (*b*) it was less painful; (*c*) there was no tell-tale scar, a matter of some importance to young single women; (*d*) there was less danger of hernia after vaginal cœliotomy—indeed, it was entirely preventable; (*e*) conservative work could be done on the ovaries and tubes with great ease; (6) tubal pregnancy, before rupture, and before the twelfth week, could be readily removed by vaginal cœliotomy; (7) in general terms, all cases in which the parts to be removed were small and low down were suitable for the vaginal operation.

The Scope of Vaginal Work.—Dr. J. Riddle Goffe, of New York, in this paper expressed the opinion that fully ninety per cent. of cases of pelvic disease in women could be successfully treated by the vaginal incision, and with less risk.

Dr. A. P. Dudley said that he was now able to report one hundred and twenty-six cases in which he had practised conservative surgery on the ovaries, with the result that there had been eighteen subsequent pregnancies.

Dr. Edward Reynolds said that the vaginal operation, while useful in a few cases, could hardly be looked upon as a rival of ventral suspension. After making the anterior incision, the bladder should be dissected away for a short distance upward and downward, and then the sutures were inserted in such a way as to make the anterior vaginal attachment higher up.

Dr. Fernand Henrotin believed that Alexander's operation was seldom called for, for the reason that it did not allow of sufficient thoroughness in operating. He preferred the abdominal route for conservative work on the appendages. Having opened the abdomen and determined by actual inspection the true condition, Alexander's operation should be done on women of the child-bearing age, and ventral suspension in others.

Dr. Pryor said that any hemorrhage or leaking of pus could not be so well controlled through the anterior as through the posterior incision.

Dr. Bovée said that the operation of transplanting the anterior vaginal wall higher up was applicable only to those cases in which that wall was attached too low down on the cervix, or was too short. If the retrodisplacement was the result of relaxation of the posterior attachments, the effect of such an operation was to pull the uterus still lower, and hold it still farther forward. He was inclined to think that the broad ligaments had as much to do with the suspension of the uterus as had the anterior and posterior ligaments.

Dr. Wathen said that in an experience of about eleven years in vaginal work he had never wounded the ureter or the bladder. It was impossible to do more conservative work by the abdominal than by the vaginal route.

Dr. A. Lapthorn Smith said that every case of retroversion without adhesions should be cured by Alexander's operation. In vaginal fixation the uterus was fixed to a movable point, which was certainly a drawback. The removal of the uterus, it should be remembered, shortened the vagina very much and brought trouble into the family.

Dr. Goffe remarked that he saw no reason why ectopic pregnancies could not be treated as radically through the vagina as through the abdomen.

Tuberculosis of the Kidney as an Indication for Nephrectomy.—Dr. Edward Reynolds, of Boston, presented this paper. He stated that tuberculosis of the kidney was not always the destructive process that it was in other organs. When occurring primarily and unilaterally in persons in fair health it was an insidious disease, characterized by trivial symptoms often for many years. If the diagnosis could be made, and appropriate treatment instituted at this stage, it was probable that a cure could be effected. Success in the operative treatment depended upon the selection of those cases in which the disease was essentially chronic, and in which the patient's general health had remained good. Almost invariably the family history was decidedly tuberculous. By palpation of the kidney, inspection of the bladder, catheterization of the ureters, analysis of the separate samples of urine, including a search for tubercle bacilli, and finally by inoculation of guinea-pigs with the urinary sediment, the diagnosis could be established. The enormous mortality in the past from nephrectomy in these cases had been due partly to an improper selection of cases, and partly also to the postponement of the operation until it became a last resort. In two cases of tuberculous ulceration of the bladder, local cauterization had effected a cure.

Dr. Arthur W. Johnstone said that from the good results of local cauterization it had occurred to him that perhaps it would be still better to cauterize and drain.

Dr. Reynolds replied that he had not used the actual cautery, but the solid stick of nitrate of silver. Drainage was a useful procedure, but it had so often resulted in a protracted and hopeless suppuration that he did not feel hopeful regarding it.

Conservative Gynæcology.—Dr. Seth C. Gordon, of Portland, Me., read this paper. He asserted that the days of the old office intrauterine treatment had largely passed away, he hoped never to return, for it had tormented the patient, taken her money and time, and brought great discredit on the medical profession. The greater part of the paper was a criticism of Dr. H. A. Kelly's article of a year ago on myomectomy. His conclusions were: (1) Fibroids may develop more rapidly after removal by such an operation as myomectomy; (2) in all operable cases in women past the child-bearing age hysterectomy is far more conservative to health than myomectomy; (3) only in women within the child-bearing period is myomectomy justified; (4) conservative gynæcology means the saving of healthy rather than of diseased and useless organs.

Dr. Pryor said that myomectomy was wholly out of place from the standpoint of the surgeon desiring to effect a radical cure, for it was impossible to tell whether or not all the fibroids had been removed. In those exceptional cases in which the woman insisted upon the preservation of her sexual organs at all hazards myomectomy might be appropriate.

Dr. T. A. Reamy said that he was not a true surgeon who could not justly consider the social and moral side of such a question. He had repeatedly removed large fibroid tumors by morcellement or internal myomectomy, and had cured the woman without sacrificing the uterus.

Dr. A. P. Dudley remarked that for ten years he had been conserving the generative organs of women irrespective of their desires in the matter.

Dr. Baldy thought that in comparatively few cases was myomectomy clearly indicated. Among Dr. Kelly's cases there had been a very large percentage in which secondary operations had been demanded.

Dr. Noble remarked that the percentage of recurrences in Dr. Kelly's cases had been only one per cent.

Dr. Baldy replied that this percentage would be very much larger after more time had elapsed.

Dr. Henrotin thought hysterectomy was the operation for fibroids, and that myomectomy for tumors of moderate size was more dangerous than hysterectomy.

Dr. Gordon, in closing the discussion, said that a woman had a right to insist that the surgeon should cure her, and hence myomectomy in many of Dr. Kelly's cases did not seem to him to have been appropriate. If the woman elected to sacrifice certain organs in order to secure restoration to health, it was the duty of the conscientious and honest surgeon to do it.

Abdominal Operations for Conditions Complicating Typhoid Fever.—Dr. J. Wesley Bovée, of Washington, D. C., reported in this paper a case in which an abdominal operation had been demanded for the removal of pus tubes. The fever and other symptoms had led him to think an operation for the pelvic condition should not be postponed, and accordingly after the woman had been in the hospital only a few days, he had operated. Two or three days later he had suspected the presence of typhoid fever, and this suspicion had been confirmed by the Widal reaction. It was probable, from the history, that the patient had had typhoid fever in a mild form before coming to the hospital, and had then suffered a relapse.

Dr. Fry also reported a case in which he had operated in the course of a typhoid fever.

Etiology of Non-Malignant Rectal Stricture.—Dr. Reuben Peterson's paper on this subject was, at his request, read by title.

Officers Elected.—*President*, Dr. George J. Engelmann, of Boston; *Vice-Presidents*, Drs. Edward L. Duer, of Philadelphia, and Seth C. Gordon, of Portland, Me.; *Secretary*, Dr. J. Riddle Goffe, of New York; *Treasurer*, Dr. J. Montgomery Baldy, of Philadelphia.

Surgical Suggestions.

Urethral Stricture.—The virulence of the gonococci is weakened by remaining in the same soil where they have proliferated, and this is the reason why the secretion of a chronic gonorrhœa produces a milder form of this disease. At each relapse the gonococci from the inflammatory exudation are carried to the surface, and are thus eliminated; but after long continuance of the gonorrhœa the papillary body does not react any more, and the gonococci remain in it and also in the follicles, maintaining a prolonged and constant irritation, which ends with proliferation of the mucous membrane and formation of hard cirrhotic tissue, which we know under the common name of stricture.—A. Ravogli.

Hints.—Whenever iodoform or any of the iodine compounds is applied as a dressing, the part should be inspected the next day, owing to the possibility of the occurrence of dermatitis. When the latter occurs it often gives rise to heightened temperature, and might lead to the belief that wound infection had taken place.—In the absence of organic disease, the ability of a patient to stand severe surgical operations depends greatly upon the state of his blood-vessels. Hardened arteries in middle age place the patient, for surgical purposes, in the class of old men. "A man is as old as his arteries."—It is well known that some injuries are especially likely to be followed by shock. In the presence of such injuries, even if the patient shows no shock, take every precaution against a condition which is apt to arise at any moment.—Statistics appear to show that chloroform is less dangerous in warm than in cold countries. It is there-

fore always advisable, whenever for any reason chloroform is to be preferred to other anæsthetics, to see that the operating-room has a high temperature.—INFECTION in deep tissues often gives rise to no other symptom than deep pain, and sometimes inability to move the part. Whenever there is deep pain with rise of temperature inspect the nearest lymphatic glands.—*International Journal of Surgery.*

Nasal Hemorrhage.—A ligature is passed through the nose in the same manner as for posterior plugging. A piece of gauze is folded to from sixteen to twenty-four thicknesses (according to the size of the nose), making a pad about an inch and a half long and three-quarters of an inch wide. The ligature is tied around the middle of this gauze pad, which is then drawn into the naso-pharynx by traction on the ligature and aid from the finger, and then, by steady pulling on the ligature, into the posterior part of the nasal cavity. As the pad enters the nose the ends fold back, thus doubling its thickness and making pressure on the lateral walls. It has been my experience that, as the pad is drawn into the nose, the hemorrhage stops. No anterior packing is required. —A. W. WATSON, *Univ. Med. Magazine*, December, 1898.

Sarcoma of Long Bones.—In a review of fifty-four cases observed in the clinic at Göttingen, Professor Reinhart (*Deutsche Zeitschrift für Chir.*, No. 47, 1898), the following classification is made: (1) Pure periosteal sarcoma; (2) sarcoma both periosteal and osseous—that is, involving both; (*a*) origin probably from periosteum; (*b*) origin probably from bone. (3) Pure central sarcoma. Class 3 is more frequent than Class 1. Class 1 is found most frequently on the shaft of the bone; class 3 near the epiphyseal line, but the portion primarily affected is on the shaft side of the epiphyseal line and not on the epiphyseal. The greater frequency is in male subjects between the ages of fifteen and twenty-five. Diagnosis has to be made from tuberculosis near the epiphysis, and incision may be required. Eighteen per cent. remain cured after operation. Partial excision is not favored.

Cystitis versus Pyelitis.—In cystitis there is always more pus than in pyelitis, and for this reason kidney epithelium is found more readily in pyelitis because of the smaller amount of pus present. After centrifuging the urine, it should be tested for the amount of albumin it contains. In cystitis it is found absent or present, depending on the amount of pus; whereas in pyelitis a considerable quantity of albumin is always found. The explanation for this difference is due to the fact that the kidney is a much more vascular organ than the bladder, therefore exudation takes place more easily. Red blood cells are found more frequently in pyelitis than in cystitis. In pyelitis casts are often found. Clinically, we might succeed in distinguishing these two conditions by washing out the bladder with sterilized water immediately after urination; examining the urine collected, and also the washings or pus. If the water contains a considerable amount of pus it is probably cystitis.—JOHN A. WESENER.

Broken Neck.—A case of broken neck should be treated (1) by extension and counter-extension, or by Walton's method of "retro-lateral flexion toward the side toward which the face looks and then rotation back to the normal position," especially if there is any deformity. Danger of sudden death should be borne in mind according to Dupuytren, though no cases have been reported. (2) This failing to relieve, laminectomy should be done, as offering the only chance to the patient, though it may not be successful more than once in fifty cases. (2) Absence of patellar tendon reflex is not invariably a contraindication to operation. (4) Fracture-dislocations in the cervical region are far more serious than those occurring elsewhere, but not necessarily hopeless. (5) Operations, if done at all, should be done at the earliest possible moment, before degeneration of the cord takes place.—GEORGE TULLY VAUGHAN (*The National Medical Review*, December, 1898).

Intubation versus Tracheotomy in Diphtheria.—Dr. A. E. Mitchell, in a paper read before the Ulster Medical Society, discussing the value of intubation as compared with tracheotomy in diphtheria, condemned the former operation (1) as being likely to force any pieces of loose membrane down into the trachea with the risk of instant suffocation; (2) as giving rise to great difficulty in feeding; (3) as liable to cause ulceration of the swollen vocal cords with permanent impairment of function; (4) as not affording such free exit for pieces of membrane, tracheal secretion, and so forth; (5) because, if the tube was coughed up, the nurse was totally unable to replace the tube.

Mixtures of Ether and Chloroform.—Dr. W. J. McCardie (*The Lancet*, December 17, 1898) says: "Statistics of the Germans and practical experience go far to show that a mixture, in all cases freshly prepared, such as the A.C.E. or a mixture containing ether and chloroform in which the ether is present in rather greater proportion than in the A.C.E. mixture—say in the proportion of 2 to 1 or 2½ to 1—is reasonably safe and probably the safest anæsthetic for routine use. Several cogent reasons are: (1) Both ether and chloroform are diluted; (2) they are given with plenty of air; (3) there are less chilling and irritation of the air-passages than when ether is given alone; (4) the breathing is more obvious than when chloroform alone is given; (5) the pulse and respiration are rather stimulated than depressed; (6) the dangers of over-depression by chloroform or of over-stimulation by ether, the latter being a factor not always realized by the administrator, are to a certain and sometimes large extent avoided."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PROPOSED CENTRAL HOSPITAL BOARD—THE TROPICAL SCHOOL—COLONIAL NURSING ASSOCIATION—MEDICAL SOCIETY—COLEY'S FLUID—ENCYSTED STONE—RESECTION OF LARGE INTESTINE—CLUMPING OF CHROMOCYTES—DIPHTHERIAL PARALYSIS—CONGENITAL TUBERCLE IN CALVES—TUBERCULOUS ULCER OF THE STOMACH IN CHILDREN—ANTI-VIVISECTION—MR. TAIT COMPOSES HIS EPITAPH.

LONDON, May 12, 1899.

ON Monday a special meeting of the council of the Charity Organization Society was held, to consider the report on the subject of a central hospital board, and also a report on general practitioners and hospitals. The position of the Sunday, Saturday, and the Prince's funds was alluded to, and the report concluded with the hope that a union of these three funds would be formed, and that the Central Hospital Council might enlarge its borders on representative lines and become the central board. The council represents only those hospitals to which schools are attached. Sir W. Broadbent thought larger influence might be exercised if the smaller hospitals were represented, and

spoke sympathetically of the Sunday and Saturday funds, on the resources of which he did not think the Prince's fund would trench. Certainly it was not supposed that this would be the case, for the great object of the prince was to appeal to sections of the community which had not been reached by other agencies. In reply to another speaker, however, Sir William said that by carrying out the scheme a long step would be taken toward suppressing the small hospitals. This remark shows that the managers of the smaller institutions have correctly appreciated the hostility of the Charity Organization and of the Sunday Fund. Some of the wire-pullers of these bodies have admitted in private that they "would like to crush out all small hospitals." How, then, can the latter have any confidence in such schemes?

The report on general practitioners and hospitals showed that replies to a series of questions had been received from seventy-two medical men, all of which only emphasize the existing abuses of hospitals, especially the out-patient departments.

On Wednesday the foundation of the new School of Tropical Medicine was practically celebrated at a dinner at the Hotel Cecil. In proposing the toast of the new school, our greatest enemy was declared to be, not hostile savages, but the deadly malaria. The hospital at the Albert and Victoria Docks would furnish, the speaker feared, a too ample supply of cases for the students at home, and they might be able to promote other schools. The man who shall successfully grapple with this foe to humanity by finding a cure for malaria, and make the tropics more habitable for the white man, would do more, he considered, for the world and the empire than he who adds a province to the queen's dominions.

Lord Lister said this scheme for such a school in London had his warmest sympathy, and he had taken part in inaugurating a similar school in Liverpool. With increased facilities for instruction at home and investigation abroad, he felt justified in looking forward with hope to the future. He also complimented Mr. Chamberlain on the interest he had shown in the prevention of disease, both in man and animals, instancing his enlisting the Royal Society in the work as regards the tsetse-fly disease, rinderpest, and more recently the sending out the expedition for the study of malaria and black-water fever.

The contributions announced at the dinner amounted to £15,800.

Mr. Chamberlain also interests himself in nursing, and his wife has just made an appeal through the newspapers for a sum of £5,000 on behalf of the Colonial Nursing Association, which sends nurses to the colonies and protectorates of the empire, paying their passages and guaranteeing their salaries. The demand for these nurses is increasing. Hence this appeal.

The annual meeting of the Medical Society was held on Monday. The report showed that the society was in a prosperous condition. Dr. F. T. Roberts was elected president for the ensuing year.

The report of the committee on Mr. Battle's case is not very favorable to Coley's fluid. This committee, after considering the history of the case, the hospital notes, and microscopical specimens, reported that the pathological appearances are not conclusive; that the clinical history does not exclude syphilis; and that in view of the extreme difficulty of accurately diagnosing sarcoma from inflammatory formations, only cases the nature of which has been proved should be admitted as evidence of the value of any therapeutical measure.

Mr. Bruce Clarke read a paper on encysted vesical calculi, founded on twenty cases. When the stone was fixed to the bladder wall he noted the absence of hæmaturia and pain, leading to the supposition that the cystitis may be due to other causes. Doubtful cases of cystitis which do not yield to ordinary measures should therefore be explored, especially in patients of sixty to seventy-five years of age. The stone in these cases is rather frequently undetected until the bladder is opened. This happened in some of the twenty cases cited. The position of the stone varies much in different cases. Some are embedded in the prostate, some lie in cysts in other parts, but most frequently near the base of the bladder.

Mr. Swinford Edwards approved of suprapubic exploration, and said no attempt to crush an encysted stone should be made.

Mr. B. Brown pointed out the necessity of distinguishing between pouches and cysts. A stone in a post-prostatic pouch, he said, could be removed by suprapubic opening without lacerating the bladder wall, but it was very different with an encysted stone.

Mr. Freyer said that in nearly a thousand cases on which he had operated he had found only twenty, or at most twenty-five, instances of encysted calculus. When there is only a small opening connecting a pouch with the bladder a cutting operation is necessary, and the suprapubic is to be preferred; but when the opening is large, he thought the stone could be dealt with *in situ*. In four hundred operations he had found it necessary to cut in only eight cases, the patients being of all ages and the stones of all sizes. I may here remark that a great proportion of Mr. Freyer's large experience was obtained in India, where stone is so common. He is a retired surgeon lieutenant-colonel of the Bengal army, and had a long service as civil surgeon and in charge of hospitals in India.

Mr. Eve related two cases of resection of the large intestine, with recovery—one for strangulation and gangrene by hernia, the other for carcinoma. They both illustrate the wisdom of postponing resection when obstruction exists until this has been relieved. He strongly advocated the method of extra-peritoneal suture as safest.

Mr. Shattock has stated that the blood serum of patients suffering from acute pneumonia has a peculiar effect on normal blood. He studied the admixture by means of the hanging drop, and reported a highly exaggerated formation of rouleaux and massing or clumping of red discs or chromocytes. At the Pathological Society last week he stated the results of his further studies by the same method. He says he has found similar chromocytic clumping in normal blood produced by serum from cases of erysipelas and acute rheumatism, and suggests that the reaction will probably occur in all infective diseases. The "buffy coat" may be the result of this increased agglutination. The reaction takes place at once, is obvious to the naked eye, and there is no effect on the leucocytes. The hanging drop looks as if it held a colored precipitate.

Dr. A. E. Garrod said that in the blood of acute rheumatism threads of fibrin could be seen between the clumps of red corpuscles, and asked Mr. Shattock if he thought it possible the clumping could be produced by contraction of these threads. Mr. Shattock replied that he had never seen fibrin in sufficient quantity to produce the effect.

At the same meeting Dr. F. E. Batten read a paper and gave a lantern demonstration respecting the pathology of diphtherial paralysis. He attributed this to degeneration of the myelin sheath of the nerve, considering that almost certainly a general poison like diphtheria must act on the whole neuron, yet the effects of the poison are manifested, at any rate in fatal cases, in the myelin sheath and not in the cell body itself.

Professor McFadyean showed specimens of congenital tubercle from calves, and remarked that such cases were extremely rare. The occurrence of tubercle in the calves of tuberculous cows is not frequent, the highest estimate being 1 in 3,000. Of actual congenital tubercle the professor has only been able to obtain three cases since 1896, although he offered a reward to any meat inspector who would send him a specimen.

Dr. Still reported five cases of tuberculous ulcer of the stomach in children—the only ones met with in two hundred and twenty-six examinations at the Children's Hospital of patients affected with tubercle. Four of the patients were under four years of age, and one was only ten months old. The ulcer was in all cases at or near the lesser curvature, and in four cases was solitary. In one case there had been perforation, but adhesions had occurred and prevented peritonitis. From the number of cases recorded, tuberculous ulcer of the stomach would seem to be more common in infancy and early childhood than at other ages.

Lord Coleridge has been addressing some claptrap to the antivivisectors, and pretending that the Prince of Wales' fund is dragging so heavily because people feared their funds might support vivisection. He then urged the public not to subscribe to any hospital which had a vivisector on its staff or had premises licensed for vivisection. He did not tell his audience that none of the hospitals had such premises, but only the schools of medicine. It suits his purpose to confuse the schools with the hospitals and so obscure the truth. The Duke of Portland has given a half-apologetic support to these antis.

Mr. Lawson Tait (who has mixed himself up with the antivivisectionists) has written his own epitaph, and this is it:

"He labored to divert his profession from the blundering which has resulted from the performance of experiments on the subhuman groups of animal life, in the hope that they would shed light on the aberrant physiology of the human groups."

Curious, is it not? and hardly up to Mr. Tait's literary style. I wonder if he ever thought it possible that he might himself be "blundering."

The cold wave mentioned in my last letter passed by at the beginning of the week, and London is now enjoying fairly mild weather with some warm sunshine. In Wales the change was more sudden—from frost and snow to thunderstorms and heavy rain. On Tuesday the tubular bridge of Carnarvon was struck by lightning, but there was not much damage done.

The Pupil.—The size of the pupil of a healthy eye varies somewhat with age; closely contracted in the newly born, it is rather large in children, whose reflexes are active, also in brunettes and myopes, somewhat smaller in blondes, in hyperopes, and still more reduced in old age. In the aged the iris is somewhat rigid, due to increase of connective tissue, and therefore reacts less readily. The pupil, usually in the centre of the iris, though Mayo and others state that it is always a little nearer the nasal side, is normally round in man, whatever may be its state of contraction or dilatation. This, however, is by no means the case with all animals. In many reptiles, fishes, and amphibians, as the frog, and in some birds, it contracts to a vertical slit. In mammals it is not invariably round, being in ungulates—horse and ox—transversely oval, contracting to a horizontal slit; in many of the felidæ or cat tribe, it contracts to a vertical slit and shows during expansion various elliptic or lozenge-shaped forms.—NORRIS and OLIVER, "System of Diseases of the Eye."

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending May 27, 1899:

	Cases.	Deaths.
Tuberculosis	169	141
Typhoid fever	58	4
Scarlet fever	212	17
Measles	404	16
Diphtheria	238	31
Laryngeal diphtheria (croup)	12	4
Cerebro-spinal meningitis	0	7
Chicken-pox	34	0
Smallpox	12	3

Poem on Kipling's Illness.—The London *Times* printed the following poem a few weeks ago:

TO RUDYARD KIPLING, ESQ., FROM THOMAS ATKINS.

There's a reg'lar run on papers since we 'eard that you was ill,
An' you might be in a 'osspital, the barracks is so still;
We 'ave all been mighty anxious since we 'eard it on parade,
And we ain't no cowards neither, but I own we was afraid.

An' we all prayed 'ard and earnest—
"O Gawd, don't take him yet!
Just let 'im stop and 'elp us,
And warn, 'Lest we forget.'"

Then sergeant said, "'E won't get round. It's three rounds blank for 'im,—
'E won't write no more stories." An' our 'opes was bloomin' dim;
But you'd always 'elped T. Atkins, an' though things did look blue,
Well, we ain't much 'ands at prayin', but we did our best for you:

"'E musn't die; we want 'im—
O Gawd, don't take him yet!
Spare 'im a little longer—
'E wrote, 'Lest we forget.'"

We 'eard that you was fightin' 'ard, just as we knew you would,
But we 'ardly 'oped you'd turn 'is flank—they said you 'ardly could;
But the news 'as come this morning, an' I'm writin' 'ere to say,
There's no British son more 'appy than old friend Thomas A.

"O Gawd, we're all so grateful;
You 'ave left 'im with us yet
To 'old us in and warn us
Lest we—lest we forget."

London Antivivisection Society.—A meeting under the auspices of the London Antivisection Society was held in London, on April 26th, at St. James' Hall. The first resolution disapproving of experiments on living animals was moved by Mr. Lawson Tait, who said it was urged by their opponents that animals might be and had been used with advantage to mankind for the purpose of determining the course of disease and the natural functions of the body, and for the decrease of suffering and the prolongation of life; but he contended that the suffering entailed on the animals had become so great and the results so small, that his patience had become exhausted. Their first efforts must be directed to the reform of the system of inspection. Medical inspection of vivisection had become something of a fraud, and there could be no satisfactory inspection until they got a layman to do it.—*London Times.*

The Plague at Hong Kong.—The somewhat rapid development of the bubonic plague in Hong Kong seems to threaten a repetition of the same visitation as in last spring and early summer. A short time ago the colonial office received official intimation of the appearance of several cases, some of which had proved

fatal, and now the governor informs the secretary of state for the colonies that there were thirty-one fresh cases in the week just ended, and adds the serious tidings that in the same period the plague deaths numbered thirty-one.—*London Times.*

Antiseptics in Food.—At a meeting of the Incorporated Society of Medical Officers of Health, held in London on April 4th, a paper on the subject of "Preservatives or Antiseptics in Food" was read by Dr. Alfred Hill, the medical officer of health and the public analyst for the city of Birmingham. A discussion ensued, in which a number of medical officers of health took part, and ultimately the following resolutions were adopted: (1) That the Incorporated Society of Medical Officers of Health strongly disapproves of the practice of adding preservative chemicals to milk and other foods. (2) That if preservatives are added to any food, a full disclosure as to the nature and amount thereof should be made to the purchaser.—*London Times.*

An Unsanitary Practice.—The New York board of health urges housekeepers to refuse to buy vegetables or fruits exposed to the dust of the street. The dust that accumulates on these exposed food products is often laden with disease germs, and if this were not so it is uncleanly and unsanitary. Meat, game, and poultry are rarely so exposed, except in the lower tenement-houses. While it is true that all such foods are washed, peeled, and cooked before being eaten, it does not follow that all the germ-laden deposit is either removed or sterilized. Foods of all kinds should be protected from all possible contamination, and the demand made by housekeepers will be met by merchants.—*The Outlook.*

New Poison Regulations for England.—The Privy Council, on the requisition of the English Pharmaceutical Society, has adopted the following regulation for the guidance of chemists: (1) That in the keeping of poisons, each bottle, vessel, box, or package containing a poison be labelled with the name of the article, and also with some distinctive mark indicating that it contains poison. (2) Also that in the keeping of poisons, each poison be kept on one or other of the following systems, viz.: (*a*) In a bottle or vessel tied over, capped, locked, or otherwise secured in a manner different from that in which bottles or vessels containing ordinary articles are secured in the same warehouse, shop, or dispensary; or (*b*) in a bottle or vessel rendered distinguishable by touch from the bottles or vessels in which ordinary articles are kept in the same warehouse, shop, or dispensary; or (*c*) in a bottle, vessel, box, or package kept in a room or cupboard set apart for dangerous articles. (3) That in the dispensing and selling of poisons, all liniments, embrocations, and lotions containing poison be sent out in bottles rendered distinguishable by touch from ordinary medicine bottles, and that there also be affixed to each such bottle (in addition to the name of the article and to any particular instructions for its use) a label giving notice that the contents of the bottle are not to be taken internally.—*Medical Press and Circular.*

Cancer.—Daniel Turner, a highly respectable physician of the last century, said: "Cancer hath its name of the Greek *καρκινος*, from likeness (say some) in its veins to the claws of the crab, in Latin *cancer.*" We read of Prince Orsini, Duke of Bracciano, a great Roman noble of the sixteenth century, that one of his limbs was afflicted with a loathsome cancerous affection, named a "lupa" or a she-wolf, because it was necessary continually to supply it with abundant applications of raw flesh. Toads were applied to cancerous sores, from which they were supposed to suck the venom. Theophilus Bouet, a Genevan physician, author of the first collection of post-mortem records ("sepulchretum"), writing in 1682, says that "an unguent of green frogs is very good for canker. Also the broth of crayfish, boiled in asses' milk, drunk five days successively, and this course repeated seven times, composes the pain of a canker in the breast." Again, we are told that "the head of a puppy a month old, cut off and dried and powdered, mixed with honey and laid on an ulcerous canker, is said to kill it." The famous Lord Bolingbroke was killed, as Horace Walpole relates, "by a man who pretended to cure him of cancer in the face." The remedy used in this case was "Plunket's paste," which got its name from one Plunket, who was a cancer-curer in London in the early part of the last century.—*Practitioner.*

English Humor.—The theory that families may be congenitally incapable of humor is a good deal extended by a magazine editor, who is reputed to have sent to various popular authors in turn a pudding-basin containing some gelatinous substance which they are requested to heat, and then make impressions of their feet on it. These impressions are to be transferred to the pages of the magazine, for the editor, who may be presumed to understand his business, evidently thinks that his readers (a million or two) would like to see with what kind of foot a favorite writer treads this terrestrial ball. His head they already know; his hand, illuminated by the Roentgen rays, is also familiar; but nobody has hitherto thought of turning the fierce light of publicity upon his feet. This ought to cause a lively stir among the autograph-hunters. Eminent signatures will go out of fashion and footprints come in. The pudding-basin is accompanied by a letter, as follows. "Illustrious Sir: I am reading all your four serials at once—turn and turn about. The effect is stimulating and not in the least confusing, for such is the torrent of your genius that a page of any story will fit into any other without disturbing the flow of the narrative. I am greatly interested to hear that you write a novel with each hand and two more with your feet, keeping four typewriters in constant motion. This prompts me to beg the favor of your footprint. I send you a basin of glue for this purpose. My wife, a thoughtful, tender-hearted woman, like all your heroines, asks me to beg you not to put your foot in the basin when the glue is too hot, as it may be painful. I should be proud to think that some of my glue was sticking to your sole, but that might spoil the impression. P.S. Kindly pack the basin with care; so many have been broken, and I am too poor to spend much on crockery" (*London News*). [And then people say that Englishmen have no sense of humor.]

A Ghost in Greenwich College.—According to *Lloyd's London Weekly*, great difficulty has recently been experienced in getting nurses to take night duty in the hospital attached to Greenwich College, owing to the nocturnal visitations of a phantom nurse in the wards and corridors. About a dozen nurses in succession have tendered their resignation after staying from two to six weeks, until the sense of the place being haunted completely unstrung their nerves, rendering them unfit for the duty of tending the sick. One of these nurses, who is now living at home, gave the following account of her experience: "It was about midnight and I was sitting in the centre of the room, expecting every moment to have a cup of tea brought up to me. A nurse, as it seemed to me, entered the room a few steps and then went back again without speaking. I could not understand what it meant, and ran along the passage after her. There

was nobody to be seen, and I was so puzzled that I could hardly summon courage to return to my post. No tea was brought to me that night, and in the morning every one denied having come into the ward during the night. Then I learned that several nurses had left the institution, scared by the same apparition that I had seen. It was impossible for me to take duty another night." The report steadily got abroad that the college was haunted, and local spiritualists, of whom there are many in the royal suburb, turned their attention to solving the mystery. It was then found that an old dwelling immediately behind the college was quite a rendezvous for ghosts. Unaccountable sounds terrified the occupants nightly, with sundry violent accompaniments, such as ornaments falling from the shelves and a bookcase being dislodged from the wall.

Boric Acid in Wines.—P. Carles points out that boric acid is present in many wines in notable proportions, and that it is found more frequently in white than in red wines. This is partly due to the fact that the clarifying agents generally employed, *e.g.*, gelatin and isinglass, tend to putrefy unless an antiferment is present. For many years sulphurous acid has been used for this purpose, but among its disadvantages it deprives red wines of their color, and is readily detected by its odor. Another reason for the use of boric acid is the demand for sweet white wines, hence its addition in order to check fermentation at a certain stage in the process. It is of course open to question, whether from a hygienic point of view the use of boric acid is permissible in articles intended for human consumption, on account of its antiseptic properties.—*Sanitary Record.*

The Conviction of Christian Scientists.—The Cleveland *Journal of Medicine* in its March issue says: "In this city, on February 24th, there died of diphtheria a four-year-old child whose parents had refused to have a physician, and had placed reliance on 'Christian Science.' The coroner, Dr. Simon, is quoted in the papers as having said that nothing could be done in the premises, as the law was too weak on the point. The coroner, no doubt, will be surprised to learn what was published in the *Journal* some time since, namely, that in Cincinnati, under the same law of course, a conviction was easily secured in a similar case. The police-court jury are reported to have taken just twenty minutes to decide that the defendant was guilty under the law as it stood, and as the coroner should execute it without criticism. A law should be just as good in one part of the State as another."

Gynæcological Teachings.—The ovary is simply a gland, developed as other glands and formed of similar elements; its peculiarity is that its cell-nuclei have special powers during a certain time of life.—TAIT.

The peculiar sensation imparted to the finger on drawing a curette over the endometrium may give some hint as to the nature of the affection; if it is grating, it is vegetations or placental fragments; if soft and spongy, it indicates endometritis hyperplastica.—MUNDÉ.

In chronic ovaritis, pain is an inevitable feature, and nineteen times out of twenty it is worse on the left side than on the right.—TAIT.

Distressing pelvic pains incident to flexions and versions of the womb are greatly alleviated by vaginal suppositories containing one grain of morphine and two grains of the extract of belladonna.—GOODELL.

Vaginal injections of bromide of potassium I have found of real benefit in cases of so-called irritable uterus, diffuse pelvic pains, and hysterical neuroses in various parts of the body. Injections containing them are best administered at bedtime. I have repeatedly seen a refreshing night's sleep follow the vaginal injection of one drachm of bromide of potassium to a pint of water.—MUNDÉ.

Adenoid Vegetations.—Dr. Sendziak (*Archiv für Laryngologie*) sums up the advantages credited to the removal of adenoid vegetations as follows: (1) Re-establishment of nasal respiration, which should be manifest at no long interval if the operation has been thorough; (2) improvement of the general health; (3) favorable influence of the intellectual faculties (relief of nasal aprosexia); (4) improvement of hearing and removal of certain diseases of the ear; in cases of otorrhœa the post-nasal space should always be examined; (5) favorable influence on deafmutism; (6) disappearance of local disease of nose and naso-pharynx; (7) relief of certain reflex neuroses (asthma, cough, enuresis, etc.); (8) cessation of hemorrhages which may have caused anxiety as to the presence of pulmonary disease; (9) improvement of defects in speech.

Food in England.—Dr. Loew surveys the "improvement in English folknutrition": During the last twenty years meat has gone up from one hundred and twelve to one hundred and twenty-two pounds per head, thanks largely to Australia and New Zealand; wheat from five and one-half to nearly six bushels. Potatoes have decreased, while tea, which now begins to be the (British) workman's drink, "has risen from four and one-half to five and three-quarter pounds per person. Milk has gone up to ten litres a head, and nearly twice as many eggs are imported into England, forty instead of twenty-two for each individual, while for each egg we eat a pound of fish, though this is only a rise of five pounds in the last ten years." On the whole, Dr. Loew thinks the conclusion that the English folknutrition is improved is probably justified.—*Medical Magazine.*

Ambroise Paré.—It is not useless to relate how the present Grand Master received his wound; for it was healed by the heroic measures of a personage of our drama—by Ambroise Paré, the man we have already mentioned as under obligations to Lecamus, syndic of the guild of furriers. At the siege of Calais the duke had his face pierced through and through by a lance, the point of which, after entering the cheek just below the right eye, went through to the neck, below the left eye, and remained broken off in the face. The duke lay dying in his tent in the midst of universal distress, and he would have died had it not been for the devotion and prompt courage of Ambroise Paré. "The duke is not dead, gentlemen," he said to the weeping attendants, "but he will soon die if I dare not treat him as I would a dead man; and I shall risk doing so, no matter what it may cost me in the end. See!" And with that he put his left foot on the duke's breast, took the broken wooden end of the lance in his fingers, shook and loosened it by degrees in the wound, and finally succeeded in drawing out the iron head, as if he were handling a thing and not a man. Though he saved the prince by this heroic treatment, he could not prevent the horrible scar which gave the great soldier his nickname, "Le Balafré," the Scarred. —"Catherine de Medici," by HONORÉ DE BALZAC.

Defective Ventilation in the House of Commons.—An anxious wife writes the following letter to the London *Times* of March 20th in reference to this subject: "The influenza is working havoc among the members of the House of Commons, and there seems every prospect of its claiming more victims as the members return to their work while the infection is still on them. Judging by the sad results in many cases, the virulence of the disease is still great. The Easter holidays are now approaching. The House

will be cleared for a short time. Can nothing be done to disinfect it and to clear the vitiated atmosphere, and especially the ventilating apparatus, from the millions of microbes which now swarm there ready to pounce upon other victims? It seems a golden opportunity for disinfecting the place and preventing the further spread of the terrible plague." Complaints are frequent as to the unhealthy condition of the chamber in which the British legislators are compelled to sit, and it certainly does appear hard on the lawmakers that for the privilege of writing M.P. at the end of their names they should be thus exposed to the attacks of the lively and ubiquitous microbe.

Coincident Extra-Uterine and Uterine Pregnancy.—At the late French Congress of Gynæcology and Obstetrics Dr. Kiriac related an instance of abortion in which a fœtus was subsequently extracted from the posterior cul-de-sac. The patient recovered after laparotomy for removal of the uterus and retained placenta.

Statistics of Croupous Pneumonia in the St. Petersburg Marien Hospital.—The majority of the patients entered the hospital on the fourth or fifth day of the disease. Of 4,252 cases, in 55.7 per cent. the right lung was involved, in 34.2 per cent. the left, and in 9.7 per cent. both lungs. In 63 per cent. the temperature fell by crisis, in 34 per cent. by lysis. Of the complications, meningitis (which resulted fatally each time) formed 17.6 per cent., pleuritis 20.4 per cent. (with almost 80 per cent. mortality), and pericarditis 10.7 per cent. The total death rate was 22.5 per cent. The death rate was 9.4 per cent. among those who previously had always been healthy, and in whom no complications developed. When complicated by typhoid, the mortality was 100 per cent.

Tuberculosis and Bicycling.—My attention has lately been called to cyclists, particularly those who sprint, riding rapidly, especially on an upgrade or on a road that is sandy; they almost all of them open their mouths; not because they have nasal obstructions, but because the nasal passages themselves are not sufficiently roomy to admit of a sufficient supply of air for the work they are doing. I have seen a number of cases of pulmonary tuberculosis which have occurred in what are called "sprinters" in very powerful young men, which without the slightest doubt have been the result of mouth-breathing occasioned by rapid riding through dusty roads and highways, as I have described.—G. A. Evans.

The Infectiousness of Colds.—Evidence that colds are infectious is furnished by what we observe among our domestic animals. Cats seem to be specially susceptible. Probably they often bring home from their nocturnal rambles those mysterious catarrhal attacks which so rapidly run through the house It is an old saying, "The cat is sneezing, we shall all have colds." Sheep, too, are liable; a whole flock may suffer, and may show that curious eruption around the lips (herpes labialis) which we all know only too well as one of the most unpleasant accompaniments of a bad cold in the head. On the Australian sheep runs, when the shearing comes around, the men who congregate at the sheds are frequently smitten with an illness of a catarrhal nature, which rapidly takes hold of them, and often affects some ninety per cent. Sometimes it becomes very serious, and may even develop into fatal pneumonia. To all appearance it is caught from the sheep. —*Spectator.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ending May 27, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, Los Angeles	May 6th to 20th	4	
Dist. of Columbia, Washington	May 6th to 20th	2	1
Florida, West Tampa	May 13th to 20th	3	
Georgia, Savannah	May 9th to 24th	10	
Indiana, Evansville	May 13th to 20th	7	
Kentucky, Louisville	May 11th to 23d	18	
Louisiana, New Orleans	May 12th to 20th	5	
Shreveport	May 13th to 20th	..	1
Massachusetts, Swampscott	May 19th	1	
Minnesota, St. Paul	May 6th to 13th	1	
Missouri, St. Louis	May 12th to 22d	12	
Ohio, Cleveland	May 13th to 20th	13	
Pennsylvania, Johnstown	May 13th to 20th	1	
Nicetown	May 25th.	25	
Philadelphia	May 13th to 20th	6	
Porto Rico, Ponce	April 29th to May 6th	4	
Virginia, Newport News	May 24th	4	
Norfolk	May 19th to 25th	9	
Portsmouth	May 19th to 25th	14	
Washington, Spokane	May 13th to 20th	4	
Wisconsin, Milwaukee	May 13th to 20th	2	

SMALLPOX—FOREIGN.

Belgium, Antwerp	April 22d to 29th	14	3
Antwerp	April 29th to May 6th	4	2
Bohemia, Prague	April 29th to May 6th	6	
China, Hongkong	April 1st to 22d	28	16
England, London	April 22d to 29th	3	
Germany, Hamburg	April 29th to May 6th	3	
Greece, Athens	April 29th to May 6th	22	8
India, Bombay	April 18th to 25th	..	9
Calcutta	April 1st to 15th	..	3
Madras	April 15th to 21st	..	1
Japan, Nagasaki	April 1st to 20th	4	1
Osaka and Hiogo	April 15th to 22d	1	
Mexico, Chihuahua	May 6th to 13th	..	3
Mexico	May 1st to 14th	35	10
Nuevo Laredo	April 29th to May 13th	..	2
Russia, Moscow	April 15th to 29th	14	9
Odessa	April 29th to 6th	1	2
Nicaragua, Bluefields	April 29th to May 13th	2	
Straits Settlements, Singapore	February 1st to 28th	..	16
"	March 1st to 31st	..	18

YELLOW FEVER.

Mexico, Vera Cruz	May 4th to 11th	..	22
"	May 11th to 18th	..	23

CHOLERA.

India, Bombay	April 18th to 25th	..	6
Calcutta	April 8th to 15th	..	9

PLAGUE.

China, Hongkong	April 1st to 8th	19	14
"	April 8th to 15th	10	12
"	April 15th to 22d	31	31
India, Bombay	April 18th to 25th	..	449
Calcutta	April 8th to 15th	..	135
Madras	April 15th to 22d	..	1

Books Received.

While the MEDICAL RECORD *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

SURGERY OF THE HEAD AND NECK. By Dr. L. C. Lane. Second edition. Royal 8vo, 1,180 pages. P. Blakiston Sons & Co., Philadelphia. Price, $5.

DEFECTIVE EYESIGHT. By Dr. D. B. St. John Roosa. 8vo, 193 pages. Illustrated. The Macmillan Company, New York. Price, $1.

MARRIAGE AND HEREDITY. By J. F. Nisbet. Second edition. 8vo, 231 pages Ward & Downey, London.

THE MEDICAL COMPLICATIONS, ACCIDENTS, AND SEQUELÆ OF TYPHOID OR ENTERIC FEVER. By Drs. H. A. Hare and F. X. Dercum. 8vo, 286 pages. Illustrated. Lea Brothers & Co., Philadelphia.

A TEXT-BOOK OF ANATOMY. By American authors. Edited by Dr. F. H. Gerrish. Royal 8vo, 917 pages. Illustrated. Lea Brothers & Co., Philadelphia.

ATLAS OF DISEASES OF THE SKIN. By Dr. F. Mraček. Edited by Dr. H. W. Stelwagon. 8vo, 199 pages. Illustrated. W. B. Saunders, Philadelphia. Price, $3.50 net.

THE STUDY OF THE HAND. By Dr. Edward Blake. Second edition. 8vo, 135 pages. Illustrated. Henry J. Glaisher, London. Price, 3s. 6d. net.

LEGAL DECISIONS. By W. A. Purrington. 8vo, 105 pages. E. B. Treat & Co., New York. Price 50 cents.

CLINICAL LECTURES ON NEURASTHENIA. By Dr. T. D. Savill. 8vo, 144 pages. Henry J. Glaisher, London. Price, 5s. net.

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Original Articles.

REMARKS ON THE INCISION AT THE OUTER BORDER OF THE RECTUS FOR APPENDICITIS.

BY FREDERICK KAMMERER, M.D.,

NEW YORK.

A YEAR and a half ago I published a modification of the incision at the outer border of the right rectus abdominis muscle[1] for appendicitis, which had for its object the prevention of hernia and consisted in the main in incisions through the various layers of the abdominal wall in different vertical planes, this being accomplished by drawing the rectus muscle sharply toward the median line after division of the aponeurosis of the external oblique. I performed this operation for the first time in the early summer of 1895.

A similar method, differing in a few particulars from my own, was employed by Jalaguier[2] at about the same time. Somewhat later Lennander[3] advised operating in the same manner for appendicitis, but he also made another application of the principle involved by recommending lateral displacement of either of the recti muscles in median laparotomy. Still another earlier and very short publication on the same subject from the reports of the Clinical Society of London[4] has come to my knowledge only a few weeks ago, wherein the author mentions practically the same procedure and bases his recommendation of it on a case which he describes.

In my former article I gave a short synopsis of six cases, which I had at that time operated on by the method. Since then I have done twenty more interval operations, making in all twenty-six cases. Although I have made several efforts I have been able to trace only eighteen of my twenty-six patients. Some of these operations are too recent to permit conclusions as to the formation of hernia, but the results in all cases are so uniform that even these will bear mentioning. I am, moreover, led to publish them at the present moment, as some doubts have been expressed as to the possibility of preventing hernia by any vertical incision. Woolsey[5] says: "Vertical incisions of any sort—even the ingenious trap-door incision of Jalaguier and Kammerer, though it is fairly secure against hernia—are objectionable, in my judgment, as they necessarily divide one or more of the nerves supplying the lower part of the abdominal wall, and so weaken it as to predispose it to hernia."

I do not, at present, look upon the division of one of the nerve-fibres passing into the rectus as a very serious matter. I say one, as I have never found it necessary to divide more than this. But even this should be a very exceptional occurrence, as the nerves are very easily exposed on pulling the rectus toward the median line and can be drawn out of harm's way by blunt retractors. In this statement I am fully upheld by Lennander,[1] who claims to have done about forty operations for appendicitis by this method and has never found any difficulty in avoiding section of the nerves in the ordinary run of cases. I have myself divided a nerve-branch in four cases. In my first two I have taken no trouble to avoid this; in the last two I have been compelled to lengthen my incision owing to firm adhesions within the abdomen, and thus to divide one nerve. One of these patients I have not seen again since his discharge from the hospital. In my first two cases the atrophy of part of the rectus, to which I have referred in my previous publication, has entirely disappeared, the divided nerve having evidently resumed its function. In the third case, although a nerve-branch was divided, the muscle never degenerated even temporarily. In one other case, on the contrary, in which I do not remember having divided a nerve, there was, four months after operation (No. 13), a very slight, scarcely perceptible falling-off in the volume of the right rectus, without apparently any impairment of function.

I have tabulated the eighteen cases as shown on p. 810.

A few of these patients have worn a support for some months, but have then taken it off; the majority have not worn any. In using the term "no hernia" under the heading of "last examination," I mean to imply also that the abdominal walls had retained, to all appearances, their normal configuration, and that there was no bulging or weakness on the side of the operation.

In none of the cases reported have I so far been able to detect any indication of hernia. Of course we cannot say definitely that such a condition will never develop, but it does seem very improbable, as some of the cases have been operated on over two years ago. The objection to this incision seems to exist, therefore, more in theory than in practice, although I will admit that it is a better plan to avoid cutting any nerves. If we should need a large incision we may be compelled to divide one nerve, and, if I was again so placed, I should bring the cut ends together with one fine catgut suture, a very simple procedure, as the nerve-fibres are so easily exposed. Primary union or rapid regeneration of the peripheral end would ensue, as the wound always heals by first intention. In this connection I want to draw attention to one advantage of the incision—the ease with which it can be extended in either direction, if conditions within the abdominal cavity make manipulations through a small incision difficult. I always begin the interval operation with an incision of about two to two and one-half inches.

In trying to establish the *raison d'être* of an operation we should, I think, consider the results. These have been very good with the modified incision at the outer border of the rectus, in my hands. From a purely mechanical point of view the procedure is certainly equal, if not superior, to any other, for we have an incision through the posterior sheath of the rectus and the peritoneum covered after completion of the operation, in its entire length and at every point, by a strong muscle the individual fibres of which have remained intact. Even after McBurney's operation the abdom-

[1] MEDICAL RECORD, December 11, 1897.
[2] Presse Méd., 1897, No. 10.
[3] Centralblatt für Chirurgie, 1898, No. 4.
[4] Battle: British Medical Journal, 1895, No. ii., p. 1,360.
[5] MEDICAL RECORD, April 1, 1899.

[1] *Loc. cit.*

No.	Name.	Age.	Date of Operation.	Operation—Further Course.	Last Examination.
1	George H...	22	January 20, 1897 ..	Primary union. Branch of ilio-hypogastric nerve has been cut at operation, followed by atrophy of part of right rectus corresponding to cut nerve fibre.	Called at my office during summer 1898, but has not answered my summons of a few months ago. At that time the localized atrophy of rectus muscle had entirely disappeared and the action of both recti was normal. No hernia.
2	Joseph S ...	42	February 3, 1897 ..	Ditto.....	During early fall, 1898. Complete restoration of right rectus. No hernia.
3	Marie S	..	March, 1897	Primary union. No nerves cut.....	In August, 1898. Cicatrix three inches long, movable. Action of recti muscles perfect. Never any atrophy. Is pregnant. No hernia.
4	Richard G ..	..	September 10, 1897.	Ditto.....	I have not myself been able to examine patient, but his family physician, who has examined him a few months ago, tells me there is no weakness of the abdominal walls and not the least indication of hernia. He attends college and is active in athletics.
5	Bertram P ..	29	January 7, 1898 ...	Ditto.....	December 10, 1898. Cicatrix two and one-quarter inches long, non-adherent. Action of both recti muscles unimpaired. No hernia.
6	Frank H....	22	February, 1898	Ditto.....	December 10, 1898. Cicatrix two and one-half inches long, non-adherent. Both recti muscles alike in all particulars (thickness, contractile power, etc.). No hernia.
7	Harry D....	30	February, 1898....	Ditto.....	Was seen by myself in September, 1898, with normal abdominal walls. No hernia.
8	Rita D	22	February, 1898....	Ditto.....	March 18, 1899. Cicatrix three inches long. Skin over same very movable. Recti muscles of equal strength and size. No hernia.
9	Abraham R .	16	March, 1898	Ditto.....	December 16, 1898. Cicatrix two inches long, non-adherent. Recti muscles normal. No hernia.
10	Adolph S ...	33	March 31, 1898....	Ditto.....	December 10, 1898. Cicatrix scarcely visible, two inches long, non-adherent. Action of recti equal and strong. No hernia.
11	Fred. W....	24	May 3, 1898	Ditto.....	February, 1899. Cicatrix two and one-half inches long. No change in appearance of abdominal walls. Recti muscles functionate normally. No hernia.
12	Michael K ..	19	July 7, 1898.....	Ditto.....	Not seen personally, but I have report that patient is well and that there is no sign of hernia.
13	Gustav J....	13	August 4, 1898	Primary union. No nerve divided, to my knowledge.	December 10, 1898. Cicatrix two inches long, non-adherent. There is, perhaps, a scarcely perceptible falling-off in size of that portion of right rectus which corresponds to cicatrix, but the contractions of the muscle appear as strong as those of the other side. No hernia.
14	Albert H....	14	August 12, 1898 ...	Incision lengthened during operation owing to extensive adhesions; very small opening left for drainage at upper angle of wound. Nerve divided. Primary union where sewed.	January, 1899. Cicatrix four and one-quarter inches long. Recti muscles equal in size and action. No hernia. Wears truss.
15	Robert Z...	16	August 28, 1898 ...	Primary union. No nerves cut.....	January, 1899. Cicatrix two inches long. Both recti equal. No hernia.
16	Rudolph P..	15	September 3, 1898 .	Ditto.....	December 3, 1898. Cicatrix two and one-quarter inches long, non-adherent. Recti muscles of equal size and strength. No hernia.
17	Mary C.....	21	January 20, 1899 ..	Ditto.	
18	Jennie N....	25	March 23, 1899....	Ditto.....	Discharged from hospital on April 24th, with her abdominal walls in normal condition. Recti act equally. No hernia.

Two of the above cases have been operated on by my former house-surgeon at the German Hospital, Dr. Semken.

inal walls are not, I think, in a condition less favorable to the formation of hernia. I do not, therefore, believe that the modified incision at, or rather over, the outer border of the rectus should be classified with other vertical incisions, as it offers decided advantages over these.

Disinfection of the Hands.—Dr. A. W. Tschiirkow (*Wratch*) claims that disinfection of the hands by means of formalin, potassium permanganate, or sublimate is very incomplete and unsatisfactory. Absolute asepsis can be obtained by submerging and mechanically rubbing the hands for three minutes, and for three minutes more scrubbing them, in ninety-five-per-cent. alcohol. The weakest solution that will still give a good result is fifty-per-cent. spirits. Methyl alcohol, ninety-two per cent., is also a good disinfectant. The sterilized gauze gloves recommended by Mikulicz are of no value, since they are easily permeated by fluids.

LOCAL ANÆSTHESIA.

By ALEXANDER B. JOHNSON, M.D.,
NEW YORK.

The subject may be considered under two heads: First, the use and limitations of local anæsthesia; second, the choice of a particular drug, or method, to suit the individual case.

The only real advantage which can be claimed for local over general anæsthesia is the diminished risk which usually attends the former method. It may be asserted that the disagreeable after-effects which follow general anæsthetics, with the exception of nitrous oxide, constitute a sufficient reason why we should use local anæsthetics by preference when it is possible. But certain other advantages which general anæsthesia possesses greatly outweigh, in the writer's opinion, this objection. Were all operations done under local anæsthesia actually painless, we should be inclined to accord to the method a far wider field of usefulness; that such is not the case, any one accustomed to their

use will admit. To infiltrate painlessly an acutely inflamed area of skin with cocaine is possible, but difficult; and in the majority of cases a good deal of suffering occurs during the process. I am credibly informed by patients that this pain, together with a burning ache, lasting an hour or more after the effect of the anæsthetic has passed off, has caused them to choose to be cut with no anæsthetic at all rather than undergo this suffering a second time. In certain instances in which the inflammatory process is superficial, freezing by ethyl chloride meets this objection; in other instances it does not. The œdema and consequent distortion of the tissues incident to the infiltration method, and also present to some extent when using solutions of the ordinary strength, render at times an otherwise simple operation unnecessarily difficult, and may annoy the patient for days and even interfere with primary union.

Those of us who have performed many surgical operations are well aware that it is impossible in many instances to know how extensive the necessary procedures may be, and many of us have been obliged to finish an unexpectedly extensive dissection upon a groaning, screaming patient because we had already reached the limit of safety in the use of our local anæsthetic, or because we have found a further extension of the local anæsthesia impracticable for one reason or another. Few surgeons are possessed of sufficient self-control to finish such an operation with the same degree of thoroughness and accuracy as though the patient was unconscious. Cases of alarming intoxication from cocaine administered in doses usually harmless are not very rare. Persons with deficient self-control and of a neurotic temperament are often greatly excited by small doses of cocaine; under such circumstances the proper performance of even a simple operation becomes difficult or impossible.

Every one of you will admit, I think, that the surgeon whose mind is concentrated absolutely upon the details of his operative technique is likely to do better work than one whose attention is divided between his operation and the probable or actual suffering of his patient. Under general narcosis the former condition is usually obtained; under local anæsthesia the latter.

It is my belief, then, that the field of local anæsthesia should be strictly limited to operations upon special regions in which local anæsthesia is peculiarly applicable; to operations small in extent and simple in technique, of short duration; and to those other cases, rather rare, in which the strongest contraindications exist to the administration of a general anæsthetic.

It was formerly hoped that by operating under local anæsthesia the pneumonias which occasionally follow abdominal operations in debilitated patients might be greatly diminished in number. Experience shows, however, that such is not the case.

The regions which appear to the writer most suitable for the use of local anæsthesics are: the general integument, limited areas of which may be rendered analgesic for the purpose of opening superficial abscesses, for the suture of superficial wounds, for the removal of superficial new growths or foreign bodies; the hand, where anæsthesia may be indefinitely prolonged by the use of a rubber constrictor applied above the wrist or upon the brachial artery; the toes, the eye, the mucous membrane of the nasal fossæ, of the pharynx, and of the mouth; the tonsils; the mucous membrane of the urethra; the integument of the penis. The knee and other joints may properly be drained under local anæsthesia. A fracture of the patella may even be sutured. Many cases of empyema of the thorax requiring simple resection of the rib are very well done under local anæsthesia.

For reasons already given, the writer regards the use of local anæsthetics for the performance of major surgical operations, excepting in cases of necessity, as unsuitable, unwise, occasionally dangerous, and as likely to impair the operative technique. He makes this positive statement partly in the hope that it may provoke a general discussion of the subject from this point of view. In cases of renal disease, of acute bronchitis, and of pneumonia; in a few cases of strangulated hernia, in which the condition of the patient is desperate; in some cases in which the avoidance of nausea and vomiting are of the greatest consequence, and in which, as in cases of gastrostomy for stricture of the œsophagus, the immediate administration of food by the stomach may in rare cases be almost imperative, the writer believes that the surgeon may be justified in performing a moderately severe operation if he considers that the administration of a general anæsthetic would greatly increase the risk of the operative procedures.

The writer has performed several operations, in which a general anæsthetic would ordinarily have been administered, under cocaine anæsthesia with satisfactory results and with only moderate evidences of suffering. Among them were: perineal drainage of the bladder, suprapubic cystotomy, excision of varicose veins of the spermatic cord, resection of the vasa deferentia, drainage of the knee-joint, a few incisions through the abdominal wall, and the opening of rather deep-seated abscesses in various parts of the body; but he has seen operations done by surgeons under cocaine anæsthesia which he thinks might fairly have been characterized as cruel. That the patient's sufferings were not due to errors of technique on the part of the surgeons may be assumed from the fact that they were thoroughly familiar with the use of local anæsthetics by the several methods.

The Choice of Drugs and of Methods.—Ethyl-chloride: Momentary incisions, through the thickness of the skin merely, may be rendered entirely painless by freezing the skin along the line of the proposed incision with an ethyl-chloride spray. If the skin to be cut is inflamed the freezing process is often attended by a moderate amount of discomfort. If the vitality of the skin is already much impaired by the intensity of the infective process, freezing may be followed by a small amount of sloughing of the wound edges. The insertion of a hypodermic needle into tense and inflamed skin is very painful. This pain may be abolished by freezing the point to be punctured with ethyl-chloride. Operations of considerable extent have, I am told, been done under ethyl-chloride anæsthesia. The incision through the skin for the suture of a fractured patella has been made with little or no pain. The writer has no experience with the method except as a preparation for very small incisions or punctures.

Cocaine and eucaine: Cocaine and eucaine may be applied practically for the production of local anæsthesia in a variety of ways. Since, except for the greater toxicity of cocaine, their actions are almost identical, they may be considered as one, except in regard to the dangers in their use.

1. The simplest method is to paint the surface of a mucous membrane or to spray it with a cocaine solution. A canal lined with mucous membrane, such as the urethra, may be rendered insensitive by injecting into it a small amount of cocaine solution. The parts best suited for this simple method are the mucous membrane of the mouth, pharynx, and tonsils, the nasal fossæ, the male and the female urethra, and occasionally the urinary bladder. Rather strong solutions are necessary for the production of anæsthesia in this manner; from one to ten per cent. The mucous membranes also vary considerably as to the rapidity with which anæsthesia may be obtained with a solution of a given strength. The mucous mem-

brane covering the turbinated bones of the nose absorbs with great rapidity; the mucous membrane of the bladder very slowly. These peculiarities are very important to bear in mind when using cocaine in this manner. The duration of the anæsthesia seems to vary directly with the strength of the solution used, within certain limits. The stronger the solution also the more widely does the anæsthesia extend beyond the actual point of application. This is equally true of solutions injected into the tissues. In operations upon the eye, a solution of one or two per cent. appears to be sufficiently strong; anæsthesia is rapidly produced and is unusually perfect. Owing to the small extent of surface, repeated applications may be made with a medicine-dropper, a few drops at a time, and the anæsthesia may thus be prolonged indefinitely.

In the case of the mucous membrane of the mouth, pharynx, and nasal fossæ, owing to the large extent of surface, the rapidity of absorption, and consequent danger of intoxication, it has appeared to the writer safer to paint the surface to be operated upon with a small amount of a rather strong solution, and to repeat the painting two or three times in the course of ten minutes, directing the patient not to swallow meanwhile, rather than to use a spray of a weaker solution over a large extent of surface. When a spray is used, a greater extent of mucous membrane than is necessary is exposed to the action of the drug, a greater quantity is absorbed, and symptoms of intoxication are, in the experience of the writer, more apt to occur, sometimes with great suddenness. The writer is in the habit of using for these purposes a solution containing five per cent. of cocaine, painting it on with a camel's-hair brush or a cotton swab; or, in suitable cases, a small pledget of cotton is saturated with the solution, but not to excess, applied accurately to the part upon which it is intended to operate, and left *in situ* for ten minutes.

The urethra appears to be well suited for the use of cocaine. The writer has been in the habit for many years of doing nearly all his internal urethrotomies, back to four and one-half inches from the meatus, under cocaine anæsthesia. In cases in which strictures are to be divided posterior to this point, the usual perineal drainage renders general narcosis more suitable. The method pursued is as follows: after irrigation of the urethra, one-half drachm of a five-per-cent. solution is introduced into the canal by means of an ordinary urethral syringe. The meatus is compressed, and ten minutes are allowed to elapse, when the remaining solution is allowed to escape and the operation is proceeded with, usually with little or no pain.

As an example of unusual tolerance of cocaine the writer would like to relate the following case: Upon the evening following an internal urethrotomy, one not very familiar with the use of the drug was directed to inject into the patient's urethra a small quantity of cocaine solution in order to render urination painless. By mistake a quantity of cocaine was injected equal to about ten grains, and allowed to remain for ten minutes or more. The patient suffered from slight nausea and giddiness, and lay awake a considerable portion of the night, but had no severe symptoms of poisoning.

The introduction of one-half ounce of a five- or ten-per-cent. cocaine solution into the urinary bladder is said to produce a satisfactory degree of anæsthesia for the performance of a rapid lithotrity with evacuation. The writer has no personal experience with this method. If an ulceration or other solution of continuity existed in the mucous membrane, the method would surely be dangerous. Ten grains of boric acid to an ounce of cocaine solution prepared with sterile water preserves it for a month or more without noticeable contamination from the growth of mould fungi. Salicylates are used for the same purpose.

Of more interest to surgeons at the present time are the various methods of producing analgesia by the injection subcutaneously of cocaine or eucaine solutions alone or in combination with other substances. Among these methods are the following:

1. The cutaneous or subcutaneous injections of strong watery solutions of cocaine or eucaine, from one to four per cent. In this method the amount of solution injected is necessarily small. In cases in which it is supposed that the whole or the greater part of the cocaine will be absorbed into the circulation, the limit of safety is ordinarily fixed at one grain or less; practically, however, in many instances this quantity may be slightly exceeded without much risk. If the individual is a strong adult, if the region to be operated upon is not very vascular, if the incision is to be rather free and is followed by some bleeding, a quantity of solution equal to one and one-half grains of cocaine may be used without much risk of producing intoxication. The writer has used this quantity of cocaine certainly several hundred times without having seen symptoms of poisoning. In vascular regions, notably the face, scalp, nasal fossæ, and mouth, such a quantity of cocaine would be dangerous in the extreme. The writer has seen five minims of a four-per-cent. solution, injected into the neighborhood of the exit of the supra-orbital nerve from the orbit, produce very sudden and marked symptoms of intoxication. It is usually considered that a full stomach and a recumbent position tend to diminish the likelihood of the occurrence of intoxication. It is customary in this method to introduce a small quantity of the solution through a fine hypodermic needle into the skin, and after that into the deeper tissues, if they are to be incised, and to wait two, three, or four minutes before cutting; testing the sensibility of the parts with the point of a knife or needle, until they seem to be insensitive. This method bears the strong recommendation of simplicity and of economy of time. If during the operation the patient complains of pain, a little of the solution may be dropped into the wound or further injections may be made. It is perhaps the method the most used by American surgeons to-day.

In a series of sixty-eight minor operations done recently in the Roosevelt Hospital, out-patient department, under my direction, by Dr. Sinclair Tousey, two and four per cent. solutions of cocaine were used. Six minims was the average quantity of a four-per-cent. solution injected, and seven minims of a two-per-cent. solution. The largest quantity of a four-per-cent. solution used was fifteen minims for the excision of a carbuncle of the neck. The smallest quantity of a two-per-cent. solution used was four minims, for the excision of an epithelioma of the face. There were thirty-nine cases of abscess. The majority of these abscesses were situated upon the palmar and plantar surfaces of the hands and feet respectively. Some of them were of large size, and the operation included a more or less extensive incision through the infiltrated and inflamed overlying skin. There were also abscesses in other regions. Two carbuncles were excised from the neck. There were several cases of phimosis, several of ganglion of the wrist, several small tumors of the face, and several sequestrotomies of the hands and feet.

In general the analgesia during the operation was satisfactory. A certain number of patients complained of moderate pain from the prick of the needle. In the cases of extensive inflammatory infiltration, notably in the hand, considerable pain was complained of for several hours after the incision was made.

Several important variations in the technique of this method are noteworthy and valuable. They bear

the names of various authors, but were doubtless familiar to most of us before we ever heard the names of these writers. For the production of analgesia in the sound skin, a fine needle is introduced obliquely into the skin until the opening at its point is buried; a fraction of a minim of cocaine solution is then injected, producing, if properly done, a small anæmic elevation at the site of the puncture. After waiting a few seconds the needle is reintroduced a short distance from, at, or within the border of this elevation, producing another elevation of like character. These injections are continued along the line and to the limit of the proposed incision. If the cut is to go deeper than the skin, the subcutaneous tissues are punctured in the same line and similarly anæsthetized. If it is necessary to incise inflamed tissues, the inflamed area may be encircled by a series of intracutaneous injections made in the surrounding healthy integument. The operation may then be made upon the inflamed part with little or no pain.

The hand and to some extent also the foot are favorable places in which to practise another modification of this method. The limb is elevated; a rubber constrictor is made to encircle it at a point between the site of the proposed operation and the trunk, and is drawn tightly enough to cut off completely the blood supply from the parts. After waiting a few moments —ten minutes is advised by certain authorities—cocaine is injected into the site of the operation as before described. The writer has been in the habit of reversing the process: first, elevating the limb; secondly, injecting the cocaine; and, thirdly, immediately applying the constrictor. By either of these means the local anæsthesia is greatly prolonged, so that the operation may be continued for an hour or more without any return of sensation in the anæsthetized part. It has also seemed to the writer that the dangers of poisoning are diminished by this method. The incision, the manipulation, and the free bleeding which follows the removal of the constrictor should remove a considerable portion of the cocaine. It is noteworthy, however, that the prolonged application of such a constrictor is intensely painful, and I have known many patients to complain bitterly of it, though they did not feel the cutting.

Another valuable modification occasionally applicable is the injection of cocaine into, or near, the sensitive nerve supplying the part to be operated upon. This may be accomplished in many instances with striking success. In the case of the digital nerve of the fingers, a minim or two of the solution is injected deeply into the sides of the finger in the neighborhood of the nerve trunks. The distal portion of the member is thus often rendered quite insensitive; or, if not entirely so, a very small amount injected into the immediate neighborhood of the parts to be cut will produce complete analgesia. As to the choice of the strength of solution to be used in these methods, it is probable that a one-per-cent. solution is abundantly strong.

2. The use of similar solutions in combination with other substances. Several modifications have been made in this method. Some surgeons, notably Schleich, have devised and practised the so-called infiltration method of anæsthesia; according to this method very dilute solutions of cocaine, morphine, and common salt are injected into the tissues to be anæsthetized, in considerable quantities, in such a manner as to distend the tissues with a large mass of fluid; thus adding the anæsthetic effect of extreme pressure and tension upon the nerve filaments to the specific effect of the cocaine itself. The sodium chloride is used to avoid the irritating and painful consequences of introducing pure, or nearly pure, water into the tissues. In the strength of eight-tenths of one per cent. it is osmotically indifferent, and even in large quantities causes little or no irritation. Morphine was added by Schleich with the idea that the anæsthetic action of the cocaine would be strengthened, but it has since been conclusively shown that morphine is not a local anæsthetic; that on the contrary it is an irritant, and that in the minute quantity occurring in Schleich's solution its general systemic effect must be slight or absent. The advantages of this method are, that the quantity of cocaine used is small, always less than a poisonous dose, and that very large areas may be infiltrated without risk. Its disadvantages are, that the method is rather troublesome and requires rather more time; that the repeated needle punctures, and even the mechanical diffusion through wide areas and loose tissues, may disseminate an already existing infectious material into previously healthy parts. In the mouth, for example, this method used for an operation for a small epithelioma of the tongue has been followed by widespread suppuration in the tongue and the floor of the mouth. The anatomical details of structure may be obscured by the artificial œdema, thus rendering the operation more difficult.

Another method which has gained a wide popularity consists in the use of a salt solution eight-tenths of one per cent., containing from one-tenth of one per cent. to one per cent. of cocaine or eucaine, at a temperature a little below that of the human body. With care this method furnishes a safe and satisfactory anæsthesia, and avoids many of the objections which may be urged against the methods already spoken of.

Eucaine with salt alone possesses certain decided advantages over cocaine. It may be sterilized by boiling, cocaine being partly decomposed at a boiling temperature with the formation of irritating substances. To suit the individual case the surgeon may select a salt 1:1,000 sterile eucaine solution for infiltration anæsthesia, or a salt one or two per cent. sterile eucaine solution, if he prefers to use that method.

Dr. H. Braun, of Leipsic,[1] Berlin, 1898, quoting Heintze, says: "Heintze has tried a number of substances which have been recently recommended as local anæsthetics, guaiacol, guaiaril, orthoform, aneson, and eucaine A. I will only state here that all possess disadvantages. They are all irritating, some of them injure the tissues, and for infiltration anæsthesia, at least, can be dispensed with." Braun also states in regard to tropacocaine that it irritates more than cocaine, and does not injure the tissues. In its toxicity it stands between cocaine and eucaine. Its solutions keep better than cocaine and may be sterilized. He considers that it is less desirable than eucaine, because it possesses less anæsthetic power, is more poisonous and more irritating.

Malaria and Pregnancy.—Edmonds (*British Medical Journal*, April 29, 1899, p. 1,023), in the presidential address before the British Guiana branch of the British Medical Association, expressed the opinion that malaria, by raising the body temperature, tends strongly to abortion and miscarriage, and also that the early use of quinine, by reducing the temperature, lessens very considerably the still-birth rate. It seems not improbable that the constitutional intoxication to which malarial infection gives rise, and of which the high temperature is but one manifestation, is the responsible factor, and that the good effects of quinine are due to this influence upon the general condition rather than upon the temperature alone.

[1] "Experimentelle Untersuchungen und Erfahrungen über Infiltrationsanästhesie," Archiv für klinische Chirurgie, vol. lvii., No. 2, Berlin, 1898.

DIPHTHERITIC CONJUNCTIVITIS CURED WITH ANTITOXIN.

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It may be interesting to the general practitioner, as well as to the ophthalmologist, to read the report of a case of diphtheritic conjunctivitis which was treated successfully by means of serum therapy. It is not within the domain of this paper to enter into a discussion of the merits or demerits of antitoxin. It is a fact, however, that some oculists believe in it as a remedy in this form of conjunctivitis, while others are either exceedingly sceptical as to its value or have a decided antipathy to its use. My purpose is to cite briefly a clinical case which came under my observation and treatment.

A child, aged two years, was first seen at Dr. Peter A. Callan's clinic in the New York Eye and Ear Infirmary on February 1, 1899. The general condition was very good. There were intense photophobia, a thin watery discharge, and considerable œdema of the eyelids. The swelling was so great that eversion of the lids was accomplished with difficulty. When the palpebral conjunctiva was brought into view it was found to be completely covered with a plastic exudate of a dirty grayish color resembling a diphtheritic membrane. The forcible removal of a portion of the membrane left behind a bleeding surface. The ocular conjunctiva showed marked hyperæmia with very tortuous vessels. The cornea presented no infiltration or ulceration. No membrane could be detected in the nose or throat, but on either cheek several islands of pustular eczema were seen. The patient was treated with the usual antiseptic solution (boric acid, four per cent.) and given a prescription for the same to be used at home. The mother was ordered to return with the child to the clinic two days later for further examination and treatment, as a croupous form of conjunctivitis was suspected.

February 3d. The antiseptic solution prescribed had produced no amelioration of the inflammatory process, but, on the other hand, the general condition had gradually grown worse and there was grave systemic involvement. A culture was then made, by the bacteriologist, from a piece of the membrane, which revealed the bacillus of Klebs-Loeffler. It was then thought wise to use the antitoxin treatment.

February 4th. The child's temperature was 101.8° F.; pulse, 140; respiration, 30. The patient was rapidly getting weaker. The membrane was still greatly in evidence and seemed to be deep down in the conjunctival tissues, but there was not that board-like hardness which is usually described as characteristic of diphtheritic conjunctivitis. Eleven hundred units of the fresh serum were injected into the thigh with no untoward results. At the same time the eyes were irrigated with a solution of bichloride of mercury, 1:5,000.

February 5th. The ocular condition showed marked improvement, a great deal of the membrane having been absorbed. There were less swelling of the lids and diminished photophobia. The patient at this time was able to open her eyes to a slight degree. The discharge was muco-purulent.

February 6th. Temperature, 101.1°; pulse, 124; respiration, 28. An injection of nine hundred units of the antitoxin was used, as some of the membrane still remained. The constitutional condition had greatly improved. On the following day the conjunctiva assumed a soft and very red appearance as a result of the entire melting away of the membrane. Of course there was a purulent discharge for a few days, which was checked by appropriate treatment. The photophobia had all disappeared. The cornea was uninvolved, and the temperature was normal. The eczema of the face had healed and the child was practically well.

The pathological changes which are generally present as a result of this disease were not observed in this case, owing to the vigorous treatment employed. It may be interesting to note that Dr. Darier, of Paris, in *La Clinique Ophthalmologique*, January, 1899, reports a case of pseudo-membranous kerato-conjunctivitis in which he used three injections of the serum with a most excellent result.

The writer is indebted to Dr. Callan, who kindly referred this interesting case to him for treatment.

Second Avenue, corner Thirteenth Street.

THE ABORTIVE TREATMENT OF GONORRHŒAL OPHTHALMIA BY A CANTHOLYSIS AND THE THOROUGH APPLICATION OF NITRATE OF SILVER, FORTY GRAINS TO THE OUNCE.

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The symptoms and gravity that exist in all cases of gonorrhœal ophthalmia are very well known to al physicians who have had any experience in the treatment of such cases. The rapidity with which it progresses, and the intense inflammatory condition, with the copious purulent discharge, are not likely to be confounded with any other pathological condition. However, in the very initial stage (and especially is this the case when we can get no specific history) it might be mistaken for acute catarrhal conjunctivitis. In both conditions there is a muco-purulent discharge; in both there is chemosis of the ocular conjunctiva, of course more marked in the former.

At this stage a positive diagnosis is made with difficulty, except by staining and examining the discharge under the microscope, thus proving the presence or absence of the gonococci. Of course in a few hours in the former case there will be intense swelling of the lids and chemosis of the ocular conjunctiva, with a copious purulent discharge, symptoms which are unmistakable. Another pathological condition, but one which is not likely to be mistaken for gonorrhœal ophthalmia, is acute trachoma. While there is a muco-purulent discharge, it is not so abrupt in its onset, and there is a distinct "velvety" condition of the palpebral without any involvement of the ocular conjunctiva.

The points of differential diagnosis which I have given, I think very important for several reasons. First: The earlier we diagnose the case to be one of gonorrhœal ophthalmia, the more radical will be the abortive treatment. Second: The application of such a strong solution of nitrate of silver is severe treatment for acute catarrhal conjunctivitis. Third: The reaction following the silver will produce intense swelling of the lids and chemosis of the conjunctiva, not unlike that produced by gonorrhœal ophthalmia.

Many physicians may not have the necessary paraphernalia for making this examination, and are so situated that they cannot have it done by a pathologist. Under such circumstances two problems confront us: Shall we wait for a few hours until we get all the characteristic symptoms of gonorrhœal ophthalmia, and then apply the silver with the hope of destroying the germs; or shall we apply it immediately, knowing that if it is a case of gonorrhœal ophthalmia we have aborted a severe attack, or if it is acute catarrhal conjunctivitis the reaction, while great, lasts only a few

hours under the vigorous use of iced cloths? The treatment is conducted in the following way: Cleanse the eye thoroughly with a solution of boric acid; take a strong pair of scissors, preferably straight with blunt points, placing one blade beneath the palpebral conjunctiva at the outer canthus, making the cut directly outward through the skin and conjunctiva. Then grasping the upper lid with the other hand, pull it forward and upward; in doing this you put the tarsal ligament on the stretch, and it can readily be found between the skin and palpebral conjunctiva. This is cut by a smaller pair of scissors, and then the upper lid becomes loose and one is enabled to expose thoroughly the upper conjunctival cul-de-sac and so to lessen the pressure on the lymphatics supplying the cornea. Should there be much swelling and chemosis following the application, I do not think it necessary to stitch the edges of the wound together, as only a temporary effect from the operation is desired.

The application of nitrate of silver (gr. xl. to ʒ i.) should be made with a small pledget of cotton on an applicator, the operator being careful not to touch the cornea. Immediately neutralize the silver with a solution of sodium chloride, then begin the application of iced cloths, changing them every ten seconds until the reaction has subsided; in the mean while the eye is kept clean with a saturated solution of boric acid. It may be necessary to make a second application in twenty-four hours, but in the case of several patients so treated I did not find it necessary. There was but slight discharge on the second day, and the reaction subsided rapidly under the vigorous use of iced cloths. The small operation on the external canthus (cantholysis) is done with slight pain to the patient by the subcutaneous injection of a four-per-cent. solution of cocaine, and as the result of this treatment depends entirely upon the thorough application of silver, I think the preliminary operation very essential, as it enables us thoroughly to expose the conjunctiva, which is otherwise impossible.

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Progress of Medical Science.

The Influence of Bicycling upon Diabetes.—Albu (*Berliner klinische Wochenschrift*) confirms the observation of others that even in severe cases of diabetes active muscular exercise, such as bicycling, may be utilized as a therapeutic factor of scarcely less importance than regulation of the diet. The former has the advantage of being more readily applicable, as a rule, than the latter, and for this reason it is worthy of serious consideration in cases in which it can be employed. Its influence should, however, always be first carefully tested both qualitatively and quantitatively.

Ether in Bronchial Asthma.—Dr. Bruck describes two cases of typical bronchial asthma (*Memorabilien*, March 13th), the direct result of the inhalation of maize dust and its irritating action on the mucous membrane, in which he demonstrated the value of ether, given hypodermatically and internally, in controlling the attack. In one case he gave twenty drops in water every half-hour, and after the third dose the dyspnœa was ameliorated. In the second case, as œdema of the lungs threatened, he injected five Pravaz syringefuls of ether in the course of one and one-half hours. On the following day the attack had completely passed over. Both patients, on account of the position of their dwelling, inhaled considerable meal dust. Since a change of residence, they have been free from asthma.

Gelatin Injections in Hemorrhage.—Dr. Curschmann, in an address before the Medical Society of Leipsic (meeting of February 7th), gave his experience with gelatin in the control of hemorrhage. He employed subcutaneous injections in six cases of hemorrhage from the stomach, six of pulmonary hemorrhage, one of typhoid intestinal bleeding, and one hemorrhoidal. In thirteen of these cases the bleeding stopped remarkably soon. His results up to the present time have been exceptionally good, and he recommends the further employment of this remedy in controlling hemorrhages.

A New Sign of Pulmonary Tuberculosis.—Dr. Murat (*Gaz. Hebdomad.*, No. 19) calls attention to a new symptom of the early stage of phthisis. It is entirely subjective, and experienced by the patient after his attention has been drawn to it by the physician. During loud and vigorous talking there is a vibration of the affected portion of the lung, recognized by the patient as a disagreeable sensation. The symptom is explained upon the physical basis that a solid body is a better transmitter than air. Dr. Murat has found this symptom in a number of cases of pulmonary tuberculosis before any objective signs of infiltration could be elicited. The entire chest vibrates during speaking or singing, and the intensification is no doubt psychical.

The Action of Anæsthetics on the Urinary Secretion.—At a recent meeting of the Royal Academy of Medicine in Ireland, Thompson (*British Medical Journal*, April 1, 1899, p. 793) presented a preliminary communication, with the following conclusions based on experimental observations: (1) A mixture of ether and chloroform (2 to 1) failed to induce increased diuresis. (2) A. C. E. mixture caused in most cases marked increase in the amount of urine, although in one animal with albuminuria suppression resulted. (3) Ether produced an increase of urine, as did also chloroform in a single observation. (4) Little or no effect was produced by the various anæsthetics on the total output of nitrogen and of urea, even when marked diuresis was induced. (5) The after-effect on the output of chlorides showed a marked diminution. (6) In eight experiments (with different anæsthetics) the urine was examined for carbohydrates with phenyl chloride, hydrazin, and sodium acetate. The secretion yielded crystals in all cases but one. Some of these were undoubtedly glucosazone, others glycuronic acid, while in one case they were probably galactosazone. In all cases the dogs were injected with a solution of morphine.

Characteristics of Nervous Vomiting.—Dr. I. Boas ("Diagnostik und Therapie der Magenkrankheiten," ii. Theil) enumerates the following as diagnostic of the nervous origin of vomiting: (1) The ease with which the vomiting is accomplished. (2) Its independence, as a rule, of the quality and quantity of the ingesta. (3) The capriciousness with which certain food stuffs, often of the most varied and bizarre kind, are retained to the exclusion of others. (4) The existence at times of elective vomiting of certain substances, which are expelled from a very varied mess of food stuff. (5) The unconcerned manner in which the patients bear this habitual condition. (6) The tolerance of the organism against the inanition tendency of the habitual vomiting. (7) The extraordinary influence of the most trivial external or internal circumstances. (8) The frequent occurrence of vomiting independent of meals, often when the stomach is empty or apparently so. (9) The appearance, at the same time with the vomiting or at varying periods, of other neurotic symptoms. (10) The absence of any secretory or motor disturbance of the stomach.

The Etiology of Scarlet Fever.—Class (*Philadelphia Medical Journal*, May 13, 1899, p. 1,066) has isolated from the scales and the throat in cases of scarlet fever a diplococcus resembling a large gonococcus, which he considers the specific cause of the disease. The organism stains readily with a number of aniline dyes, and it grows upon a culture medium consisting of glycerin-agar, prepared according to the usual method, and to which is added about five per cent. by weight of black garden earth rendered sterile by interrupted heating. The earth is dried, sifted through a fine hair sieve, and mixed with bouillon to make a thin paste. This is boiled for an hour, sufficient sterile bouillon being added from time to time to replace that evaporated by boiling. The mixture is kept in a warm place for a few days to allow the spores in the earth to develop, when it is again boiled for an hour, after which it is set aside for a few days. This procedure must be repeated until no growth is developed. The organism appeared non-pathogenic for rabbits and guinea-pigs.

The Diagnostic Characteristics of the Pupils.—Dr. Jul. Pfister (*Deutsche Medizinal-Zeitung*, April 13) tabulates the subject as follows:

Narrowing of the Pupil: (I.) Irritative myosis. Normal to light and accommodation. Pathological (due to motor oculi) in: (*a*) diffuse inflammatory diseases of the brain and its membranes, which give rise to a direct irritation of the motor oculi nerve; (*b*) tumors in the neighborhood of the pupil-narrowing centre or in the neighborhood of the motor oculi fibres or the root itself; (*c*) in the beginning of cerebral apoplexy, hysterical and epileptic attacks; (*d*) in hemorrhage into the pons; (*e*) in continuous near-sightedness (caused by a spasm of the accommodation muscles and the sphincter of the pupil); (*f*) in inflammatory conditions of the anterior portions of the bulb (keratitis, iritis, cyclitis, conjunctivitis, scleritis); (*g*) the use of eserine, pilocarpine, muscarine, nicotine, opium. (II.) Paralytic narrowing (dependent upon the sympathetic) occurs in: (*a*) traumatism, apoplexy, tumors, inflammation of the cervical vertebræ, as soon as they produce destructive changes; (*b*) tumors of the mediastinum, carcinoma of the œsophagus; (*c*) paresis of the sympathetic.

Dilatation of the Pupil: (I.) Paralytic mydriasis (dependent upon the motor oculi) in: (*a*) hemorrhage, tumor at the base of the aqueduct of Sylvius (nucleus of the motor oculi); (*b*) in diseased areas which involve the motor oculi fibres somewhere or other during their course, *e.g.*, in sinus thrombosis, glaucoma, etc.; (*c*) the use of atropine, duboisine, daturine, hyoscyamine, hyoscine, homatropine; (*d*) compression of the bulb. (II.) Spastic mydriasis (dependent upon the sympathetic) in: (*a*) fright; (*b*) accumulation of carbon dioxide in the blood; (*c*) in advanced epileptic and eclamptic seizures; (*d*) in tumors and inflammation of the spinal cord, *e.g.*, in the beginning of tabes; (*e*) in tumors of the neck; (*f*) reflexly in the presence of intestinal worms, biliary and lead colic; (*g*) melancholia and mania; (*h*) use of cocaine.

Reaction of the Pupil:

(I.) In irritative myosis, light, accommodation, convergence, and eserine increase the contraction. Atropine causes dilatation.

(II.) In the paralytic myosis, light, accommodation, convergence, and eserine cause a still greater contraction. Atropine works poorly and dilates but little.

(I.) In the paralytic mydriasis, the reaction to light, accommodation, and convergence are absent. Eserine causes only a slight contraction.

(II.) In the spastic mydriasis, light, accommodation, convergence, and eserine cause contraction.

Deviations of Pupillary Reaction: (I.) Reflex fixed pupil, also known as the Argyll-Robertson phenomenon. The pupil no longer reacts to light, but does to accommodation and convergence. This is one of the early symptoms of tabes and progressive paralysis; in exceptional instances this phenomenon is also seen in dementia senilis, paranoia, multiple sclerosis, syphilis of the central nervous system, and epilepsy. (II.) Hemianopic pupil reaction (Wernike). A contraction of the pupil takes place only upon illumination of one-half of the retina, whereas upon illumination of the other half no reaction occurs.

Chronic Copper Poisoning.—The extant literature on poisoning by copper is very incomplete, and the conclusions of various writers are often in direct contradiction of one another. Most authorities, however, agree that large doses of copper are poisonous, while small quantities, continued for a prolonged period of time, should not be regarded as harmless. Drs. Baum and Seeliger (*Archiv für wissenschaftl. u. prakt. Thierheilk.*, xxiv., S. 80, 127), go a step further and ask whether a chronic copper poisoning ever exists. In their experiments they employed as test animals one sheep, two goats, twelve dogs, and seven cats; and for test material, cuprohæmol, cupric sulphate, acetate, and oleate. The experiments extended over a prolonged period of time, in some cases a year. They summarize their conclusions as follows: Chronic copper poisoning, in the scientific sense, can be produced by the continued administration of minute doses of copper, through a prolonged period of time; it is characterized *intra vitam* by loss of weight, weakness, and loss of appetite, occasionally by falling of the hair and cramps. The autopsy shows chronic intestinal catarrh, changes in the liver and kidneys, with considerable deposits of copper in the former; occasionally there are added catarrh of the stomach, hemorrhages in the heart and diaphragm, marked prominence of the Malpighian corpuscles, anæmia or hyperæmia of the brain, and pathological changes in the pancreas. The intensity of the poisonous symptoms and of the pathological organic changes, and the period at which they appear, depend upon the species of animal experimented upon, the power of resistance of the particular animal employed, the size of the dose, and the preparation used.

The Classification of Epileptics.—The *Boston Medical and Surgical Journal* (April, 1899, No. iv.) gives a simple and concise classification of epileptics. There is, first, the clinical classification, that made according to the type and stage of the disease; and, second, the practical classification of epileptics in institutions. His arrangement is as follows:

I. Clinical. 1. According to etiology: A. Idiopathic or true epilepsy. B. All other forms for which definite causes exist. *a.* Traumatic: (1) Injury to brain tissue, intracranial hemorrhage; (2) continued increased pressure on the brain and meninges, as by depressed bone; (3) obscure cases following blows on the head without manifest organic lesion. *b.* Toxic. *c.* Organic: Hemorrhage, embolism, thrombosis, neoplasm, cerebral sclerosis, etc. *d.* Syphilitic.

2. According to symptoms—(totally unscientific and should fall into disuse): A. Grand mal is the prominent feature. B. Petit mal is the prominent feature. C. Automatic actions are the prominent features.

II. Practical classification in institutions. A. Sex. B. Mental condition: *a.* Sane. *b.* Insane: (1) Criminal; (2) habitually violent; (3) temporarily violent; (4) mild, non-violent, non-criminal: (*a*) the much demented and helpless; (*b*) the moderately demented, harmless epileptics, able to get about and perhaps to do light work; (*c*) those but slightly demented or essentially sane between attacks.

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PUBLIC BATHS.

BATHING, if not so old as the hills, is at least as old as man. The practice has been followed among the Hindoos for years without number, and it is with them as with some other Eastern races a religious belief. The Jews were convinced of the healing properties of water. One of the laws of Moses was purification by water. The Talmud teaches a similar code. Under the ancient Roman dynasty bathing reached its highest stage of perfection, and even the most luxurious modern baths cannot compare with the magnificent bathing establishments built in the days of Rome's zenith. At the time when Augustus Cæsar ruled, public baths had been in vogue for a considerable time. After his death each emperor, if he wished to get into the good graces of the populace, freely expended the money of the State in the construction of enormous buildings, containing suites of bathing apartments, gymnasia, and sometimes even theatres and libraries. These were called thermæ. When Ptolemy reigned in Egypt Alexandria stood unrivalled in its public baths. To come, however, to more modern times, to Germany must be awarded the credit of first establishing public municipal baths. In that country river baths for the summer months have been in existence since the thirteenth century. Great Britain was the first country to inaugurate the present system of baths and washhouses. In 1794, the corporation of Liverpool purchased a private swimming establishment and in 1842 opened public baths and washhouses. This example was quickly followed by cities and towns throughout the kingdom. Of the sixty-five county boroughs with over fifty thousand population, only seven do not have public baths. Of the two hundred and fifty smaller boroughs seventy-four have such establishments. In London there are more than thirty, in Manchester nine, in Liverpool eight, in Glasgow seven, in Newcastle six, in Birmingham five, and in Bristol and Salford four each. In Germany there are now municipal bathhouses on the British model in more than forty of fifty-five German cities with over fifty thousand population. In France, although the movement was taken up at first with much energy, this spirit quickly died, and public baths are much less numerous in France than in Great Britain or Germany. In Austria, Norway, and Sweden municipal baths have been erected in the larger cities. Vienna has eleven. In Italy again, while the crusade against personal uncleanliness has not been undertaken with much vigor nor greeted by the population with a large amount of enthusiasm, the larger cities possess the means of bathing to a limited extent. In Spain and Portugal public baths will be looked for in vain, and in Russia, Belgium, and Holland the system is not as yet regarded with a high degree of favor. The foregoing figures have been quoted for the purpose of comparison, and it will be shown how far the United States lags behind most European countries as regards a municipal bath.

Public baths are in use in a very small number of American cities. Boston thirty years ago inaugurated summer baths, but establishments conducted on the British plan have been introduced only within the last ten years. The following cities contain public baths: Yonkers, Boston, Chicago, New York, Brookline, Mass., Providence, Philadelphia, and Worcester. That is to say, in a country containing nearly eighty million inhabitants there are but ten cities that provide any kind of bathing facilities, while in New York State, with a population of upward of six millions, Buffalo and New York City are the only two cities which have free bathing institutions. Perhaps no city in the world is more in need of a thorough system of public baths than New York, for no city is more crowded in certain districts. Many efforts have been made to induce the city authorities to supply this want, and Dr. Simon Baruch has been especially conspicuous in insisting upon the necessity of adequate means for bathing and in pointing out the superiority of rain-baths. The New York *Herald* of October 25, 1891, commenting on the opening of the baths built by funds supplied by Baron de Hirsch, says:

"These rain-baths are something entirely new for this country. Attention was first called to this system of baths in this country by Dr. Simon Baruch. . . . Dr. Baruch spent six months in Europe, studying the baths of all the foreign nations. On his return he brought the subject before the Academy of Medicine, and headed the rapidly growing movement for public baths. His idea is that, in order to popularize bathing among the poor of great cities, public baths should be established in the immediate vicinity of the populous tenement districts, where their presence offers a constant allurement, and where the people may obtain pure water, soap, and towels as well as comfortable accommodation."

Somewhat delusive hopes were raised by Mayor Strong during the time he held office. As a matter of fact he did appoint a bath committee, who recommended plans for an immense building to accommodate two thousand bathers daily, with washhouse, etc., at the cost of $95,000. This is at the present time in course of construction in Rivington Street near Goerck Street. The intentions of the committee were doubtless good, but at the same time its action was ill-advised. The wiser policy would have been to listen to the practical counsels of Dr. Baruch

and to heed the warning of the MEDICAL RECORD, and instead of expending the people's money lavishly upon one building, to use the sum in constructing several small bath-houses in localities easily accessible to the dwellers in the tenement sections. However it seems probable that this mistake will not occur again. The mayor has given his word to favor the building of two baths on the east and west sides of the city on the lines suggested by Dr. Baruch, and in districts recommended by the Academy of Medicine committee. The baths in the parts of a crowded centre of population inhabited by the working classes are not so much needed for recreation or even for promoting physical development and health, important as both these objects are, as for the more prosaic but equally desirable purpose of cleanliness. Therefore the result aimed at will be attained if buildings small in cost and size are erected, supplied plentifully with warm and cold water, provided with all the conveniences for a thoroughly satisfactory wash, and, as has been remarked before, placed where they are really wanted.

The inhabitants of the cities in this country have been long in making up their minds that public baths are necessary, but now that New York has taken the initiative, her example will doubtless be followed by those cities which at present lack proper establishments for bathing and washing purposes.

THE HUNTERIAN ORATION OF SIR WILLIAM MACCORMAC.

THE Hunterian oration delivered at the Royal College of Surgeons of England in February last was the fifty-ninth since its establishment in 1814. When this fact is taken into consideration it must be freely acknowledged that the task set before Sir William MacCormac, the selected orator, was no light one. The ground has been traversed and retraversed so often that it would seem a matter for wonder that there could be anything fresh found to say concerning the greatest British surgeon of the last century. Happily the genius and versatility of Hunter himself removed many of the difficulties in the path of his eulogist. He was a many-sided man; his claims to fame do not rest on his pre-eminence as a surgeon alone, but on a far firmer basis, and it is by his acute and laborious investigations in the field of organic science generally, and by the monument representing his labors he bequeathed to posterity, that his name will be remembered and revered all the world over. If it is true, as Carlyle says, that "genius consists in an infinite capacity for taking pains," then indeed was Hunter a genius. By the present generation perhaps the value of Hunter's researches is hardly appreciated at its true worth. The age in which he lived, the comparative lack of opportunities, the condition of stagnation of science in Great Britain in his time are not sufficiently taken into account. The *British Medical Journal* puts the situation well when it says: "It is not until we are familiar with the state of contemporary knowledge and thought that it is possible to realize how much he was in advance of his time, for his methods were those which have only come into general use during the latter half of the present century, the methods of repeated experiment and patient observation."

In times gone by the Hunterian orator was not chosen on account of his eloquence. It was enough that he held a fairly high position in the medical world, and in fact the selection was not so much a question of fitness as of routine. Times have, however, greatly changed, and the Hunterian orator of the present day must not only be in the front rank of British surgeons, but must also be gifted with a silver tongue. Both these qualifications Sir William MacCormac possesses in a high degree. He is one of the greatest of living English-speaking surgeons, and is besides a speaker of brilliancy and force. His oration on Hunter was a model—lucid, concise, and discriminating, a fascinating and lifelike sketch of the man and his deeds.

SCIENCE IN MAGAZINES.

The Scientific American of May 20th has an apropos article criticising in no measured terms the custom lately come into vogue of treating in magazines scientific matters in a sensational and ignorant fashion. A magazine of to-day is not considered complete and in keeping with the times unless it contains an article on a medical or scientific subject. When such features are dealt with by persons who know what they are writing about and are able to express themselves in language intelligible to the general reading public, no fault can be found with this departure. In fact, it is calculated to educate and do good. But when the ordinary everyday reporter or hack scribe, possessing no technical knowledge, is invited to write up some discovery in science, he must necessarily draw very considerably upon his imagination. The results are weird and uncanny, and warranted to convey a false and misleading impression on the points in question to the minds of the readers thereof. An article on liquid air which recently appeared in a magazine, and which has been condemned by all expert writers, is a typical instance of this description of composition. If the proprietors of magazines are unable to procure men who can discourse on scientific matters in phraseology at once comprehensible and correct, it would be better that these subjects should be dispensed with.

The Pay for Medical Services in Virginia allowed by law is, according to a paper by Dr. O. M. Smith in the Richmond *Journal of Practice*, abominably inadequate. He says that the law allows physicians only fifty cents for testimony in court, even if they are detained all day. The physician who attends the inmates of a county jail is paid three-quarters of one whole dollar every day. The maximum fee for an examination in lunacy is $2.50, whatever the distance travelled, and the usual allowance for making a post-mortem examination is the same.

News of the Week.

The Health Officer of Savannah, Dr. J. C. Lehardy, has resigned as the result of a disagreement with the mayor. It is announced that the city council will offer the position to Dr. W. F. Brunner, at present at the head of the United States marine hospital service at Savannah.

The Sanitation of Cuba.—Dr. H. R. Carter, of the United States marine hospital service, who recently arrived in New Orleans from Havana, reports that the sanitary condition of Cuba is better than ever before. A few cases of yellow fever have been discovered from time to time, but by the proper isolation of the patients the disease has been prevented from spreading. At one time yellow fever was very threatening at Holguin, but by the adoption of severe measures it was wiped out there. Havana, which was usually a pesthole at this time of year, is still practically free from the yellow plague.

Yellow Fever at New Orleans.—A case of yellow fever having been reported at New Orleans, a commission of health officers from Louisiana, Mississippi, and Alabama made a thorough investigation of the health conditions of that city, including an inspection of all the hospitals and infirmaries, and reported that they could find no other case of suspicious illness in the city, and had not been able to trace the source of infection in the case reported. The State and local health authorities afforded every assistance in the investigation. The commission reports that in its opinion it is unnecessary and unwise for any State or city to quarantine against New Orleans under the present conditions.

Rising to the Emergency.—The death, on April 29th, of Prof. Reuben Ludlam, of the Hahnemann Medical College, Chicago, was attended with peculiar distressful circumstances. The following graphic account is given by the *Hahnemann Monthly:* "Dr. Ludlam's death, which was caused by heart disease, occurred at five o'clock. The venerable surgeon had recently recovered from a long sickness, the result of a surgical operation. The operation at the time of his death was one of the first he had attempted since his recovery. It was a case of hysterectomy for the removal of a fibroid tumor. The operation took place in a private operating-room. Dr. Ludlam apparently was in the best of health and spirits, and his hand never had been more steady nor brain more clear. The operation was almost half completed when he uttered an exclamation of distress, the knife dropped from his nerveless fingers, and he sank unconscious into a chair. His son, Dr. Reuben Ludlam, Jr., who was assisting him, glanced at his father, over whose face the pallor of death was gathering, then at the patient on the operating chair, and instantly took up the work where his sire had left off, while the attendants carried the venerable physician to another room and summoned Dr. Halbert and Dr. George F. Shears. They applied restoratives and did all they could, but in a few moments the last sign of life disappeared. Meantime his son had completed the operation with care and skill, though suffering under terrible suspense. The operation was wholly successful."

A "Sympathetic Healer" in the Penitentiary.—Mrs. Mary Miller, an illegal "healer" of the Christian-Science order, recently undertook to pray away an injury of the foot. The "claim" was too strong for her faith, however, and the patient, a twelve-year-old girl, conceived the idea of gangrene, which belief she communicated to a surgeon, who was finally called in and who amputated the leg. The woman accepted $51 for her divine offices. She was tried a few days ago before Judges Fitzgerald, Keady, and Fleming in the court of special sessions in Brooklyn, was found guilty on the technical charge of practising medicine without a license, and was sentenced to five months' imprisonment in the Kings County penitentiary.

A Food Investigation.—The New York State board of health has inaugurated a crusade against adulterated food products. Its agents are now at work throughout the State collecting samples for the purpose of bringing the guilty parties to justice. Particular attention is directed to flour, sugar, tea, coffee, and to other similar articles of consumption, as well as to fruit products, including extracts used in flavoring soda-water. A bill was introduced in the regular session of the legislature providing for the appointment of chemists to investigate the food products sold in this State and to make a report to the next legislature. This bill failed of passage because Governor Roosevelt thought the work should be done by the State board of health. The board is authorized to expend $4,000 in making this investigation, and already some fifty samples have been purchased and submitted to the chemist of the board for analysis.

Shorter Hours for Drug Clerks.—The bill of the New York legislature enforcing shorter hours for drug clerks having been killed, the Druggists' League announces that it will now demand the passage of a municipal ordinance regarding drug stores. This ordinance would provide that drug stores and pharmacies remain open on Sundays and legal holidays and after 8 P.M. on week days only for the sale of surgical dressings and medical supplies on the written order of a practising physician for immediate use. It is also stated that the league will soon organize a system of pharmacies under its own direction. The league will earn little popular support for its objects if it attempts to shut off the flow of soda-water on Sundays and evenings in summer.

The Famine in Russia has assumed frightful proportions in consequence of the action of the press censor in forbidding all mention of it at its beginning. Now that it is permitted to publish the facts the accounts are probably exaggerated—at least it is to be hoped they are, as some writers estimate the number of starving peasants at twenty millions. The Rev. Mr. Francis, pastor of the British-American church in St. Petersburg, writes to the London papers a pitiful appeal for help for the sufferers in the eastern provinces

of Russia, where he is now working as chairman of the relief committee. He gives distressing details of the sufferings of the people. He says seven provinces, covering nineteen thousand square miles, are affected, and that five million people are famine-stricken and will need to be fed during the next three months. He adds that the Czar, Czarina, Russian government, and the Red Cross and other bodies have subscribed large sums, but at least $10,000,000 is requisite to keep the starving people alive during the three months to the next harvest.

A Ship with Scurvy on Board.—An Italian brig from Montevideo recently arrived at Hampton Roads with nine of the crew down with scurvy.

Diphtheria in the Hebrew Shelter.—The board of health has placed a quarantine on the Infants' Department of the Hebrew Sheltering Guardian Society at One Hundred and Fifty-first Street and the Boulevard, owing to an outbreak of diphtheria among the inmates.

Smallpox at the Carlisle Indian School.—A few days ago several cases of varioloid were discovered among the students of the Indian training-school at Carlisle, Pa. The patients, all of whom are boys, have been isolated in the school hospital, and the entire school has been quarantined.

"Divine Healers" in Cincinnati.—Having cured the chief of police of "rheumatism," or corns, and some of the city fathers of other ills, a couple of "healers" have received permission to ply their trade publicly on Fountain Square in Cincinnati. With such a precedent established, quacks will have little to fear in the Queen City of the West.

Army Medical Service.—The following preamble and resolutions have been adopted by the delegates of the Philadelphia County Medical Society at the meeting of the American Medical Association at Columbus, and were duly presented:

"*Whereas*, The morbidity and mortality statistics of the late war have served to call to the attention of physicians of the United States the weighty and enlarging problem of the care of soldiers and sailors in peace and during campaigns, under widely varying conditions of climate and environment, now and in many respects presenting themselves for the first time; therefore, be it

"*Resolved and recommended*, by the American Medical Association, (1) That the medical corps of the army and navy be enlarged to meet properly all demands that may be made upon them. (2) That transportation of medical supplies be under the control of the medical department. (3) That a corps of sanitary inspectors be created, whose duty it shall be to examine into the sanitary condition of camps and bodies of troops in transit, and advise in relation thereto. (4) That the Government establish permanent camp sites, the selection to be subject to the approval of the surgeon general, for use in the mobilization of large masses of troops. (5) That a professor of military hygiene be appointed at West Point to instruct the cadets in the principles of sanitation. (6) That the medical officers of the National Guard be subjected to rigid examination both for admission to the service and for promotion. (7) That the surgeon-general of the army and navy in time of peace and war be empowered to call into requisition the services of skilled specialists. (8) That the President of the United States be respectfully urged to recommend to Congress the appointment of an army medical commission, to be composed of physicians and sanitarians to be taken from military and civil life, including the surgeon-general of the army and navy, whose duty it shall be to prepare a report containing a detailed plan of a modern system to govern the medical departments of the army and navy in peace and war. Be it furthermore

"*Resolved*, That a committee be appointed by the president of the American Medical Association to wait upon and present these resolutions to the President of the United States for his favorable consideration."

Albany Medical School Graduates Form an Association.—The New England alumni of the Albany Medical College were formally organized into an association at the Hunt Memorial Hall on Thursday, May 25th. The following officers were elected: *President*, T. D. Crothers, M.D., of Hartford, Conn.; *Secretary*, W. G. Murphy, M.D., of East Hartford.

United States Marine Hospital Examinations.—A board of officers will be convened at New York, N. Y., on Tuesday, June 27, 1899, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States marine hospital service. Applications for this examination must be received on or before June 24th. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: (1) Physical; (2) written; (3) oral; (4) clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and, when practicable, candidates are required to perform surgical operations on the cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service assistant surgeons are entitled to examinations for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due

examination, as vacancies occur in that grade. Assistant surgeons receive $1,600, passed assistant surgeons $2,000, and surgeons $2,500 per annum. When quarters are not provided, commutation at the rate of $30, $40, or $50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per cent. in addition to the regular salary for every five years' service, up to forty per cent. after twenty years' service. The tenure of office is permanent. Officers travelling under orders are allowed actual expenses. For further information or for invitation to appear before the board of examiners, address: Supervising Surgeon-General, United States Marine Hospital service, Washington, D. C.

Yellow Fever has appeared in the South in two places.

The Tuberculosis Congress at Berlin.—The first sounds of the tuberculosis congress at Berlin are about us. The congress convened last week, May 24th to 27th, and the number of the *Berliner klinische Wochenschrift* for May 22d is devoted to the subject of tuberculosis. The *Zeitschrift für diätetische und physikalische Therapie*, vol. iii., Heft 2, is also given up entirely to the congress proceedings, and to reviews and abstracts bearing on tuberculosis. The object of the congress is eminently practical; it stands for the prevention of the spread of this scourge. The empress and queen is special "patroness," the chancellor of the treasury is president, and the central committee has representation from the different state departments. Virchow, v. Leyden, Gerhardt, B. Fraenkel, v. Ziemssen, Schroetter, and others are to contribute to its proceedings, and among the other noteworthy physicians of Europe who are expected to attend are Brouardel, Nocard, Martin, Landouzy, Metchnikoff, Sir Henry Weber, Malcolm Morris, Grainger Stewart, Heymann, Simonetta, Botkin, Egger, and others. The *Berliner klinische Wochenschrift* publishes articles by F. Hueppe on "The Tuberculosis Congresses" and "Hygienic Movements"; "Blood-Spitting in Tuberculosis," by C. Gerhardt; "The Surgical Treatment of Tuberculosis," by K. Turban; "The Relation between Menstruation and Tuberculosis of the Lungs," by Neumann; "Body Weight, and the Relations of the Abdominal Organs and Chest in Phthisis," by Dr. S. Gabrilowitch; "Tuberculosis Infection in Men," by E. Aron; "A Statistical Study on the Spread of Tuberculosis," by George Meyer of Berlin. Posner contributes on "The Care of Tuberculosis." The *Zeitschrift für diätetische und physikalische Therapie* gives portraits of the empress, of Fürst Schillingsfürst, Reichskanzler, honorary president; Herzog von Ratibor, first vice-president; Prof. Dr. E. v. Leyden, second vice-president. It also contains a special tuberculosis programme, H. Schaper writing on "The Treatment of Tuberculosis in Special Hospitals and Isolation Homes," Dr. Sinclair Coghill on "The Prevention of Tuberculosis"; "The Value of High Mountain Climate in the Treatment of Tuberculosis," by F. Egger, "The Turkish Open-Air Treatment of Tuberculosis," by Dr. Suleiman Bey; and "The Diazo-reaction in Phthisis and its Prognostic Importance," is contributed by v. Leyden's clinic.

An Egg Idiosyncrasy.—A writer in the *British Medical Journal* describes the case of a young lady, otherwise perfectly healthy, who has symptoms of acute poisoning on any occasion on which she takes egg in any form and in the minutest quantity, the severity of the attack being in proportion to the amount which has been taken. Almost immediately after it has been swallowed she has rigors and vomiting, and in a very short time the tongue becomes parched and dry, the throat sore, and there is severe headache with pain in the back. The very smallest quantity of egg, no matter how disguised in any other form of food, will produce the symptoms in a more or less severe form. The symptoms may continue for from a few hours to two days. A tiny particle of the white placed on the skin produces nettle rash.

Medical License Examination in New Hampshire.—The fifth examination for licenses to practise medicine in the State of New Hampshire will be held at the State house, Concord, on Tuesday and Wednesday, June 20 and 21, 1899, beginning at 8 A.M. All unlicensed physicians who were not in practice in that State on and before March 16, 1897, must pass the examinations in order to receive a license to practise legally their profession. Application blanks should be procured early, as these papers must be filled out and in the hands of the regent by June 15th. All information regarding the examinations will be given by the department of public instruction, State Library, Concord.

Filipinos as Patients.—In a recent report to the surgeon-general, Major Lippincott, chief surgeon at Manila, states that "two hundred and fifty-six wounded Filipinos, including four women, were received into the hospital during February and March. Of these forty-five, including a woman, died. These people received the best of care and treatment, and seem to appreciate the efforts made in their behalf. It is interesting to note the different results of treatment between our men and the Filipinos. In the latter suppuration of wounds is the rule, while we rarely see it in our cases. Many causes account for this, but the chief reason, of course, is infection before coming into our hands. Besides, they have an inordinate propensity to tear off dressings and finger their wounds when opportunity offers."

New St. Vincent's Hospital; the Spacious Annex Opened.—The new Free Hospital for the Destitute Sick, which has been built as an addition to St. Vincent's Hospital at Seventh Avenue and Eleventh Street, was formally opened Sunday, May 28th. At the exercises, which were held in one of the wards, the archbishop presided, and Charities Commissioner John W. Keller, Dr. C. J. McGuire, and John D. Crimmins spoke. A reception was given by the Sisters of Charity, the Ladies' Auxiliary, and the Medical and Advisory Board, and the rooms of the new

building were thrown open to inspection. The new structure is seven stories high, and has a frontage on Eleventh Street of one hundred and forty-five feet. It is fireproof throughout, and is so arranged as to afford the very essential elements of light and pure air for the patients. The building will be entirely devoted to free patients. A novel feature is a spacious roof garden, and plenty of air is insured by the arrangement of an interior courtyard, which is made attractive by a lawn, a large fountain, and a number of trees. The medical ward was furnished throughout by Dr. F. S. Dennis, one of the visiting surgeons of the hospital, and his wife. Dr. Dennis also furnished the gynæcological department. The *x*-ray apparatus for the surgical room was given by John D. Crimmins.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 3, 1899. May 26th.—Surgeon C. G. Herndon ordered to Cleveland, O., temporarily for recruiting duty at the branch hydrographic office. June 3d.—Medical Inspector F. Rogers promoted to medical inspector.

Dr. Playfair was hurt in a queer automobile accident recently. He was going up a hill when something gave way and the carriage began to roll backward down the slope. The driver applied the power brake to the rear wheels, forgetting that he was going in that direction, with the result that the carriage stood up on end and tipped backward, bruising Dr. Playfair as it fell upon him.

Guarding against the Plague.—A dispatch to Lloyds from Malta says that vessels from Egypt can obtain coal and provisions in the quarantine harbor there under quarantine restrictions. Passengers must swear that they have not been in Egypt within twenty-one days, or otherwise they will be compelled to undergo twenty-one days' quarantine aboard ship. These precautions are taken in consequence of the outbreak of the plague in Egypt.

Dr. William Oliver Moore has been appointed consulting ophthalmic and aural surgeon to the Flushing Hospital and Dispensary, Borough of Queens.

Medical College Consolidation.—The St. Louis Medical College and the Missouri Medical College, both of St. Louis, have been united, and the new institution will be known as the Medical Department of Washington University.

The First Woman Medical Graduate at Durham.—Miss Selina Fitzherbert Fox recently took honors in the examination for bachelor of medicine at the University of Durham in England. She headed the list of candidates, who, with the exception of herself, were all men. Miss Fox studied at the London School of Medicine for Women and at the College of Medicine, Newcastle-on-Tyne. This is the first time, we believe, in the five years that the qualification has been open to women that advantage has been taken of the privilege.

The Medical Profession in Hungary.—According to official statistics recently published the number of medical practitioners in Hungary has been steadily increasing during the last few years. In 1892 there were 4,047; in 1893, 4,174; in 1894, 4,280; in 1895, 4,424; in 1896, 4,657; in 1897, 4,858. As regards the proportion of practitioners to population it is largest in Buda Pest, where it is 23 per 10,000 inhabitants, and lowest in Hodmezovasarhely, where it is 3.2. Of the whole number of practitioners in Hungary, 2,154, or 44.3 per cent., hold public appointments. There are in Hungary 8,580 midwives holding diplomas. The number of hospitals and asylums is 359.

Mercurial Poisoning through Inhalation.—A young man, who had never taken mercury in any form, recently died of severe hydrargyrosis in a Vienna hospital, caused by the presence in the same ward of several patients undergoing Welander's "pillow-slip" mercurial treatment. He was in an advanced stage of tuberculosis with ulcerations in the mouth, anæmic and cachectic, and although removed to another ward at the first indications of disturbance, sufficient mercury was found in the urine to account for the fatal result in his enfeebled condition.—*The Journal of the American Medical Association.*

Riding "Hands Off."—The mathematician has taken to the bicycle, not so much for exercise as for a subject of infinite calculations. Among other things he has now shown that to ride easily hands off without regard to wind, stones, and car tracks it is only necessary to go at the rate of 10.4 miles an hour and to have fully inflated tires. That, at least, is what Mr. Whipple, of Trinity College, Cambridge, announces after an elaborate series of calculations to determine the relation of velocities to stability of motion.

Dr. Charles B. Penrose, of the University of Pennsylvania, has resigned, on account of ill health, his positions as professor of gynæcology and member of the university hospital staff.

The Late Dr. J. W. Stickler.—The following minute was adopted by the medical staff of the Orange Memorial Hospital at a special meeting called to take action on the death of Dr. Joseph W. Stickler:

"Dr. Joseph William Stickler, attending physician at the Orange Memorial Hospital, died May 18, 1899. Dr. Stickler was born at Hoboken, N. J., June 26, 1854. He moved to Orange with his parents very early in life. He received his preliminary education in the Orange public schools and took the degree of S.B. at the University of the City of New York in 1876. His medical degree was received at the College of Physicians and Surgeons, New York City, in 1879, after receiving which he served a term as house physician in the Presbyterian Hospital. Dr. Stickler was appointed attending surgeon to the Orange Memorial Hospital in July, 1882, and from that time he has always been very faithful in his attention to the duties of the hospital. When the phthisis ward was established, at his own request he was transferred to

the medical side of the staff, in order that he might take advantage of the opportunity that was thus afforded by the new ward for pursuing his studies in tuberculosis, in which he had been so long and deeply interested. Early in his connection with the staff Dr. Stickler was appointed pathologist to the hospital, and he devoted a great deal of time to the development of that department, and through his influence and enthusiasm the laboratory for diagnostic and pathological research was established and the building erected which that department shares with the dispensary. It is remembered that he was one of the first American physicians to investigate the merits of Koch's tuberculin, and that he went to Berlin to become thoroughly familiar with the new method of treatment, and that he conducted a long series of experiments with it in the wards of our hospital. Dr. Stickler has ever been faithful in his duties in the hospital, sparing neither his time nor his strength, and often contributing liberally of his means for the benefit of this institution. His relations with his colleagues on the staff were always kindly and courteous, and his memory will be cherished as that of a genial, cultured, and scientific physician.

"We, the members of the staff of the Orange Memorial Hospital, wish to express the deep sense of personal grief that we feel at his death as well as the loss that the hospital has sustained, being deprived of his services and skill.

"*Resolved*, That this minute be spread upon the records of the medical staff and a copy be sent to Dr. Stickler's family.

"THOMAS W. HARVEY, *Secretary*."

Obituary Notes.—DR. C. H. HELVINGTON, one of the best known physicians in Southern New York, died in Binghamton recently of pneumonia. He was born in 1835, and was a graduate of the Albany Medical College and a veteran of the civil war. He leaves two sons, Dr. A. P. Helvington, of Binghamton, and the Rev. S. O. Helvington, of Portage Rock.—HENRY E. CRAMPTON, M.D., a veteran of the civil war, died at Glen Ridge, N. J., on Sunday, May 18th. He was sixty-two years old. At the time of his death he was the treasurer of the New York Academy of Medicine and a member of the Medical Society of the County of New York, the Harlem Medical Society, the New York Medical Union, the New York Genealogical Society, and Alexander Hamilton Post, G.A.R. He devoted much time to philanthropic work, especially in connection with the Association for Improving the Condition of the Poor, of which he was for many years a vice-president, having particular charge of the department of hygiene. He was also a director of the Dry Dock Savings Bank. Dr. Crampton leaves five children and ten grandchildren.—DR. JOSEPH D. WALLACE died at Philadelphia on June 1st, of appendicitis, at the age of thirty-one years. He was demonstrator of anatomy in the Medico-Chirurgical College, having been graduated in 1895.—DR. JAMES H. CANTRELL died at Philadelphia on June 3d, at the age of sixty-six years. He was graduated from Jefferson Medical College in 1856.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Fiftieth Annual Meeting, Held at Columbus, Ohio, June 6, 7, 8, 9, and 10, 1899.

(*By Telegraph to the* MEDICAL RECORD.)

GENERAL SESSION.

PRESIDENT, DR. JOSEPH M. MATTHEWS, OF LOUISVILLE.

First Day—Tuesday, June 6th.

THE Grand Opera House of Columbus was crowded to suffocation when the president of the association, DR. JOSEPH M. MATTHEWS, of Louisville, Ky., called the meeting to order at 10:30 A.M.

Address of Welcome.—After the opening prayer by the Rev. Washington Gladden, his excellency ASA A. BUSHNELL, governor of Ohio, delivered the first address of welcome. He humorously alluded to the stifling heat by saying that he had been told beforehand that if the association met in Columbus it would expect to have a "hot time," and if this was true they certainly had no reason to feel disappointed on that score. That this great body of medical men had consented to hold their annual meeting in that city was to be looked upon as another triumph for the State of Ohio. There was a reason why he personally should feel a somewhat keener interest and sympathy in the medical profession than the ordinary layman, for in his youth he had been an apothecary. When the speaker referred to the manner in which the various custodial institutions and hospitals throughout the State had been conducted, and expressed the sincere hope that they might be kept far beyond political influence, there was a ready response in a tumult of applause. Another portion of the address that was well received was the description of his efforts to secure the establishment of a board for the examination and registration of medical practitioners. Although it had been at work a comparatively short time, he said, it had become an honor to the profession and to the State.

An address of welcome was also delivered by his honor Samuel J. Swartz, mayor of the city.

The President's Address.—DR. JOSEPH M. MATTHEWS, of Louisville, in his address considered first "Our National Body; Its Purposes and Destiney." H said he imagined that when the father of this association called around him a few devoted friends, accomplished physicians and surgeons, and effected an organization to be known as the American Medical Association, their first thought was the unification of the profession which they loved so dearly. Sacrifices and great personal discomfort were endured by them to obtain the good, but the splendid results were evidenced in the assembled body. Some must be teachers or instructors, others listeners; they each in their way contributed their mite. It might be that some member from a far-off and sparsely settled country had heard some truth that in its application might save a life, or in return he could give an experience which might prove of incalculable benefit to his more fortunate brother. This possibility should rule out class legislation. In lieu of this he urged that the profession should receive all who represented honesty, fair dealing, and who entertained an earnest desire to elevate the standard of the medical profession and of the association.

Washington is the Proper Home of the Association.—On the question of "A Local Habitation," he thought it was to be seriously questioned whether the

association, so numerically great as it was destined to be, or in truth now was, profited by its migration each year to distant parts of the Union. He thought it added no dignity to the distinguished body of the association to be travelling about, to say nothing of the inconvenience to the members, nor of the expense of entertainment imposed upon a local profession. He believed that the members upon careful thought and consideration would conclude that the American Medical Association should have a local habitation. He thought the place best suited for this was the city of Washington, the capital of the nation, since in its free libraries, magnificent buildings, the home of the medical departments of the Government army, navy, and marine hospital corps, it had advantages offered by no other place. He suggested as not far-fetched the possibility that the Government might assist the association in the ultimate ownership of a suitable building for its meetings. The *Journal*, too, would find here the most suitable of all abodes. He called attention to the importance of attending the general session on the last day of the meeting, and pointed out that it was the fault of the members if resolutions which were not pleasing were rushed through. He deprecated the holding of clinics by the local profession, which very materially decreased the attendance upon the meetings of the general sessions and the various sections. This same absence occasioned by the dinners to which the members were kindly invited, he thought, could also be obviated.

The Journal.—Reference was made to the death of Dr. John B. Hamilton, editor of the *Journal of the American Medical Association*, a truer friend than whom the association never had. Possessed of clear-cut individuality, he was always outspoken, and what he did he at least believed to be for the best. By his efforts the *Journal* had been brought to its present high standard. He congratulated the association upon the selection of Dr. George H. Simmons as Dr. Hamilton's successor, who stood as a peer among his editorial friends. He disagreed entirely and unequivocally with the advocacy of a censorship in the management of the *Journal*, believing that if one article read before the association was refused publication, the pledge and obligation of the association were violated; the reader should select the wheat from the chaff. In connection with the business interests of the *Journal* he suggested that a suitable man, preferably a doctor, be selected to travel, with the object of increasing the membership of the association. He believed there were many hundreds of worthy physicians in the United States, ignorant of the manner of becoming members, who would readily join the mother society if properly approached. He believed that the added membership would more than pay the salary of such an officer.

The annual heated debate over the secretaryship was deplored, and as an easy solution of the matter the suggestion was offered that the editor of the *Journal* be the secretary of the association.

With reference to the recognition by the association of local medical societies which had adopted the code of ethics, the president expressed the hope that something would be done to this end. He had found that in many instances the State society had failed to recommend these societies, but for no particular reason.

Tuberculosis.—The rest of the address was given to the consideration of tuberculosis, the antivaccinationists, and syphilis. In the consideration of tuberculosis reference was made to the tuberculosis congress recently held in Berlin, and to the action taken by the Liverpool Medical Institution toward the prevention and the treatment of the dread disease; also to the action of the section on hygiene of the French Association for the Advancement of Science, in passing a resolution pointing out that the convection of tuberculosis by inhalation is only one of the modes of infection, and that a larger part of the diffusion of the disease was played by contagion through the alimentary canal, and urging the necessity of taking adequate measures to insure the sterilization and harmlessness of articles of food. As a remedy for the prevention of the ravages of the disease suggestion was made of the resolution adopted at the International Congress of Hygiene in Brussels in 1897: "The hospitalization of tuberculosis is urgent and will not long be withheld." He urged that the association should appoint a committee to prepare a careful report on this subject and present it to the next congress sitting, beseeching that this Government erect, prepare, or donate hospitals or reservations in and at which the poor or others shall receive treatment for the cure of consumption. Also that the advisability of the respective States erecting similar institutions be impressed upon State boards of health in the various States.

The Antivaccinationists were referred to as a class which was doing much to endanger the lives of our citizens, and whose meddling ways were giving the health boards much annoyance. The author asked that the association give to the medical profession in America an indorsement of their views in a resolution sustaining compulsory vaccination.

A Crusade against Syphilis.—In his consideration of this subject the president made reference to the international medical conference to be held in Belgium, known as "The International Conference for the Prevention of Syphilis." He stated that he had already named the delegation for whose attendance request had been made through the Belgian minister at Washington. He believed that the time has arrived when physicians, singly or when in convention assembled, should throw aside all restraint when dealing with this vital question. The minister and the priest should aid the doctor in this praiseworthy undertaking. The doctrine should be inculcated into the young of both sexes, that freedom from this awful condition should exist before the marriage relation was thought of. Suggestion was made that a committee be appointed from this body, to report at the next annual meeting on the subject, "What is the Best Means of Preventing the Spread of Syphilis."

A Word to the Politicians of the Association.—The address closed with a plea for harmony, in which the president said: "Let me beg of you that this meeting be one of perfect harmony and peace. Let nothing of an acrimonious nature be indulged in, but rather let your deliberations be characterized by patience, love for each other, and a desire to ennoble the profession to which you belong. For are we not brothers indeed, fighting for a common cause—the obliteration of the common enemy, disease? May your future life, each and all of you, be one of peace and perfect happiness; and may God grant to all a long life filled with good deeds. If fate should decree that any one of you should pass away before we meet again, may you find eternal rest in 'God's next country.'"

Report of the Chairman of the Rush Monument Committee.—In the absence of Dr. Albert L. Gihon, the chairman of this committee, the treasurer of the fund, Dr. Henry D. Holton, read the report, as follows:

You may remember the enthusiasm which prevailed at the meeting of the Association at Philadelphia, when the sum of $100,000 was fixed by common consent as the amount which should be contributed by the profession to erect a suitable memorial, not alone of the great medical patriot of the Revolution, but of the part which the profession of

medicine represented by him had had in the foundation of this great republic, and as the expression of the patriotic sentiments and love of country of the medical men of the present day. You must also recollect how the delegates from State after State rose and pledged their several constituencies each for its quota for this commendable project. You may further remember how, at the meeting at Denver, two States, New York and Colorado, redeemed that pledge, and a third, Pennsylvania, conditionally, and how, at my request, the permanent secretary was directed to communicate with the officers of the State medical societies, urging them to appoint without delay representative members of the committee from their several States and Territories. I know that he promptly performed this duty: six State medical societies have appointed such representative members: $355.50 has been added to the monument fund, which now, by increases of interest upon the money invested, amounts to about $10,000 actually in the treasurer's hands. A Washington dispatch reads: "The sum of $4,200 was to-day (January 3d) received at the office of the Lafayette Monument Commission from the Ohio State commissioner, being the amount contributed by school children of the State of Ohio for the monument to Lafayette to be erected in the city of Paris, in the year 1900. With contributions sent direct from various schools, this makes $5,000"—one-half the fruits of fifteen years' appeals to over one hundred thousand members of the medical profession in the United States for a monument at their own national capital to their own countryman and professional *confrère*, whose services in the cause of national liberty were every whit as great.

Your business committee at Denver did not approve my request that the association should defray the expense of attendance at the meetings of at least one of the officers of the Rush monument committee. As these officers have continued over from year to year, it is evident that the action of the business committee virtually requires them to contribute annually from their private means from $50 to $200, according to the distance travelled. In my own instance, by reason of my retirement from active duty in the navy, by limitation of age, I am no longer eligible for official detail, and would be subjected to an outlay on account of the monument which no other member of the association is asked to make.

Mr. President and members of the Association: After fifteen years of persistent, earnest effort, the time has come when I must admit that I can do no more. I reminded you at Philadelphia that, of the eleven men originally interested in this project, all but two had died since its inception. In February of this year the secretary of the committee, Dr. George H. Rohé of Maryland, my friend of friends, my always enthusiastic colleague and active coadjutor, also died; so lest death come unaware to me as it did to him, it is advisable that I transfer this duty to some younger, and I hope more successful, worker. It has been from the first a labor of love for me. From the beginning of my professional life, and this was almost half a century ago, the personality of Rush has been familiar to me, through my preceptor Dr. Rush Van Dyke, whose father, Dr. Frederick A. Van Dyke, a courtly, cultured gentleman of the highest type of the old-time physician, was himself a favored pupil of Benjamin Rush, whose name he bestowed upon his son, for whom he selected the honorable career which his famous teacher and himself so worthily graced. I would that every physician of this day should appreciate his indebtedness to this great man, who, had he lived among us, would have been no less distinguished—this physician who, great when he lived, is still the greatest physician this country has ever produced—this typical manly doctor, whose faults were those which belong to every man of his impetuous, earnest, far-seeing, and far-striving nature. To honor him with a monument is to honor our profession; and it must be a monument in keeping with the dignity of this greatest of human vocations—hence, I felt you acted wisely at Philadelphia in determining $100,000 as the proper sum to be devoted to its erection.

The secretary of the navy has assigned an unequalled site for the structure on the beautiful park fronting the United States Naval Museum of Hygiene, especially appropriate in that Rush was a pioneer in sanitary science, which men like the surgeon Gross and the physician Flint, as they laid down their lives, declared to be the highest aim and crowning glory of the science of medicine.

At the sluggish rate at which this fund has grown in my hands, it would be futile for me to hope to see it reach the proportions, I think with you, it should attain, especially as I shall have left for an indefinite residence abroad when this report is presented. So, thanking you for your repeated expressions of approval of the little I have done, and of the much I have sought to do, and cordially wishing success to my successor in office, I hereby resign the trust with which you first honored me in 1884 and have repeatedly renewed the past fifteen years.

Treasurer's Report.—Dr. H. P. Newman, treasurer of the association, presented his annual report. This showed that the association was in a prosperous financial condition, there having been on hand December 31, 1898, the sum of $21,729.95.

Reorganization of Army and Naval Medical Departments.—The Philadelphia County Medical Society offered the following preamble and resolutions, which were referred to the executive committee:

"*Whereas*, the morbidity and mortality statistics of the late war have served to call to their attention of the physicians of the United States the wide and enlarging problem of the care of soldiers and sailors in peace and during campaigns, under widely varying conditions of climate and environment, now, in many respects, presenting themselves for the first time: therefore be it

"*Resolved* and recommended by the American Medical Association—(1) That the medical corps of the army and navy be enlarged to meet properly all demands that may be made upon them; (2) That the transportation of the medical supplies be under the control of the medical department; (3) That four sanitary inspectors be created whose duty it shall be to examine into the sanitary condition of the camps and bodies of troops in transit, and advise in relation thereto; (4) That the Government establish a permanent camp site, the selection to be subject to the approval of the surgeon-general, for use in the mobilization of large masses of troops; (5) That a professor of military hygiene be appointed at West Point to instruct the cadets in the principles of sanitation; (6) That the surgeons-general of the army and navy in time of peace and war be empowered to call into requisition the services of skilled specialists; (7) That the medical officers of the National Guard be subjected to rigid examination, both for admission to the service and for promotion; (8) That the President of the United States be respectfully urged to recommend to Congress the establishment of an army medical commission, to be composed of physicians and sanitarians to be taken from military and civil life, including the surgeons-general of the army and navy, whose duty it shall be to prepare a report containing a detailed plan of a modern system to govern the medical department of the army and navy in peace and war. Be it furthermore

Resolved, That a committee be appointed by the

president of the American Medical Association to wait upon and present these resolutions to the President of the United States for his favorable consideration.

Several other resolutions of a similar purport were read and referred to the executive committee.

Publication of the "Index Medicus."—Dr. George M. Gould, of Philadelphia, spoke of the great misfortune it would be to the profession to be deprived of such a useful co-laborer as the *Index Medicus*, and in this connection offered the following resolutions:

Resolved, That the executive committee appoint a committee of three members of the association to take charge of the publication of this periodical, perfecting plans of the same, engaging the necessary editorial assistance, and making such contracts for the publication of the *Index Medicus* as would maintain its former high standard.

Resolved, That the treasurer of the association be instructed to pay all necessary expenses incurred by the committee in the prosecution of this work, provided that the deficit shall not exceed $3,000 annually.

These resolutions were referred to the trustees.

The general session was then declared adjourned.

SECTION ON SURGERY AND ANATOMY.

First Day—Tuesday, June 6th.

The meeting was called to order in the First Congregational Church, with Dr. W. J. Mayo, of Rochester, Minn., in the chair. Dr. M. L. Harris, of Chicago, was secretary.

Address of Chairman; Cicatricial Stricture of the Œsophagus and Its Surgical Treatment.—Dr. Mayo began his paper by giving König's classification of strictures into those produced from within and those caused by external conditions. Cicatricial stricture resulted from ulceration and from traumatism, such as caustic alkalies and foreign bodies. Syphilitic gumma might be followed by ulceration. Tuberculous ulcerations were generally secondary to swallowed sputum. The most frequent locations were at the isthmus, at or near the tracheal bifurcation, and at the diaphragmatic opening. There might be one or many strictures; the entire gullet might be obliterated. Dysphagia and regurgitation were the most prominent symptoms. If the cervical part was affected, dysphonia might result. Spasomdic stricture was usually hysterical. Diverticula from the posterior wall often proved puzzling. Œsophagoscopy was not considered of much value for diagnosis. The treatment was most important in early stages. He spoke of external œsophagoscopy (Gerster), and lower œsophagoscopy as performed by Richardson. Dilatable and non-dilatable strictures, with their treatment, were taken up. In the former olive-tipped whalebone bougies with long and tapering edges were advocated. The soundings should be repeated as the indications required. For non-dilatable cases Billroth's external operation should be used. For strictures above the aortic arch, Gussenbauer's combined operation was best.

Considerations in the Diagnosis and Treatment of Gall Stones.—Dr. Joseph Ransohoff, of Cincinnati, stated that comparatively little was known of the etiology. Gall stones only originated in the bladder, though the nucleus might be hæmatic or bacterial. The majority were composed of cholesterin and bile pigment, with an occasional covering of salt. In his experience, recurrence after operation was uncommon. Though a frequently overlooked disorder, the diagnosis was usually easy. The *x*-ray had failed in its promise. The colic was due to inflammation of the biliary ways and not to the stones. Local diagnosis was difficult and often impossible. The preferable method of operation in uncomplicated cases with stone in the bladder was cholecystostomy with temporary fistula at one sitting. Impacted gall stones in the common duct might give the impression of malignant neoplasm. He concluded by stating that—(1) Gall stones in the bladder were generally formed at the same time; no recurrence was the rule unless reinfection took place. (2) Cholecystostomy with drainage was the rule for a normal case. (3) The operation was to be done at one sitting. (4) Cholecystectomy might be done in acute cases; the operation was more dangerous than cholecystostomy. (5) Choledectomy was the routine operation for stones in the common bile duct. (6) Cholecystenterostomy was applicable in obstructive jaundice from malignant disease, or in impermeable cicatricial stenosis of the common bile duct.

Observations on the Treatment of Gall Stones.—Dr. A. J. McCost, of New York, stated that the tendency to early operations in these cases was asserting itself. Distention of the gall bladder often existed when the cystic and common ducts were free from stones. There might be chills, vomiting, fever, jaundice, and even death without impaction of a stone. The cause of jaundice was not necessarily the downward passage of a stone into the duct. A stone might exist in the common bile duct without distention of the gall bladder. Cholecystitis was generally infection. It should be operated upon early, before the case was too far advanced; before sepsis, semi-unconsciousness, emaciation, albuminuria, and casts existed. In such instances death was due to delay in not operating. The indications for operation were cholecystitis with fever lasting for weeks; repeated attacks of gall-stone colic, which affected health and happiness; persistent jaundice due to cholecystitis or impacted stones.

Surgery of the Common Bile Duct.—Dr. W. E. B. Davis, of Birmingham, Ala., stated that the most frequent cause of obstruction was a stone which often acts as a ball-valve, causing intermittent distention. A stone in the common duct might be followed by biliary cyrrhosis. Catarrh of the gall bladder and common duct was the chief cause of the precipitation of cholesterin. The speaker believed that stones were formed in the common duct. Suturing of the common bile duct was not advocated. Gauze drainage was preferred.

Dr. Walker, of Detroit, thought that the bladder could be sutured by a purse-string suture. For septic cases drainage was better.

Dr. Beven, of Chicago, said that the origin of gall stones was mycotic, as had been proven chemically and experimentally. He advised the use of his S-shaped incision—through the outer border of the right rectus, with enlargement above and to the left, and below and to the right—as very serviceable. Hernia was rare after this method.

Dr. Robert T. Morris, of New York, remarked that he practically obliterated the gall bladder with a purse-string suture, inverting the bladder so that the fundus impinged on the region of the valve.

Dr. J. B. Murphy, of Chicago, agreed with Dr. McCosh as to the importance of early operation. The danger was not in the operation itself, but in the pathological changes produced by the condition. Immediate operation was indicated in primary malignant infection of the gall bladder and in obstruction of the common duct, with high temperature.

Dr. E. D. Ferguson, of Troy, considered it improper to close the wound at once, because one could never be sure that the bladder and ducts were empty.

Dr. Thomas, of Pittsburg, said that if one was convinced that the bladder and ducts were empty, the wound should be closed.

Dr. Porter, of Fort Wayne, objected to closing the gall bladder at once, because long-continued drainage

was often necessary to cure the patient, and because plugging of the common duct might be due to cholangeitis.

Dr. Warner, of Columbus, condemned the administration of olive oil. Early operation was very desirable.

Dr. Rodman asked if any one had seen gall stones in a full-blooded negro.

Dr. J. E. Moore, of Minneapolis, advised an exploratory operation.

Dr. Marcy, of Boston, said that before closing the wound it was necessary to be sure that the ducts were free. The S-shaped incision was highly recommended.

In closing the discussion, Dr. Ransohoff maintained that the etiology of gall stones in the human being, as well as the period at which they formed, was but little known. Dr. Morris' operation he considered to be entirely theoretical. He disagreed with Dr. Murphy in reference to operation in acute cases.

Dr. Davis stated that he had had one case of distention of the gall bladder in a full-blooded negro, but no stone was found.

Appendicitis as a Cause of Inflammation of the Right Ovary and Tube.—Dr. A. J. Ochsner, of Chicago, stated that the differentiation of appendicitis and tubal or ovarian trouble was often difficult. He was convinced that appendicitis in many cases was the cause of right ovarian and tubal inflammation. This relation was explained upon the principle of infection by way of the appendicular-ovarian ligament. The tube and ovary might give secondary symptoms, and the appendix be overlooked. He concluded as follows: (1) Appendicitis frequently caused inflammatory disease of the right ovary and tube, occasionally of the left; (2) it was likely to cause chronic invalidism; (3) in operating for pyosalpingitis the appendix should be examined; (4) in dysmenorrhœa, limited to the right side, the appendix was often involved; (5) in patients recovering from gangrenous appendicitis there were often secondary disturbances in the ovaries and tubes, or digestive disturbances; (6) in girls with dysmenorrhœa the previous history of the genital apparatus should be inquired into.

Complications and Sequelæ of Appendical Abscess.—Dr. J. B. Deaver, of Philadelphia, said that appendical pus was very poisonous, and was easily absorbed from the surrounding blood-vessels and lymphatics. General purulent peritonitis was, in his opinion, not amenable to successful treatment. The peritoneum was so full of nooks and corners that in reported successes some places must have been free from pus. Its presence was a contra-indication to operation. The hepatic complications included thrombo-phlebitis of the mesenteric and portal veins and abscess of the liver. Purulent pericarditis and pleurisy might result. Abscess of the lung and spleen also occurred. When the appendix pointed into the pelvis the pain might be on the left side. The veins might be thrombosed or gangrenous. The abscess might rupture internally or externally, giving rise to fistula. The abscess might be retrocæcal. The tube, ovary, and appendix might form one mass. Adhesions and fistulæ were the most common sequelæ. Intestinal obstruction might follow the former. Fecal fistulæ formed a very distressing condition.

Bad Methods in Appendicitis.—Dr. Robert T. Morris, of New York, passed over the first part, which dealt with methods having a death rate of their own, such as iodoform gauze, protracted operations, multiple excision, extensive operations to protect the peritoneum, etc. He then entered into a criticism of various men whose methods of teaching he considered as productive of great harm to the public at large. He made mention of Dr. Keen's challenge at the Denver meeting, that no one could take one hundred healthy cases and have a mortality of two per cent. He thought that such a statement, from so prominent a surgeon, had worked infinite harm during the past year.

Anatomy and Biology of the Processus Vermiformis.—Dr. G. G. Eitel, of Minneapolis, said among other things that the appendix was rarely lodged under the cæcum or ascending colon, and rarely against the abdominal wall. It had been found against the liver, caught in the mesentery, and in the inguinal canal. It was rarely absent altogether. It varied considerably in length at various periods of life. Its growth was not in proportion to advancing age. Complete occlusion was rare, and partial more frequent. More than fifty per cent. of patients over sixty years of age had obliteration of the tube lumen.

Diagnosis and Treatment of Appendicitis, with Report of One Hundred Cases.—Dr. W. J. Means, of Columbus, reported one hundred and twelve cases—eighty-two operative, twenty treated medically. Thirty of the former were acute and fifty-two chronic or recurrent, with two fatalities in all. In two instances he erred in diagnosis, one case being a cholelithiasis with the gall bladder in the cæcal region, and the other being pyosalpingitis with an attached appendix. Operation was contraindicated where profound septicæmia, paresis of the bowel, and a pulse rate and temperature out of proportion existed. The treatment was mainly surgical. In surgery alone lay the hope of cure. It was best to operate when the diagnosis was positively made. The judgment of the surgeon told when to operate. The earlier the operation the better for the patient.

Inquiries in Etiology and Treatment of Appendicitis.—Dr. W. H. Harsha, of Chicago, stated that appendicitis bore somewhat the same relation to digestive disturbances that pneumonia did to bronchial catarrh. Among etiological factors, he first mentioned age. It was a disease of the young. The average age was twenty-six years. Only three cases were over fifty years. Men were more often affected on account of exposure, over-indulgence, etc. In half the cases fecal concretions were found. There might be a nucleus of bone or bird shot. Constipation might cause irritation and congestion of the appendix. Appendicitis might be considered the penalty for "getting on end." In the treatment there seemed to be a crystallizing of sentiment toward early operation. We could not justly say that every case should be operated upon at once, because some cases recovered from the first attack and remained well five or ten years. For catharsis the writer had used physostigmine sulphate and magnesium sulphate hypodermatically.

Dr. W. W. Keen, of Philadelphia, said that he did not consider general suppurative peritonitis a contra-indication to operation. To him it meant instant operation. If left alone these patients would certainly die, whereas if one was rescued it was one saved from the grave. The operation must be bilateral and thorough. As to the Denver challenge, he stated that the question must be discussed from the standpoint of the general practitioner and not from that of a surgeon.

Dr. J. B. Murphy, of Chicago, said that it was hard to select mild cases. Who could say that in the next twenty-four hours a mild case was going to take a similar course? He considered it his duty to operate inside of the first twenty-four hours in mild cases, and in all cases within the first forty-eight hours.

Dr. Lewis, of Kansas City, considered that to know when, what, and how to do it was the burning question of the hour.

Dr. Grant, of Denver, said that when we could determine definitely which cases will be mild and which severe, the time for elective methods of treatment would be at hand. If every case was operated upon within

twenty-four hours the mortality would be infinitely less.

Dr. McArthur, of Chicago, stated that he had had one hundred and eighteen cases without a death. There were mild cases which did not require operation.

Dr. Johnson, of Hartford, had reported one hundred cases with two deaths.

Dr. Wagner, of Chicago, related some mild cases with perforated appendix. In one case the hair of a hair-brush was found. In every case the appendix must be found.

Dr. Graham, of Chicago, said that the most experienced surgeons disregarded all rules of other surgeons.

Dr. Laplace, of Philadelphia, remarked that so long as the abdominal wall was opaque we couldn't tell what was going on beneath it, and therefore it was advisable to lean toward operation.

Dr. Parker, of Fort Wayne, objected to the statement that no case of purulent peritonitis recovered. With free incisions, even to opening the intestines, some patients got well.

Dr. Ochsner said that, in his experience, when patients with generalized purulent peritonitis were operated upon they died.

Dr. Deaver still considered that no case of general infectious peritonitis was cured by operation. The cases reported were of a localized character. Operation in appendicitis was indicated at once if the diagnosis was made within the first twenty-four hours.

Dr. Morris stated that Dr. Keen's item had been misunderstood.

Dr. Means said he recognized no time limit. The operation should be done when the diagnosis was made.

Some Radical Changes in the Post-Operative Treatment of Cœliotomy.—Dr. Emil Ries, of Chicago, read a paper on this subject. According to the reader, patients could leave the hospital at an earlier date and follow their usual occupation. They could be fed and be up and around in a short time after normal cœliotomy. The time in bed could be counted by hours instead of days. He frequently allowed the patients to get up in twenty-four hours, and to go out in four or five days. The bowels were never opened during the first few hours after operation. If they were left alone they moved naturally. In the preoperative period he did not cause a complete emptying of the bowel. After operation the patients were encouraged to move about in bed. Meat, bread, and vegetables were allowed as soon as peritonitis was found to be absent. A well-filled intestinal canal broke up old and prevented new adhesions. After operation no tonics were given. The activity of the muscles must be kept up. The only difference between vaginal and ventral cœliotomy was the incision. Absolute rest was unnecessary. No binder was used after ventral incision. Drainage was never used, and packing only occasionally.

Dr. Manley, of New York, said that the last paper showed how much could be accomplished in a short time. Drainage was not so necessary as was formerly considered. He asked what form of sutures Dr. Ries used, and whether this method was advocated in parenchymatous hemorrhage.

Dr. Wiggin, of New York, thought that patients were deprived of food for too long a time after laparotomy. Absolute rest was unnecessary. The bowels should not be moved too soon after operation. Intestinal paresis should be prevented. If at the end of twelve or eighteen hours the patient vomited, and had nausea or a disgust for food, the bowels should be opened.

Dr. Bonnerfield, of Cincinnati, thought that the paper showed more what might be done than what should be done.

In closing Dr. Ries said that his method saved money, time, and discomfort. He used formalized catgut hardened in alcohol for deep abdominal layers. He avoided packing whenever possible, and preferred to let the peritoneum take care of a little oozing. He insisted on early liberal feeding. The bowels should be kept moving, for this prevented adhesions.

SECTION ON PRACTICE OF MEDICINE.

First Day—Tuesday, June 6th.

The chairman, Dr. Frank Billings, of Chicago, called the meeting to order in the hall of representatives.

Chairman's Address.—The chairman said that an attempt had been made this year to present synopses of the papers to be read, and although this was the first attempt of the kind in any of the sections, the fact that, out of the eighty-three papers, fifty-four abstracts had been submitted, proved that the plan had been successful. These published abstracts gave members an opportunity to acquaint themselves with the subject-matter and so prepare themselves for the discussion. He desired that original research should be stimulated, especially in the line of clinical work. Reports of cases with full reports upon the clinical findings, and when possible supported by thorough post-mortem examinations, would be of greater value than papers upon general subjects more or less theoretical in character.

What were the Physiological Processes or Functions that Imparted to the Living Human Body its Vital Resistance or Immunity to the Action of Toxic Agents, and How Could They be Aided by Therapeutic Agents?—Dr. N. S. Davis, of Chicago, read this paper. The author touched briefly upon (1) the physiological processes by which the living body maintainedi ts vitality and metabolism in health; (2) how these natural processes were affected by the chief causes of disease, both acute and chronic; (3) the chief means by which the physician might effectually aid the natural processes in restoring health after disease or disorder had been produced. It was plain that the natural processes or functions which imparted to the living human being its vital resistance were (1) the inherent power of selection and rejection possessed by each cell or organized mass of bioplasm of which the blood and tissues were composed; (2) the oxidation by which tissue metabolism was affected; (3) the excretory and eliminating processes by which the products of metabolism and other disturbing elements were attracted from the blood currents and passed out of the system. The vital resistance of any living body might be said to depend directly upon the activity and efficiency of these several physiological functions and processes. The important etiological fact had been pretty fairly demonstrated, that nearly all the acute general diseases or febrile affections were caused by toxic agents called ptomains, leucomains, or toxalbumins, resulting either from pathogenic bacteria introduced from without or from the retention of excrementitious products of metabolic change within. The external application of water in the form of baths or spongings not only diminished the fever heat but also increased in a marked degree the oxidation and decarbonization of the blood, and the elimination of the waste and toxic products by the kidneys and other excretory organs. Strychnine and digitalis given at the same time directly increased the sensibility and action of the respiratory and vasomotor nerves, thereby sustaining the important functions of respiration and circulation. And yet every well-devised experimental investigation had demonstrated that alcohol, chloroform, and ether in the system directly diminished the sensibility and action of the respiratory and vasomotor

nerves in proportion to the quantity used, and also markedly retarded the oxidation and decarbonization of the blood, and lessened both the activity of leucocytes and of normal metabolism, thereby placing the effects in direct antagonism to the effect of the other remedies given in conjunction with them. A large part of the prevailing skepticism regarding the curative effects of drugs had resulted from such coincident use of antagonistic agents and the frequent use of agents for the relief of some prominent symptom, while the ulterior effects were injurious to the natural processes of vital resistance instead of aiding the same.

A Comparison of the Various Methods of Estimation of Hæmoglobin.—Dr. B. M. Linnell, of Chicago, read this paper. The two instruments that we are most familiar with in this country are von Fleischl's hæmometer, "the German," and Gowers', "the English," instrument. In the use of these instruments, certain sources of error were demonstrated. First, in color tests in general. Two eyes rarely agreed in the accurate estimation of varying shades of color. The eyes of the same individual varied at different times, due to fatigue and the influence of varying intensities of light. Second, in adding water to dilute the hæmoglobin, one was apt to overdilute the solution, thus making it necessary to repeat the test. Third, one could not make a number of estimates of the same specimen and strike an average. The speaker drew the following conclusions: We need a system of estimating hæmoglobin which will eliminate the necessary inaccuracies of color comparisons. Hammerschlag's was mechanically accurate and eliminated the necessary errors of color comparisons. The errors made in taking the blood were common to both methods. The tests seem to show that the specific gravity varies with the percentage of hæmoglobin. The variations under normal conditions in the blood were not great enough to interfere with the value of the specific-gravity test.

Dr. Judson A. Daland, of Philadelphia, agreed that so far as color tests were concerned all tests were objectionable. He referred to methods by which he could reduce a certain percentage of error in the use of von Fleischl's instrument.

Dr. George Dock, of Ann Arbor, Mich., thought that the specific-gravity methods were easy to carry out, but we should bear in mind that the specific gravity does not always correspond to the amount of hæmoglobin present. He thought Gowers' method faulty.

The Spread of Diseases in Schools and its Prevention.—Dr. Lambert Ott, of Philadelphia, read this paper. The diseases usually spread in schools, naming them in the order of frequency, were diphtheria, scarlet fever, measles, whooping cough, varicola, and variola or varioloid. There were three common sources of danger: First, being in school during the inception and development of the disease; second, returning to school too early in the convalescence, or permitting children in the infected household to attend school; third, in daily attendance in school during a light and overlooked attack of contagious disease. The common means of contagion or contamination were by personal contact, inspiring exhalations, kissing; by the common use of the drinking cup; by exchanging working material, such as pencils, cleaning rags, etc.; by passing around from mouth to mouth a whistle or a mouth-organ. A grave question arose—When should we allow children to return to school during the convalescence of contagious diseases? The speaker's rule was after the following lapse of time: (1) diphtheria, four weeks from its inception, and one week in the open air; (2) scarlet fever, four weeks from its inception, and one week in the open air; (3) measles, two weeks from its inception, and one week in the open air; (4) whooping cough, not until every vestige of the cough has disappeared; (5) smallpox, two months from its inception, and one month in the open air.

Dr. Arnold, of Boston, referred to an attempt to correct the evil in schools in Boston. In 1894 there was started a system of school inspection. The city was divided into fifty districts, and a medical examiner appointed for each district. During the first fourteen months 66,790 pupils were examined, of which number 6,053 were not sick, and 10,737 were found to be ailing, of which number 2,041 were ill enough to be sent home. Of these, 453 had some contagious disease, and would have been a source of danger if allowed to remain at school.

Dr. Rayburn, of Washington, advised that children should not be sent to school before the age of seven years, on account of their greater susceptibility to contagion before that period.

Dr. Axtell, of Denver, spoke against the indiscriminate use of lead-pencils in schools, and once suggested to a lead-pencil manufacturer that it would be a wise plan to incorporate in the black material quinine or some bad-tasting substance to prevent children carrying the pencils to their mouths.

On motion of Dr. John Musser, of Philadelphia, a committee of three was appointed to bring this subject before the general session for consideration. Dr. Ott was appointed chairman of this committee, Drs. E. R. Axtell, of Denver, and Rayburn, of Washington, being the other members.

Etiology and Therapy.—Dr. Elmer Lee, of New York, read a paper on this subject, in which he stated that the false idea prevailed in the profession that active principles, not vital, were introduced within the human organism, thereby causing disease, and disease, in turn, was thought to be curable by the introduction of other foreign non-vital matters into the system, either through the natural channels or through punctures in the skin. This interpretation of vital activity was contrary to physicology. So long as true medicine was regarded as an art dependent upon the validity of cumulative experiments there was no great hope for the agreement of physicians. It was necessary to understand the methods of vital activities before it was possible to construct correct therapeutics. When it was recognized that the introduction of the supposedly active principles of disease or of its cure from without was not possible, and that active life forces were manifested through the inherent vitality, it was then possible to understand the distinctions between special activity of the voluntary and involuntary organisms and their causes. Vital force was divisible into sensibility, instinct, sensation, and contractility. Sensibility was a property of mind and must not be confused with sensation, which referred to the contact world. These vital forces could be both normal and abnormal. Disease was abnormality of these functions. The cause of disease produced disease, through its contact producing an abnormal sensation in response to which pathological action was begun. The causes of disease were either primary or secondary. The primary factors included foreign matters and excess of quantity and vitiated quality of food. The secondary factors were included under pathological fluid products within the body, the result of abnormal chemical action. The secondary causes were those serious factors of disease constituting a large variety of toxins. Wherever there were pathological fluids there could be found micro-organisms, and from their presence it was assumed that they were the perpetrators of the crime; instead of which the microbe was a scavenger, innocent of harm—in fact, a benefactor. It was important to determine early what was the factor of greatest importance, in order to decide whether it was wise to employ elimination, introduce antiseptics, reduce temperature, deploy vital activity, or abrogate sensation.

Disease was a condition which is both local and general in its manifestations, caused by material both from without and from within, and not an attack of something that could be expelled or become migratory. When it was understood that foreign materials from without produced abnormal sensations within, and these interfered with normal vital action, it would help us in finding methods for the removal of the cause. Vital action unaided would, if left to itself, frequently remove the cause and restore the organism to health. As a sequence to pathological action specific virus was manufactured within the living organism, and when these materials were present in toxic proportions, active disease followed. While abnormal chemical fluids were present in the body, micro-organisms found suitable food for development, and perished when the supply was exhausted. The microbe when filled with pathological chemical material became a pathogenic organism, and if transplanted it might possibly excite pathological action by the toxin absorbed from the human organism, in which it was developed. The so-called germ was not necessarily an enemy to health. There was not likely much to be gained by artificial germicides, etc. Rational and physiological treatment looked to the prevention of the formation of toxins. The germ theory, which had added but little to the true understanding of pathology, and less to the therapeutics of the practical physician, seemed destined, comet-like, to pass from view.

Cerebro-Spinal Meningitis.—Dr. T. N. Miller, of Rockford, Ill., read this paper. Regarding the treatment of this disease he said that he knew of no better remedy than ergot and calabar bean pushed to their physiological effect. Bromides were less efficient. He advised against bleeding. While he did not consider opium the "sheet-anchor of our hope," yet he could see that it was of great aid in all stages of the disease. Especially in the first three days he considered the iodides of paramount importance, both from their well-known effects in preventing suppuration and effusion into the ventricles, and also in softening of the brain tissue. He also used counter-irritation. Applications of ice he had never used, for fear of the depressing effects upon the general circulation and blood stagnation.

Some Unusual Features of Epidemic Cerebro-Spinal Meningitis.—Dr. Gerge L. Eyster, of Rock Island, in this paper presented a clinical report of two cases of cerebro-spinal meningitis of the markedly intermittent type, accompanied by muco-purulent discharge from the nasal cavities, in which were found large numbers of the diplococcus intracellularis meningitidis. He also gave a description of the post-mortem findings.

GENERAL SESSION.

Second Day—Wednesday, June 7th.

National Bureau of Public Health.—On recommendation of the executive committee the association unanimously adopted resolutions indorsing the establishment of a national bureau of public health, with a cabinet officer at its head, together with instructions to the board of trustees to set aside a certain sum of money for the use of the special committee appointed in connection with this matter.

The Medical Corps of the Army and Navy.—The resolutions of the previous day were adopted, together with a provision that Congress should be directly appealed to; and that the president of the association should appoint a commission consisting of one person from each State having a medical society, and one person from the army, navy, and marine hospital service respectively, whose duty it should be to memorialize Congress on this subject.

Rank of Surgeon-General.—Amid hearty applause, a resolution was adopted having for its object the indorsement of the project to raise the rank of the surgeon-general of the army to major-general.

Women Military Nurses.—The bill before Congress providing for the employment of women as military nurses in the army was formally indorsed by the association.

Revision of the Pharmacopœia.—The association also decided to appoint a commission to confer with the Pharmaceutical Association with regard to the introduction into the Pharmacopœia of 1900 of certain medicinal proportions not hitherto included.

Address on Surgery of the Alimentary Canal.—Dr. Floyd McRae, of Atlanta, Ga., delivered this address. After speaking of the great value of salt solution in modern surgery, he took up the operation of gastrectomy. He stated that there were now on record four cases in which the stomach had been completely removed—viz., first, the celebrated case of Schlatter; second, the case of Dr. Brigham, of San Francisco; third, the case of Dr. Richardson, of Boston; fourth, that of Dr. McDonald, of San Francisco. Although the operation had been successfully performed in these instances, the results clearly proved that when the disease was so extensive as to demand this operation, the case was hopeless. The speaker then went on to describe Roux's method of performing gastroenterostomy, a procedure which he characterized as almost an ideal operation of its kind, although he admitted that it was not improbable that in the hands of less experienced persons than Roux it might not give as good results as the Murphy button. In the malignant cases Roux had had a mortality of ninety-six per cent., but none at all in the non-malignant ones. Taking up the subject of penetrating wounds of the abdomen, the lecturer adverted to the experience gained in the late war—viz., that these wounds when inflicted in war upon men who were fasting often terminated favorably. He added, however, that such results could not be expected under the conditions which obtained in civil practice. It was generally thought that when the point of entrance was above the umbilicus and the injury was received while in the standing posture, there was a greater probability of the escape of the hollow viscera, but this had not been confirmed by his own experience. In all four of his own cases, although the injury had been received under these conditions, extensive damage had been done to the hollow viscera. As recovery followed inversely with the time elapsing between the reception of the injury and surgical intervention, the importance of prompt operation was obvious. Attention was then directed to Dr. M. L. Harris' method of performing circular enterorrhaphy, the essential feature of which was the invagination of the gut and securing a strong sero-fibrous union. This operation he said had impressed him exceedingly favorably, although it was possible that a more extended experience would show a greater liability to intussusception or to stricture. He had collected one hundred and seven cases of typhoid perforation that had been subjected to operation. Of these eighty-five had died, giving a mortality of 79.43 per cent. The tendency to recovery was greater when the perforation occurred late. One might confidently expect to save by this means twenty-five to thirty-five per cent. of cases if the operation was done within twelve hours after perforation. The speaker then spoke of the results of an analysis that he had made of 2,903 cases of appendicitis reported during 1898 and 1899. The total number of deaths was 399, or a mortality from all methods of treatment of 13.74 per cent. Of the 896 cases treated medically, 103, or 11.83 per cent., died. One of the strong arguments against operating as soon as the diagnosis had been made was the fact that this

time was so very variable. He was inclined to think that the general adoption of this practice would occasion a still greater mortality. According to his experience children under twelve years of age bore appendicitis badly and should be operated on without delay:

Address on State Medicine: The Medical Aspects of Crime.—Dr. Daniel Brower, of Chicago, delivered this address. He stated that the care of the criminal was the one great question that baffled society, largely because the medical aspects of crime had not been sufficiently considered. Criminology of to-day was much in the same condition that psychiatry had been when Pinel and Tuke had appeared and wrought their memorable reforms, substituting patience and scientific treatment for brutality and chains. This transformation in the care of the insane had been brought about by the medical profession, and it was our duty to-day with equal zeal and earnestness to consider this question of criminality, find out its etiology, and provide means for its cure. Reference was made to the work of the pioneers in criminal anthropology. These men had established the fact that the habitual criminal is an abnormal man, the abnormality manifesting itself first physically in the criminal physiognomy, in stigmata of degeneration, etc., and second psychically, in moral insensibility, low intelligence, vanity, and emotional instability. The speaker then gave the number of arrests in Chicago for ten years, namely, from 1884 to 1893. A study of the census reports for the past forty years left no doubt in the mind of any one that crime was increasing throughout the United States in a vastly more rapid ratio than was the population. The two great etiological factors in crime were criminal parentage and environment. Another important factor was intemperance, fully fifty per cent. of the criminals arrested in our large cities being inebriates. It was estimated that alcoholics were the direct or indirect cause of probably seventy-five per cent. of all crimes committed. The constant and rapid increase of the urban population was another etiological factor. The census of 1890 showed that 27.6 per cent. of our population was urban. The criminal laws and their unseasonable execution also influenced the causation of crime. One of the absurdities of the law was the frequent conviction of the same criminal, an expensive and unprofitable procedure. Our jails were schools of crime. The delays of the law often gave children, sometimes arrested for trivial offences, weeks or months of tutelage under old and often incorrigible masters in crime. Our laws were defective also because they were directed against the crime and not the criminal, overlooking the important fact that the crime was an accident, and the criminal the product of a long line of etiological factors, demanding for his cure not punishment, but reformation. Dr. Brower then dwelt upon criminal physiognomy, illustrating his remarks with lantern sketches dealing with prognathism, anomalies of the teeth, the degenerate ear, the criminal nose, pallor of the skin, the beard of criminals, the cranial capacity of criminals, etc., and gave the tabular statements of Talbot, MacDonald, Corré, and Ferri. Speaking of the brain of the criminal, he said that the potentiality of the brain did not depend so much upon its size and weight as upon its structure. Alterations, such as the meninges to the extent of fifty per cent. in the way of adhesions, various forms of meningitis, hemorrhage, atrophy, and atheroma, had been found in fifty per cent. of the brains examined. The feet of criminals frequently showed a tendency to revert to the flat foot of the lower races, and this was usually associated with a low instep. The tactile, temperature, and pain senses were rarely normal in criminals, the pain sense being especially diminished. The treatment should be based on the etiology to be scientific; and as criminal parentage and environment were the two great causal factors, so the treatment should be directed against them. In the first place the propagation of crime should be stopped. The operation proposed by Dr. Ochsner, of resecting the vas deferens, did not mutilate the person or destroy his sexual power, but it did prevent procreation and was attended with very little risk; castration, on the other hand, was vastly more dangerous and destroyed sexual power. The children of these degenerates should be taken in charge by the courts and placed, not later than at the age of seven years, in a favorable environment. Alcoholism was a very important and difficult etiological factor to dispose of. Legislation was needed for inebriates, and there should be some remedy provided against the constant increase in urban population, some way by which the unproductive citizen might be transported to the country and made productive. All sentences for crimes should be indeterminate, the criminal being sent to a prison or reformatory just as a patient was sent to a hospital. The pardoning power should be taken out of the hands of governors of States and placed under the control of a board of pardon, whose members should be skilled in criminal anthropology. For criminal minor children there should be reform schools. There should be reformatories for the older criminals who are capable of reformation, and, lastly, for those who are incapable of reformation there should be penitentiaries for their lifelong incarceration.

SECTION ON MEDICINE.

Second Day—Wednesday, June 7th.

Treatment of the Heart in Chronic Interstitial Nephritis.—Dr. Arthur B. Elliott, of Chicago, read this paper. The conditions met with were thickened and inelastic arteries subjected to the strain of a heightened tension, and an hypertrophied and sensitive heart muscle. The patient was exposed to the risk of rupture of the vessels, and also to failure of the heart. Both the increased tension and the cardiac enlargement were compensatory, and any effort to qualify either might prove mischievous. There should be no intervention so long as there were no definite subjective symptoms. An increase of tension in the arterial system beyond the bounds of safety became manifest in dizziness, ringing in the ears, headache, disturbed cardiac action, fulness of vessels, occasional epistaxis, or it might be temporary amblyopia. A flagging heart was shown by the soft, irregular, and frequent pulse. Dyspnœa, post-sternal weight and discomfort, cough on exertion, and diminished urine were additional signs. All the small details and habits of the patient's life should be regulated, including the diet, clothing, exercise, and baths. The patient must be cautioned against heavy meals, and the regularity of the bowels must be scrupulously maintained, an occasional mild mercurial purge being administered. At the earliest signs of cardiac embarrassment some restriction in activity should be insisted upon, and when compensation seemed threatened absolute rest in bed must be enforced. The medicinal measures were at first limited to the vasodilators, the effect of the remedies being largely mechanical, dilating the capillaries, lowering peripheral resistance, and diminishing the work of the heart. To meet alarming symptoms, a free catharsis was efficacious. Some preparation of mercury was preferred. To met emergencies the nitrite of amyl might be inhaled, but nitroglycerin was usually the drug of choice. Iodide of sodium and iodide of potassium, in doses gr. v.–x., given well diluted one hour after meals, may be used. Heart tonics of the

digitalis group should of course never be used during the stage of cardiac hypertrophy, being only admissible when there was indication of failing compensation. A vasodilator should be simultaneously administered in order to prevent the dangerous augmentation of the peripheral resistance.

The Transmission of Systolic Mitral Murmurs, with Special Reference to the Nature of the So-called Anæmic Murmurs.—Dr. Horace B. Arnold, of Boston, read an exhaustive paper on this subject. He summarized his studies as follows: Mitral systolic murmurs might not only be heard at the mitral area in the apex, and extending toward the axilla, but also at the mitral area in the back, along the left border of the heart, in the second left interspace, at the base, and at the valvular area. Anæmic murmurs were not confined alone to the pulmonary area and second left interspace. They extended by varying gradations around the left border of the heart to the apex, and to the mitral area in the back, thus gradually assuming the characteristics of a true mitral regurgitant murmur. Transmission to the mitral area in the back might excite this whether the murmur was heard at the apex or not, and even in what appeared in front to be typical anæmic murmurs. We could not find a dividing line between the so-called anæmic murmurs and the mitral murmurs. The presumption that these different gradations in the distribution of the murmurs all have a common origin was strengthened by finding these different gradations successively in the different stages of the same case. It was practically proved by finding all these gradations in healthy hearts which had been subjected to the same severe exhausting strain, as in the case of runners. Weakened muscular action of the heart existed in anæmic persons as a result of poor nutrition. Weakened muscular action was an adequate cause for mitral insufficiency, whether dilatation existed or not.

The Causes and Differential Diagnosis of Accidental Heart Murmurs.—Dr. George W. Webster, of Chicago, read a very interesting paper with this title. He argued that no single theory could account for all accidental murmurs, and that it was probable that all these murmurs were, like those of organic disease, due to the production of "fluid veins." The diagnosis rested on: (1) The exclusion of organic disease, as shown by (*a*) the absence of a history of antecedent causal disease; (*b*) the absence of the results of valvular defects, as evidenced by hypertrophy and dilatation, or by broken or damaged compensation. (2) By a history of such disease or conditions as acute intoxication, chorea, the anæmias, etc., with which these murmurs are frequently associated; (*b*) the characteristics of the murmur, as shown by rhythm, the point of maximum intensity, the area of audibility, posture, exercise, etc. He drew the following conclusions: (1) Accidental heart murmurs might occur when there was neither anæmia nor fever, as in certain forms of intoxication. (2) Accentuation of the pulmonic second sound might occur in accidental heart murmurs. (3) The accidental murmur might be diastolic in rhythm. (4) The term "accidental" should be employed to designate all those cardiac murmurs which could not, after careful examination, be clearly demonstrated to belong to the organic class, it being clearly understood that as our knowledge extended and increased, the number of "functional" maladies gradually diminished. The term "accidental" committed us to no theory of causation, indicated no pathology, avoided a discussion of the question whether functional disturbances occurred with pathological change, and, above all, it erected no barrier in the ways of progress. (5) He inclined to the view that no single theory could be said reasonably to account for all accidental heart murmurs. He believed that there was a relative insufficiency of either the mitral or tricuspid valves, due to incomplete contraction of the heart, this latter being due to degeneration, fatigue, or to the effects of toxic agents, as in pyrexia, alcoholism, etc., and that under the circumstances the murmur might not vary in any of its essential characteristics, of quality, pitch, and intensity, or in point of maximum intensity and area of audibility, from regurgitation due to organic disease at the same orifice. (6) The theory of Potain in regard to cardio-pulmonary murmurs seemed a possible explanation of some of the accidental murmurs. (7) In all cases of organic disease the vibrations originating in fluid blood were due to the formation of fluid veins. The theory that the accidental murmurs originated in vibrations in the walls of the vessels or of the conus, and were not communicated to the moving column of fluid, and so were not carried by it, did not seem quite reasonable, but might serve to explain the limited area of audibility of some of these murmurs. (8) The wide diversity of opinion in regard to rhythm, point of maximum intensity, and area of audibility would seem to indicate careful, accurate observations improperly interpreted or else an attempt to explain all accidental murmurs by one theory. (9) In many cases, especially those of systolic murmurs at the apex or in those heard over the body of the heart, a correct diagnosis could not always be made without awaiting the results of treatment.

The Use of Quinine in Malaria.—Dr. George Dock, of Ann Arbor, Mich, read this paper. In the tertian or quartan intermittent form, or any combination or duplication of these, quinine should be given in the decline of the paroxysm if possible, or not later than the end of the apyrexia. The difference depended upon the time at which the patient is seen or the diagnosis made. The dose should be given at one time or in parts at separate intervals, in such a form that absorption might be confidently expected. He had found it very satisfactory to give the full dose in the form of the hydrochlorate, in capsules, followed by fifteen drops of dilute hydrochloric acid. With patients who had been unable to retain other preparation, he had been successful in giving three five-grain capsules half an hour apart, with a small dose of dilute hydrochloric acid after each, with direction to repeat in half an hour if any dose was vomited. The question of quinine in malarial hæmoglobinuria must be settled by careful clinical observation and experiment, and statements regarding it must be given credit in proportion to the accuracy with which the observations are made. In the mean time quinine could be used cautiously if parasites were present, giving the drug in the form most likely to be absorbed, in doses within the limit of safety, and stopping its administration as early as the microscope showed this to be proper. A temporary increase in the severity of the symptoms should not alarm the physician. It was necessarily due to the drug. At the same time that the specific was being given, other methods of treatment must not be forgotten. The quinine was given to check the malaria, not for any particular symptom or complication.

The Unsatisfactory Results of the Hypodermic Administration of Quinine in the Treatment of Malaria.—Dr. G. A. Fackler, of Cincinnati, read this paper. He offered the clinical facts elicited by a review of twenty cases, confirming the previous cursory observations made as to the unreliability of quinine administered hypodermically in malaria. A general *résumé* of these twenty cases furnished the following data: Three cases in which quinine hypodermically was successful; ten cases in which quinine hypodermically was not successful; seven cases in

which quinine by mouth was successful; ten cases in which quinine by mouth was successful after hypodermic injection had failed—making a total of seventeen cases in which quinine by mouth was successful as a curative measure in the treatment of malaria. In only three out of thirteen cases in which the remedy was introduced subcutaneously was an abeyance of symptoms noted.

The Pneumonia Question: Some Interesting Considerations.—This paper was by DR. EDWARD F. WELLS, of Chicago. In pneumonia the treatment should resolve itself into reasonable prophylaxis, in making the patient comfortable, in preventing excessive formation of toxins, in neutralizing them, encouraging their elimination, and increasing the resisting powers of the system against their action, and in preventing or managing properly the complications which might arise. He did not believe there was any substitute for bleeding in this disease as a remedial resource. Venesection should not be performed, as a rule, in the very young or the aged, the weak or the anæmic, nor in cases in which the evidences of obstruction of the pulmonary circulation, or of increasing toxæmia, were present. Simultaneously with the venesection, or immediately after, a solution in distilled water of chloride of sodium seven per cent., chloride of potassium twenty-three per cent., and chloride of calcium three per cent., was injected subcutaneously in quantities approximating to the amount of blood withdrawn. The speaker believed that the immediate future would demonstrate pneumonia to be certainly a preventable and largely a curable disease.

Pneumonia in the Aged.—DR. ROBERT H. BABCOCK, of Chicago, read this interesting paper. This paper considered pneumonia in the aged to be more frequently lobar than catarrhal. Its symptomatology was often unlike the typical form, and might be said to constitute a form of its own. The physical signs were often obscure, and the diagnosis often depended upon the history and the symptoms. He emphasized four points—viz.: (1) It was his conviction that aged pneumonic patients bore well and required large doses of strychnine; (2) stimulants, as alcohol in small or moderate doses and ammonia in frequently repeated doses, were usually highly beneficial; (3) as little medicine as will meet the indications should be given, for fear of upsetting the stomach and thereby destroying what few chances the patients have at the best; (4) because of the tendency to renal insufficiency the nourishment should be largely fluid, and nothing was so suitable as milk and properly prepared beef juice.

The Treatment of Pneumonia.—DR. H. A. HARE, of Philadelphia, read this paper. When called to care for a patient through an attack of illness, especially pneumonia, the physician should be a watchman at all times, and a therapeutist only when necessity arises. In all infectious diseases, especially croupous pneumonia, the patients might be divided into three classes: (1) Those who were so mildly ill that all they needed is good care and little or no active treatment; (2) those whose cases were so malignant that nothing could be done which would produce cure; (3) those who lay between the two, and who were capable of cure, but only by the most skilful treatment. As to the use of the abortive treatment, by bleeding or circulatory sedatives such as aconite and veratrum viride, it was evident that few patients could receive this treatment, because only a few of them had a sufficiently bounding pulse to justify it, and few were seen early enough to be benefited by it. When consolidation had taken place the attempt should be made to prevent hyperpyrexia by cold sponging with friction, and by the use of the ice-bag over the heart and to the head. Ice to the præcordium slowed the heart and protected it, perhaps, from the ill effect of the fever. Ice to the head diminished the pain and kept the mind clear, and controlled the temperature. The antipyretic drugs were of use because they allayed nervousness, and not because they reduced the fever. If one was tempted to give a patient stimulants, and before doing so felt his own pulse, he would sometimes be surprised to find that his own was the weaker. Digitalis often failed as a stimulant because it lost much of its regulating power over the heart in the presence of high fever. Belladonna in doses of five to ten minims every four or eight hours might be useful. Strychnine goaded the system to increased endeavor, and was especially of use when the patient seemed to be sinking into the slough of death. The value of nitroglycerin seemed to be in a direct proportion to the degree of arterial tension. The value of oxygen was problematical. This disease could not be treated by any routine method.

SECTION ON SURGERY AND ANATOMY.

Second Day—Wednesday, June 7th—Morning Session.

Dermoid Fibroma of the Abdominal Wall and Plastic Operation for the Successful Repair of the Defect Caused by its Removal.—DR. A. I. BANFLEUR, of Chicago, read this paper. These tumors extended inward and might be mistaken for intra-abdominal growth. They have a tendency to infiltrate. The term dermoid indicated a tumor springing from a fascia or ligament. Dermoids usually occurred in the abdominal wall; they might occur in the neck and breast. The history of these cases was usually meagre. The writer narrated the method of operation, its extent, and its involvement of fascia, iliac fossa, pubic bone, iliac vessels, etc. In the case narrated the wound healed in ten days, with no return of growth three months after. The microscopical examination corroborated the clinical diagnosis. Ventral hernia did not occur.

Observations on Prevention of Surgical Shock and Collapse, Based on Clinical and Experimental Evidence.—DR. GEORGE W. CRILE, of Cleveland, spoke on this subject. Collapse was due to impairment or breakdown of the vasomotor system. The organism responded to stimuli until changes were no longer produced and shock prevailed. Collapse was due to marked interference of the primary respiratory and circulatory organs, or of the pneumogastric nerve and its branches. The brain could not stand long exposure. If pressure was exerted on the brain and an anæsthetic was given, shock was more frequent. Therefore atropia should be given hypodermatically. The operation must be done quickly. In neck operations death might result from interference with the superior laryngeal nerve. Cocaine should be applied to the larynx to prevent reflex inhibition; also atropia to prevent inhibitory action of vagi on the heart. With these drugs it was impossible to have collapse in neck operations. In intubation death was due to reflex inhibition, not to suffocation. In tracheal operations atropia or cocaine was unnecessary. The omentum was the antithesis of the peritoneum. Manipulation of the latter caused a fall of blood pressure. Mechanical stimulation of the uterus, tubes, and ovaries caused a rise of blood pressure, that of the testicle a fall. In joint operations shock was due to cutting through nerves and not through bone.

DR. LEVINGS, of Milwaukee, spoke of the mental and physical condition of patients prior to operation. Rapid work, control of hemorrhage, and a small amount of anæsthesia formed the tripod upon which lives depended. He advocated strychnine for the heart and nervous system. In impending shock nitro-glycerin and whiskey should be given hypodermatically.

Dr. Allen, of Cleveland, added that care of temperature was necessary. The patient must be kept warm.

Dr. Ochsner, of Chicago, stated that the number of cases of shock varied in different hospitals. The more the tissues were traumatized and handled the greater was the shock.

Dr. Bullett, of Louisville, thought it was wise to differentiate between shock with and without hemorrhage. Previous administration of strychnine was injudicious.

Dr. Murphy, of Chicago, asked what effect the ligature of the tubes and spermatic cord had on shock; also, what were the effects of retractors and massage. He emphasized the point as to traumatism.

Dr. Milliken, of Dallas, spoke of post-operative washing of the stomach as a preventative.

Dr. Austin, of Kansas City, suggested the administration of morphine hypodermatically before anæsthesia.

Dr. Crile thought one ought to separate hemorrhage from shock. In shock pure and simple, in a toneless system physiological salt solutions did little good. The previous administration of strychnine, whiskey, and nitroglycerin was deprecated. Ligature of the spermatic cord produced a slight fall of blood pressure, whereas crushing of the testicles caused a pronounced decline. Ligature of the oviducts produced but a slight fall of blood pressure. Dragging of all the tissues produced shock.

Operation for Undescended Testicle and Congenital Inguinal Hernia.—Dr. A. D. Bevan, of Chicago, spoke of the malformation, malposition, and location of the testicles, the mental effect produced by undescended testicles, the dangers of their presence, and the justification for surgical interference. The rule ought to be to operate and transplant every undescended testicle if it can be palpated. A retained testicle might become carcinomatous. Undescended testicles were sterile as a rule. The operation was more successful than generally supposed. He made a three-inch incision over the canal high up, and split it open; he then drew out the testicle, and ran the finger along the vas, separating the peritoneum for two to three inches; then along the spermatic vessels and removed all covering from the cord. The testicle hung by the vas and spermatic vessels, and could often be placed on the thigh. A pocket was made for the reception of the testicle, and the inguinal canal was restored by Bassini's methods or without transplantation of the cord (Ferguson, Chicago). The age of selection for the operation is fifteen years. This operation was to be preferred to castration.

Dr. Milliken, of Dallas, thought the operation was thoroughly justifiable. He preferred to operate at the age of eight to ten years.

Dr. Lord, of Omaha, related a case of retraction of the testicle in an adult following parotitis. The testicle never again descended.

Dr. Harris, of Chicago, thought it inadvisable to operate before puberty, because some testicles remained in the canal until that time and then descended, the testicle being retained on account of imperfect development. He would operate immediately after puberty.

Dr. McArthur, of Chicago, thought that some cases would still fail to respond to Dr. Bevan's operation.

Dr. Schaefer, of Chicago, agreed with Dr. Harris as to operating after puberty. He had seen four cases where the testicles descended at puberty.

Dr. Bonffleur, of Chicago, mentioned a case of testicle in the groin, the patient being very hypochondriacal.

Dr. Manley, of New York, thought that in early life the most prolific cause was a badly fitting or a prematurely adjusted truss. It was wise to leave them alone until after puberty, if there was no hernia, for some cases undergo spontaneous cure. He was in favor of castration in some instances.

Dr. Reed, of Rock Springs, said that in most cases the organ was worthless, and he questioned the actual benefit derived from operation.

Dr. Bevan said he was glad to see that the majority were agreed as to the time of operating.

Contribution to the Treatment of Spinal Caries.—Dr. George R. Elliot, of New York, read this paper. He spoke of the different mechanical inventions, and the work of Sayre and Taylor, of the various kinds of corsets, and of the material used. Suggestions by his patients had aided him in perfecting his apparatus. His support was open and did not restrict respiration. The apparatus, adult and child size, was then passed among the members.

Afternoon Session.

Exstrophy of the Bladder.—Dr. D. P. Allen, of Cleveland, read this paper. After presenting the various operations of König, Kuester, Trendelenberg, Sonnenberg, and others, he recommended Meidel's operation as the choice. The greatest discomfort in earlier operations was the formation of phosphates. In operating, all the mucous membrane except that around the opening of the ureters was removed; the ureters were immobilized; the sigmoid flexure was drawn up; the extremities of the ureters were inserted into the sigmoid and fastened. The sigmoid was dropped into the abdominal cavity and the latter closed. The sphincter ani was stretched and a drainage tube carried into the rectum. No method gave such great relief and such small mortality as Meidel's operation. A successful case was then shown.

Dr. C. A. Wheaton, of St. Paul, read another paper upon the above subject. He spoke of the embryology of the genito-urinary apparatus, epispadias, hypospadias, and exstrophy. A series of cases consisting of epispadias, hypospadias, and aggravated epispadias with exstrophy of the bladder were submitted. Photographs were passed among the members.

Dr. Mataz, of New Orleans, said that these contributions showed what could be done, and that radical cure was no longer a hope but a fact. Meidel's operation was the only one to be considered. He gave the following conclusions: (1) All autoplastic methods for exstrophy were palliative; (2) of all radical methods Meidel's was the most complete; (3) Meidel's was best for comparative cure; (4) the mortality was not yet firmly settled; (5) Meidel's operation was difficult, laborious, and tedious, and required skill; (6) it was not applicable to all cases. The general condition must be good.

Dr. Willard, of Philadelphia, thought that Meidel's operation was in the right direction. It made the patient more comfortable, but he questioned whether it prolonged life. Infection of the kidneys was the great danger.

Dr. Eastman, of Indianapolis, thought that Meidel's operation was contraindicated when the kidneys were disorganized. He reported such an instance in which he performed Sonnenberg's operation.

Dr. Allen said that the safety of the patient depended on leaving the mucous membrane around the opening of the ureters. This prevented kidney infection.

Tuberculosis of the Fascia.—Dr. J. E. Moore, of Minneapolis, said that the fascia might be the primary seat of tuberculosis. It might be confined to the surface or dip down into the muscular tissue. The fascia lata, popliteal space, and the extremities were most commonly affected. The symptoms were: slow devel-

opment of the swelling, with no pain, and local rise of temperature; the general temperature was 99° F. The skin was red at first, later purple; finally sinuses formed. The general health might be greatly or slightly affected. The diagnosis was made largely by exclusion. The prognosis varied with the location, extent, and variety of the affection. In treatment the knife, curette, and scissors should be used to remove every part of the disease. Gauze drainage was best. In the extremities it might be necessary to amputate.

Surgery in Knee-Joint Tuberculosis.—Dr. A. F. Jonas, of Omaha, read this paper. He said that no one method was applicable to all cases. The cases are classified into mild or recent, severe or chronic. He could not tell whether the primary deposit was in the bone or synovial membrane. In the former conservative methods might be used. He had used mechanical treatment, intra-articular injections, the cannula, incision, irrigation, and para-articular operations, or arthrectomy, resection, and amputation, according to the necessity of the case. Tuberculin was not used. A stiff extremity was better than an artificial limb. An early diagnosis and early treatment were emphasized.

Dr. Willard, of Philadelphia, said that the knife and scissors were the best caustic. He did not like excision for children. He was opposed to iodoform injections. The diagnosis should be made early.

Dr. Sherman, of San Francisco, said that iodoform was inert in joint tuberculosis. Some treated the joint when the tuberculosis was in the fascia. The *x*-ray was a help.

Dr. Moore considered excision in children scarcely ever justifiable. Iodoform was useless in joint tuberculosis. The best conservative was the knife.

Dr. Jonas thought that conservatism was to do something to restore the function by whatever means. He never obtained results from iodoform.

Two Novel Cases of Surgery of the Trachea: Stricture of the Trachea Successfully Removed by Operation; Successful Removal of a Diaphragm in the Trachea Following Cut Throat and Producing Aphonia.—These were by Dr. W. W. Keen and Dr. W. S. Jones, of Philadelphia. Dr. Keen reported both cases, and plates were passed among the members. The technique of both operations was carefully described and successful results were reported. In the second case the patient spoke four days after the operation, for the first time in thirteen months. In this case the œsophagus was accidentally opened during the operation, it having been drawn forward by adhesions. In the first case the stricture reached from the third cartilage to the upper border of the fifth. Relief was great after the operation.

Dr. Crile, of Cleveland, related a case of stenosis of the larynx.

Dr. Uryman, of Detroit, asked whether thorough suture of the parts was originally carried out.

Dr. Keen replied that he saw the patient one year after the accident.

Longitudinal Silver-Wire Suture in the Closure of Wounds.—Dr. M. L. Harris, of Chicago, claimed that the advantages of silver wire were its ease of sterilization, its non-hygroscopic property, its rendering coaptation of the edges easy, its causing strength of union, and the formation of a slight cicatrix. The suture was called longitudinal because it was parallel to the wound. He used it in deep edges as well as in skin. It was applicable to cœliotomy, hernia, and appendicitis. The rigidity of the wire prevented gaping of the edges.

Dr. Eggleston, of Seattle, asked if silver wire was easily removed.

Dr. Means, of Columbus, said he preferred galvanized steel wire.

Dr. Harris said that the wire was very easily removed. With silver wire there was less infection of deep tissues.

Laminectomy, with Report of Cases.—Dr. J. C. Monroe, of Boston, read this paper. He said that laminectomy was a serious procedure, though not a difficult operation. Exploration was sometimes indicated. Some cases were successful, and others were relieved. The most discouraging cases were the cervical and upper dorsal. Below the mid-dorsal the chance of recovery was greater. In chronic traumatic lesions the field was encouraging. The operation could be done at any level. In cases of tumor laminectomy offered good results. A single median incision having been made, pack as you go along, and make one cut with the scissors into the interspinous ligament, the laminæ being taken away with one cut of the forceps. The chisel was rarely necessary. The operation should not be done in case of shock. After the operation the patient should be put in the dorsal position.

Dr. Ferguson, of Chicago, thought that hemi-laminectomy was sufficient. He made the incision a little to the side. Operation should be done early.

Dr. Bonffleur believed in operating during shock, which was an indication rather than a contraindication. Sensation might be present and yet operation be indicated.

Dr. Patterson, of Philadelphia, related a case of cerebro-spinal meningitis operated upon by Morton, in which the symptoms subsided two days after the operation.

Dr. Daly, of Pittsburg, was opposed to hemi-laminectomy.

Dr. Monroe said that tapping of the cord was as good as hemi-laminectomy. It was wrong to operate in shock, for shock was not due to injury of the cord. This operation was often successful in meningitis.

Pancreatic Cysts.—Dr. L. L. McArthur, of Chicago, reported two cases of his own. He subdivided cysts into (1) retention or true cysts (ranula pancreatica); (2) cysto-sarcoma; (3) epithelioma cysticum. Cysts occur in both sexes, usually between the ages of thirty and forty years. The most marked symptoms were colic and digestive disturbances. Icterus was common. The treatment consisted of extirpation of the sac or drainage in one or two steps. Regurgitation of bile into the pancreatic duct was possible. In colic we should think of pancreatic stones. In cysts other than retention cysts extirpation was necessary.

Dr. Graham, of Chicago, thought that the majority of pancreatic cysts were pseudo-cysts or hæmatoma of the lesser peritoneum.

Dr. Turck, of Chicago, reported an instance of hemorrhagic pancreatitis.

Dr. French, of St. Louis, mentioned a case in which he removed a pancreatic tumor weighing sixty-six pounds.

Dr. McArthur said that hemorrhagic cysts were rapid in development.

Treatment of Popliteal Aneurism by Excision.—Dr. J. C. Oliver, of Cincinnati, reported a case of traumatic popliteal aneurism in a syphilitic subject. He said that in extirpation we attacked the disease directly, and interfered with the circulation of the limb less than in the Hunterian operation. The collateral circulation was better and the danger of gangrene less. The certainty of cure was greater. Prolonged compression was inadvisable. Operation by extirpation was most scientific, and gave more cures and less deaths.

Destruction of the Femoral Artery and Vein, without Loss of Leg; with Report of Cases.—Dr. B. Merrill Ricketts, of Cincinnati, reported three

cases, and stated that amputation of the leg was not always necessary when the lumen of the artery and vein was occluded. It was better to ligate the artery and vein than to operate at once. Ligation of the artery or vein in chronic pathological conditions was less likely to cause death than in accident or health. Gangrene might be due to septic infection. End-to-end anastomosis might be accomplished. Complete occlusion sooner or later took place. Preservation of the leg did not depend on the artery and vein alone.

Dr. Manley, of New York, thought that in senile gangrene the primary trouble was in the vein.

Dr. Freeman, of Denver, called attention to the fact that gangrene might be due to blood extravasation into the deep popliteal fascia.

SECTION ON GYNÆCOLOGY.

First Day—Tuesday, June 6th.

The meeting was called to order at 2 P.M. The chairman, Dr. A. H. Cordier, of Kansas City, then read his address. He said that one of the most important subjects coming before that section was cancer of the uterus. Here disappointment would be avoided and life saved by early recognition and prompt and thorough operation. The early detection and prompt management of gonorrhœa, with the avoidance of intra-uterine sounding, had materially reduced the number of cases of tubal and ovarian diseases of specific origin. He thought the abdominal route for dealing with adherent and suppurating tubes and ovaries would remain the route of choice with the majority of American surgeons, when there were adhesions or suppurative disease of the adnexa, which should be operated upon as soon as the diagnosis is made, unless in the latter months of pregnancy. In closing, reference was made to the recent and important investigations into the treatment of puerperal fever by serum therapy, and by the use of Credé's silver ointment.

Pelvic Tuberculosis.—Dr. Augustus R. Clarke, of Cambridge, Mass., read a paper on this subject.

Dr. E. E. Montgomery, of Philadelphia, described a case of tuberculous disease of both ovaries and tubes, in which relief and improvement in general health had followed removal of the appendages.

Dr. A. Goldspohn, of Chicago, objected to the removal of the adnexa in young women because of tuberculosis of those parts. It was better to leave the uterus and half of the ovaries even when the tubes were removed.

Dr. C. C. Frederick, of Buffalo, cited a case in which the woman made a good recovery after the removal of both ovaries and uterus. Subsequently there had been a localized tuberculous abscess on the left side, which he had evacuated through the vagina. It had continued to drain despite all efforts to stop it, and she had now developed general pulmonary tuberculosis.

Dr. C. E. Ruth, of Keokuk, Iowa, narrated a case in which, on removing a large ovarian cyst, the peritoneum had been found thickly studded with tuberculous deposits. He had ligated and removed the entire omentum and the tumor, and the woman had done well for about three years and then succumbed to pulmonary tuberculosis.

Dr. Carsner agreed with Dr. Goldspohn that it was not necessary to remove the tubes for simple tuberculous peritonitis. Irrigation was sufficient here; but if there was degeneration he removed the organs.

Dr. Ross, of Toronto, said that he had seen a number of cases of pelvic tuberculosis in women. The disease appeared to be more frequent in young unmarried women, where there was no question of coitus, and therefore it did not come from the vagina.

Dr. Joseph R. Eastman, of Indianapolis, spoke of the aid to diagnosis afforded by curettage and microscopical examination of the scrapings in cases of tuberculosis of the uterus.

Dr. T. Tod Gilliam, of Columbus, spoke of the misery caused by the little angular, calcareous masses which studded the peritoneal cavity even after the tuberculosis had run its course.

Dr. Reeve, of Cincinnati, described a case of this kind upon which he had operated, and in which general infection had not occurred until about one year later.

Dr. W. B. Dorsett spoke of the value of antiphthisical serum, and reported an illustrative case.

Dr. Clark, in closing, expressed his belief that a large part of the infection must be through the stomach. He believed that it was the better plan to save part of the ovary, that menstruation might go on.

Cholecystectomy.—Dr. Clinton Cushing, of Washington, D. C., read a paper on this subject, in which he reported thirty-one operation cases occurring in his practice.

Dr. J. R. Eastman believed that free drainage through a biliary fistula, as in cholecystotomy, was of decided value, the fistula acting as a safety-valve to the engorged liver.

Dr. Davis, of Birmingham, said that one argument against the removal of the gall-bladder was the difficulty of knowing whether or not the duct was pervious.

Dr. Sutherland, of Nebraska, objected to the use of sedatives for relief of the paroxysms. In three recent cases he had successfully removed gall-stones almost double the calibre of the duct by two doses of eight ounces of sweet oil.

Second Day—Wednesday, June 7th.

Spontaneous Rupture of the Body of the Uterus during Labor.—Dr. Henry D. Ingraham, of Buffalo, read this paper. He said that fortunately this complication was much more rare in this country than in Europe. According to statistics, a series of 48,000 cases of labor yielded only 12 instances of rupture of the uterus, 5 being traumatic and 7 spontaneous. Of the latter, 86 per cent. of the mothers and 71.5 per cent. of the children died. Both the mother and child died in each of the traumatic cases.

Uterine Fibroids.—Dr. T. Fitzgibbons, of Milwaukee, in this paper spoke of the various methods of treatment. He condemned the intra-uterine use of styptics, and stated that he had not found electrolysis satisfactory. Ligation of the uterine arteries was not advisable. Myomectomy might be used in subserous fibroids.

Dr. G. Betton Massey, of Philadelphia, objected to the term "electrolysis" in this connection, claiming that it was the trophic action of the current rather than electrolysis which was wanted. He had accomplished a great deal more, however, by the use of the electric current combined with the oxychloride of mercury.

Dr. W. H. Wathen, of Louisville, Ky., thought electricity had done much harm in the treatment of fibroids. Much was to be expected from myomectomy.

Dr. T. A. Reamy protested vehemently against the tendency to operate and sacrifice the sexual organs of women. He declared that medical science would never be advanced by reckless denunciation of electricity and by blind devotion to the surgeon's knife.

Dr. Henry O. Marcy, of Boston, said that after observing a large number of cases of uterine fibromata, he was compelled to admit that he had seen little or no benefit from the electrical treatment, and he believed this to have been a quite general experience.

Dr. A. Goldspohn, of Chicago, asserted that treatment by electricity was not rational because it could not possibly be applied to all parts of the endometrium; moreover, it created an excellent culture bed for germs and really made the woman's condition worse.

Dr. J. R. Eastman considered the field for electrical treatment quite limited.

Dr. Chauncy D. Palmer, of Cincinnati, said that he placed no reliance on any medicine except ergot in the treatment of fibroids. He favored the Apostoli electrical treatment for intramural growths.

Dr. Fitzgibbon, in closing, said that he believed the consensus of opinion was in favor of the intraperitoneal method of operating.

Indications for Operative Treatment of Post-Puerperal Sepsis.—Dr. John B. Deaver, of Philadelphia, in this paper divided puerperal sepsis into three groups, viz., endometrial, metrial, and parametrial, and narrated cases illustrative of the mode of treatment best adapted to each group. They all emphasized the great truth that the early institution of so-called radical measures constituted the truest conservatism.

Afternoon Session.

The Advantages of Vaginal Section in Surgical Treatment of Pelvic Diseases in Women.—This was the title of a paper by Dr. J. R. Goffe, of New York. After briefly stating the history of the employment of the vaginal route, he pointed out the indications for this method. He regarded it as the best operation in the conservative treatment of the diseased uterus and appendages. The method of shortening of the round ligaments by this route was briefly described. As compared to the abdominal route the following advantages were claimed: less shock, the avoidance of hernia, less danger of wounding the intestine, no bladder irritation, better drainage, and convalescence was shortened from one to three weeks. As an example of the possibilities of this route, the author mentioned a case in which he removed a ten-pound fibroid through the vagina.

The Technique of Surgery of the Uterus and Adnexa per Vaginam.—This paper was read by Dr. Wiliam H. Wathen, of Louisville. The writer took the same stand as Dr. Goffe in his strong advocacy of the employment of the vaginal route. It was to be advised in all cases of unruptured tubal pregnancy seen before the third month. When the patient was in a condition of shock due to premature rupture and hemorrhage, it was his practice to open the vaginal vault and pull down the uterus. A clamp was then placed on the broad ligament, and when the patient recovered from shock the operation was finished. In cases of puerperal sepsis, with or without a collection of pus in the pelvis, he had had excellent results from simple incision and light packing with iodoform gauze. He had never made a wound in the ureter or the bowels by this method. The opinion was expressed that in old cases of encysted peritonitis opened in this way, and drained, the adhesions were gradually softened and often completely absorbed by the technique. The speaker insisted upon the uselessness of retractors and deprecated the use of a large number of instruments. When there were extensive adhesions he believed that good results could only be obtained by the bisection of the uterus. Each half was separately brought outside of the vulva, and could easily be removed.

What Becomes of the Patient after Vaginal Puncture and Drainage?—Dr. F. Henrotin, of Chicago, read this paper. He entered into a discussion as to the classes of cases in which the vaginal route was to be preferred. Removal of the appendages without the uterus should be done from above. If the uterus was to be removed in addition to the appendages, the vaginal route offered decided advantages. In cases of purulent collections in the pelvis due to gonorrhœal infection he believed that vaginal section was not indicated. Purulent collections due to other agencies, if recent and having soft walls, were in the majority of cases cured by vaginal section and drainage. From twenty-five to thirty per cent. of all pelvic diseases did better by vaginal incision than by the abdominal method.

The discussion was opened by Dr. Howard Kelly, of Baltimore. All other things being equal, he said he preferred the vaginal route. In infections due to the gonococcus he advocated incision and drainage through the vagina. For diseases involving the upper part of the genital tract, in conservative operations the abdominal route offered the greater advantages. He quoted the statistics of fifty-nine cases of collection of pus in the pelvis treated by vaginal section and drainage.

Dr. J. B .Murphy discussed the pathology of purulent collections in the pelvis. In cases due to the streptococcus good results usually followed incision and drainage, but in gonorrhœal cases extirpation by the abdominal route of the tube involved afforded the only means of recovery.

Dr. Joseph Eastman, of Indianapolis, believed that the vaginal route afforded many advantages. He advocated placing of the patient at first in the knee-chest and later in the Sims position. The sphincter was now dilated, and by this means it was claimed that more room was obtained.

Dr. Noble, of Philadelphia, believed that generally the abdominal route was the better. The ability to inspect the appendix, which was so often involved in cases of pelvic disease, was a very strong point in favor of the abdominal route in the case of women suffering from profound septic intoxication due to a large collection of pus in the pelvis. Prompt incision and drainage were recommended as a palliative measure in all cases. A secondary abdominal operation could be done later if necessary.

Dr. Carstens, of Louisville, believed that ectopic gestation should always be attacked from above. In hysterectomy with removal of appendages the vaginal route was the better. In women after the menopause the vaginal route was the one to be preferred in most cases of hysterectomy.

Dr. Emil Ries, of Chicago, spoke of some of the minor points in technique that were often neglected. Traction on the cervix when there were many adhesions often resulted in failure to bring the uterus forward, whereas pushing the cervix back in the pelvis often shoved the fundus forward within easy reach. He spoke of the facility with which the tubes and ovaries could be exposed to view, and of the value of such exposure especially in clinical demonstrations.

Dr. H. O. Marcy, of Boston, called attention to Dr. Battey's work in this field more than half a century ago. He did not believe that hernia frequently followed abdominal section. In his last thousand cases of abdominal section he had known of but one instance of this kind. He pointed out the value of the buried suture and the subcutaneous method of avoiding any scar.

Dr. Reed, of Cincinnati, advised that in cases of pelvic disease all exploratory abdominal incisions should be first made. If there were adhesions and if the pus was localized, an incision was made near Poupart's ligament and another in the vagina, and a through-and-through drainage established.

Dr. H. T. Byford, of Chicago, was a firm believer in the advantages of the vaginal route in almost all

cases. If the uterus was very tightly adherent and could not be moved the abdominal route was preferable. In operating in septic conditions, one could always assure the patient absolutely of the safety of the operation, even though the results might not in some cases be manifest so soon as they were by complete removal from above.

Drs. Deaver, of Philadelphia, Duff, of Pittsburg, McDonald, of Albany, and Davis, of Alabama, advocated the vaginal route in acute pelvic suppurations, especially so if the patient was septic.

Dr. Lawrence, of Columbus, believed that abdominal section was still the route of election.

In closing the discussion, Dr. Goffe pointed out that he used the vaginal section in all cases for the primary and exploratory operation, and expressed the opinion that as the technique became better known it would come into more general use.

Dr. Wathen said that in performing vaginal section for purulent collections all the adhesions must be broken up, and the peritoneal cavity should be opened and explored in every instance.

The report of the executive committee was deferred.

Dr. W. E. B. Davis, of Birmingham, Ala., was appointed chairman of the section for next year, and Dr. F. F. Lawrence, of Columbus, Ohio, secretary for next year.

Papilloma of the Ovaries, Omentum and Uterus; Operation and Recovery.—This was the title of a paper by Dr. J. H. Brand, of Baltimore. The slow growth, the freedom from recurrence, and the rarity of the affection were the principal features of the paper.

Clinical and Microscopic Differentiation of Sclerocystic and Cirrhotic Degeneration of the Ovaries, and Chronic Ovaritis.—This paper was read by Dr. W. H. Hunniston, of Cleveland, Ohio. Two forms of sclerosis were recognized, the one primary, the other secondary. The primary form was analogous to the condition occurring in the kidney in chronic interstitial nephritis. The secondary form was always due to an inflammatory process. In the primary form, the ovary was small and very hard. In the secondary form it was from three to four times the natural size and usually contained a large number of cysts. Dysmenorrhœa, commencing at puberty, increasing in severity, and lasting during the whole of each menstrual period, with menstrual pain, was the primary form. Sclerotic changes in the kidneys and blood-vessels were common. Dysmenorrhœa following pelvic infection, beginning a day or two before the menstrual period, and disappearing with the appearance of the flow, and accompanied by considerable endometritis, were the principal clinical features of the secondary form. Cystitis and menorrhagia accompanied this latter form. The treatment advocated consisted in the castration of all the primary cases, if they were near the menopause. When this was the case it was better to tide them over it, and then relief was usually afforded. In the cases due to infection much relief could be afforded by electricity and massage.

Dr. Goldspohn, of Chicago, and Dr. Boice, of Washington, pointed out the fact that many of the cases were not recognized by the general practitioners, and often escape to the specialist.

GENERAL SESSION.

Third Day—Thursday, June 8th.

Report of Nominating Committee.—The nominating committee made the following selection of officers for the ensuing year: *President*, Dr. W. W. Keen, of Philadelphia; *First Vice President*, Dr. C. A. Wheaton, of St. Paul; *Second Vice-President*, Dr. E. D. Ferguson, of Troy, N. Y.; *Third Vice-President*, Dr. G. M. Allen, of Liberty, Mo.; *Fourth Vice-President*, Dr. W. E. D. Middleton, of Davenport, Iowa; *Secretary*, Dr. George H. Simmons, of Chicago; *Assistant Secretary*, Dr. J. A. Joy, of Atlantic City, N. J.; *Treasurer*, Dr. H. P. Newman, of Chicago; *Judiciary Council*, Dr. J. D. Griffith, of Kansas City, Dr. J. E. Cook, of Cleveland, Dr. J. H. Baillache, of Washington, D. C., Dr. J. B. Lewis, of Topeka, Dr. J. W. Irvin, of Louisville, and Dr. Frederick Holme Wiggin, of New York.

Place of Meeting.—It was voted that the next place of meeting should be at Atlantic City, N. J.

Report of the Board of Trustees.—Dr. S. J. Happel, of Tennessee, presented the report, which showed that during the year 1898 the receipts had been $82,331.42, the *Journal* expenses $58,202:21, and that there was a balance on hand of $19,661.46.

Secretaryship.—The report stated that after very careful consideration of this important subject the trustees recommended that there should be no "permanent" secretary; that the editor of the *Journal* should be the secretary, and that there should be an assistant secretary. This report was adopted with but few negative votes.

Committee on Legislation.—On the recommendation of the trustee the association adopted the resolutions already presented regarding the committee on legislation, limiting, however, the annual expenses to $250.

Revision of Constitution and By-Laws.—A committee of three was appointed to secure proper revision of the constitution and by-laws, and publication of the same.

National Department of Public Health.—The committee having in charge this matter reported the work done and expressed the belief that, as a result of its efforts and of the indorsements given to the Spooner bill, this measure would be passed by the next Congress.

Resignation of Dr. Albert L. Gihon.—The following resolutions were adopted:

Resolved, That the association accepts the resignation of Dr. Gihon as chairman of the Rush monument committee with extreme reluctance and regret, and tenders its sincere thanks for the manner in which he has discharged the onerous duties of this office, and

Resolved, That this action be spread upon the minutes and a copy of the same sent to Dr. Gihon.

The Control of Tuberculosis.—A resolution was adopted, calling for the appointment of a committee of five to consider the best means of treating tuberculosis and preventing its dissemination, and to report to the United States Congress and to the various State legislatures, urging upon them the adoption of appropriate measures.

Compulsory Vaccination.—The following resignation was enthusiastically adopted:

Resolved, That this association strongly urges the adoption by local boards of health of laws requiring compulsory vaccination and depreciates in the strongest way the efforts of those who are endeavoring to secure the abolition of compulsory vaccination; and that a copy of this resolution be sent to every health board in the country.

Address on Medicine.—Dr. J. C. Wilson, of Philadelphia, delivered a scholarly oration. At its close Surgeon-General Sternberg presented a series of stereopticon views showing the hospital ship and the camp as they existed in the later Spanish-American war.

(*To be Continued*)

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Twenty-First Annual Congress, Held at Chicago, May 22, 23, 24, 1899.

PRESIDENT, DR. WILLIAM E. CASSELBERRY, OF CHICAGO.

First Day—Monday, May 22d—Morning Session.

President's Address.—"This association was organized in response to an invitation sent out by the late Dr. Frank H. Davis, of Chicago, who may thus be said to have been its real founder. It is therefore eminently fitting that we should meet in the city where the founder lived and worked. The time-honored custom of an address from the president affords opportunities for dwelling upon various matters which might not be appropriate for any set paper or discussion. I therefore beg leave to call your attention to some of the topics which may thus properly be considered. All are doubtless conscious of the changes wrought in laryngological practice by the advance of nasal pathology and by the inclusion of the ear in the sphere of work. The laryngologist formerly treated diseases of the throat and chest. Now he tends to be a surgeon with a routine of practice limited to local measures applied to the upper respiratory area. We should strenuously deprecate the tendency to deal with the nose and throat exclusively in a mechanical way and as if they were parts without organic relation to the rest of the body. Such a view engenders narrowness of thought, and the practitioner thereby loses much of that fundamental knowledge of pathology and applied therapeutics so demanded by the patient's best welfare. The proper care and treatment of nasal troubles are by no means effected simply by boring a hole through the nares and thereby making them patent, though the ill-advised procedures of many posing as laryngologists would seem to indicate that such was the case. It is freely conceded that the ear and nose stand in intimate relations. The laryngologist must treat aural affections, and he should cultivate an exhaustive knowledge of this branch of medical science. Care should be taken not to neglect, in enthusiasm for the ear, the original laryngological study. Such a tendency to render undue homage to the ear is shown in the use of such words as otolaryngology, otorhinolaryngology, etc. In addition to this, there are many in the smaller towns who combine eye work with that of the nose and throat, and hence there are many posing as laryngologists whose education and restricted routine of practice put them out of touch with many pertinent phases of the subject. The laryngologist of to-day should constantly endeavor to make the real diagnosis in the earliest stage of lung tuberculosis. Many of these patients are liable to come first to him complaining of cough, irritable throat, husky voice, and inclination to nasal inflammations. While they may complain only of throat trouble, they should be exhaustively examined. The conventional injection, spray, or cauterization does not suffice. The laryngologist need not embrace in his practice the entire broad field of chest diseases, but he should be familiar with every art of diagnosis and every therapeutic resource in order to do his patient justice. For the former he should keep himself proficient in the making of physical examinations of the chest, should carefully note the height and weight of his patients, their chest conformation and perimeter, should ascertain the vital capacity, be able to stain for bacilli, and be versed in the use and interpretation of the tuberculin test. Incipient infiltration of the larynx, disclosed only by the mirror, may afford the earliest clue to the existence of pulmonary trouble. The presence of polypi in the nose with degeneration of the middle turbinal and unassociation of sinus disease will enable us to exclude tuberculosis in favor of bronchial asthma or chronic broncho-pneumonia. Inspection of the throat will also frequently reveal the cause of cough or hemorrhage, which otherwise might be regarded as evidence of pulmonary mischief. Attention must also be given to the heart, aorta, and mediastinum. Aneurismal pressure will often show itself by the paralysis of a vocal cord. In old persons an elongated uvula will often appear to be the cause of an irritable cough, but a more careful examination may reveal an enlarged heart with valvular lesions. Hence, while the uvula may be an exciting factor in the production of the cough, the underlying cause must be attributed to the irritability of the respiratory tract brought about by failing cardiac compensation.

"The laryngologist should also be a good systematic therapeutist and cultivate the habit of careful prescribing. He should study the conditions of natural immunity and susceptibility so that he may be able to designate the proper mode of life and place of abode best adapted for each individual case, familiarizing himself with sanitation, hydrotherapy, climatology, and sanitary methods. Reports from the Rocky Mountain region show that twenty per cent. of cases of laryngeal tuberculosis can be cured in that locality, and that an additional twenty per cent. can live along greatly improved for an indefinite peroid.

"In connection with bronchial asthma, present-day studies in nasal pathology establish the fact that vasomotor changes are at the bottom of many of these cases which are accompanied with polypoid changes in the ethmoid region. The laryngologist should be ready to assume complete charge of all such cases, treating them along broad therapeutic lines.

"All laryngologists are familiar with many throat conditions which appear as salient features of underlying systemic states. Œdema of the larynx is often secondary to nephritis; laryngeal ictus is often the forerunner of tabes. Hence the true clinician in the special field of laryngology should be first of all a good physician, and after that a specialist. Nor need a man with this breadth of view be any less skilled in the operative technics of tonsillotomy, in the rectification of deflected septa nasi, in the surgery of sinusitis, and in mastoid affections. He can appreciate the disadvantage of nasal obstruction just as well as another who perceives that alone.

"Gentlemen, we have met to aid each other in the search for more truth. Let us profit by each other's experience, search along more liberal lines, and endeavor to realize that conception of power phrased by the Sage of Concord: 'A cultivated man, wise to know and bold to perceive, is the end toward which Nature works.'"

Is the So-Called American Voice Due to Catarrhal or Other Pathological Conditions of the Upper Air Passages?—This paper was read by DR. JOHN W. FARLOW, of Boston. He said that the so-called American voice was characterized by a peculiar nasal twang, which was quite distinct from the vocal modifications arising from faulty conditions in the fauces and larynx which are not here considered. Such latter were the thick voice of enlarged tonsils and the voice of low carrying power due to various laryngeal affections. Any interference with the free passage of air through the nares impaired vocal resonance, but did not produce the peculiar American nasal voice. Anterior deviations and spurs of the nasal septum occasioned abnormal air vibration in the nose, as also did a narrowing of the organ at the tip, especially when it was bent downward. Anterior turbinal enlargements and polyps acted in a similar manner, and in the same category might be included chronic catarhal inflam-

mation of the nasal mucosa without hypertrophy. From all these causes, there resulted anæsthesia and paresis of the soft palate; hence some tones which should be formed in the mouth were produced in the naso-pharynx at a higher level. This was probably the reason why the nasal twang persisted after operations had been done for adenoids, for it took some time for the palate to grow out of its paretic condition. The twang did not seem to be caused by merely atrophic conditions. For purposes of study we might group our patients into three classes, according to age—below twelve, between twelve and thirty, and over thirty years. In the first class, nasal voice was very common, but the foregoing lesions, which might be regarded as its cause, were not especially frequent at this stage of life. In the second class, the lesions were more common, but this particular variety of voice was less so. In the third and older class, nasal voice was comparatively infrequent. From this line of reasoning it followed that the nose alone did not determine the classification into nasal and non-nasal voices. Voice-training would often improve its quality without any special intervention, medical or surgical. In short pathological conditions seemed to have far more influence on the range and power of endurance of the singing voice than upon its quality in the median register. In children, nasal voice was often only a matter of imitation, cured by placing them with persons who spoke properly. It must be stated also that the possession of an agreeable voice was quite compatible with the existence of abnormal anatomical conditions. All civilized races presented anterior obstructions. The great emigration of all nationalities to this country had introduced into our common speech all sorts of bizarre vocal sounds, and we were very careless as to the best methods of speaking. Yet some of the most pronounced nasal voices were heard in country villages where the population was purely native. The necessity of properly training children's voices could not be too strongly urged. They should be removed as far as possible from vicious influences in this respect. Every autumn our newspapers were flooded with advertisements of singing teachers, each one of whom claimed to possess the correct method, but only one person sang while a hundred talked. People fell into the conversational habits of the community in which they lived, and made no effort to better faulty methods.

Discussion of this paper was opened by Dr. G. Hudson Makuen, of Philadelphia, who deplored the lack of attention given to tone formation as a rule. The medical man knew little about the subject, but the laryngologist especially should be in a position to instruct the singing-teacher. The excessive tension of our American life was partly the cause of the nasal voice, and we must learn to cultivate the teachings of the "gospel of relaxation," for our American push was fast assuming the proportions of a national calamity. So far as the anatomical factor in this question was concerned, the low-hanging palate during speech was probably the prime element, as it centred the vibrations of sound waves in the naso-pharynx. By practising before a mirror with the mouth open, the patient could learn to give the proper tone to the levator palati muscles.

Dr. T. Amory De Blois, of Boston, thought that the peculiar quality of voice was largely a racial question. The guttural of the German, the vibratory nasal voice of the French, and the high-pitched tones of the Yankee were familiar illustrations, while the English voice among all social ranks was of an agreeable low pitch.

Dr. John O. Roe, of Rochester, called attention to the "resonator" office of the nasal sinuses, the size and shape of which strongly modified the voice. Their influence was not cut off by anterior obstructions, but posterior ones greatly affected it. The structure of a given language affected voice tone. Languages with many consonants, as German and Russian, gave low-pitched voices, while one with many vowels, as French, gave the opposite.

Dr. A. W. De Roaldes, of New Orleans, mentioned American conversational habits, instancing the fact that racial mixtures and the easy mode of living in the South produced lower-toned voices than different conditions in this respect in the North. Negro voices were rarely high-pitched.

Dr. Thomas Hubbard, of Toledo, ascribed to the noise of our American cities much of the prevalent high-pitched speaking. This was necessary in order to make one's self heard. From the noisy environment also the ear became dulled and the appreciation of vocal misuse was blunted.

In closing the discussion, Dr. Farlow expressed the view that the low palate was often due to lack of use, but he could not look upon it as the initial cause of nasal voice. Its causative relation was secondary, not primary. So far as the influence of the sinuses was concerned, he would remind the association that nasal voice was most common in children in whom the sinuses were scarcely at all developed. Voice was but very little due to language, for English was spoken in many lands, none of which presented the American nasal tone. As to city noises, the most pronounced twang was often heard in the quiet village.

Adeno-Carcinoma of Nose, with Report of Case.—This was a paper by Dr. James E. Newcomb, of New York. The Transactions of the association for two years ago contained the report of two cases of this nature and allusions in all to twenty-three other cases in which the clinical diagnosis had been verified by microscopical observation. The additional case to be reported was that of a woman, aged sixty-one years, who had suffered for nearly six months before coming under observation from daily nose-bleed with obstruction of the left naris. Bleeding had been severe on one or two occasions, but had never required any operative interference. There was some emaciation. Three months before coming under observation she had blown from the nostril what was probably an ordinary polyp. Examination showed enlargement with polypoid degeneration of the left middle turbinate. Around it were several fleshy proliferations which bled easily upon manipulation. Pressure symptoms and glandular enlargements were absent. Masses were removed under cocaine. The pathologist's report was adeno-carcinoma. The patient has thus far refused radical operation. Some six authentic cases of this nature have been reported during the last two years. Cancer of the nose is rare. Gurit was able to find only four cases among 9,554 cases of cancer of all organs. It was claimed that the association of ordinary polyps with carcinoma was only a coincidence. Tissier, who has written at length upon this phase of malignant disease, does not believe that the epitheliomatous degeneration of simple polypi had ever been definitely proven. What we knew about the etiology of nasal polypi would explain their occurrence in a cancerous nasal fossa. On the other hand, Plicque stated that it was pretty frequent after the ablation of numerous benign polypi to find new polypi appearing, this time composed of epitheliomatous tissue. Dr. Newcomb thought the latter statement incorrect, for polypi were very numerous and often removed by very crude means, while the occurrence of cancer here was very rare. Mention was made of a surgical procedure suggested by Dr. Dawbarn. It consisted of the ligation on both sides (a suitable interval occurring between the two operations) of the eight branches of the external carotid artery, and then of the excision of

the entire trunk of this vessel in the attempt to starve the growth by shutting off its blood supply.

Dr. G. V. Woolen, of Indianapolis, mentioned the case of a girl of eight years who had in the nostril what appeared to be an ordinary polyp, which came on two years after an injury. Removal was followed by recurrence. The microscopist reported on the original polyp that it was non-malignant, and only mucoidal in character. The later clinical history showed that it was malignant, and it extended over so wide an area as to be inoperable.

Dr. J. L. Goodale, of Boston, spoke of the case of a man aged fifty-one years, from whose nose polyps had been annually removed for some years. The last removal was in May, 1898. Five months later there came on exophthalmos, pain, and nasal obstruction, with the left naris full of a soft bleeding mass, which was removed and showed a fibrous stroma with epithelial cell nests. Recurrence took place.

Dr. Thomas Hubbard, of Toledo, said that he had had under his care a farmer who had had antral suppuration for seven years. Later a growth appeared within the antrum and thence extended into the naris. Examination of a portion removed revealed the presence of cancer.

Removal of a Foreign Body from the Bronchial Tube through a Tracheal Opening.—This paper was by Dr. A. Coolidge, Jr., of Boston. The patient, a young man aged twenty-three years, was tracheotomized in early childhood and had worn a tube ever since. The last one, of hard rubber, from long use gave way, the tube proper becoming detached from the shield and being inhaled. Severe cough with difficult and noisy breathing was present on admission to the hospital twelve hours later. An *x*-ray examination was negative. He was etherized and placed on his back with head extended and rotated to the right. The original tracheal wound was enlarged downward and to the right. A urethroscope half an inch wide and three inches long was passed down (with stylet in position); the stylet was then withdrawn and the speculum without difficulty pushed down the trachea to within an inch of the bifurcation. A hand-mirror and sunlight afforded suitable illumination, by which means the upper end of the tube was seen in the right bronchus about half an inch below the bifurcation. A pair of alligator forceps passed through the speculum effected its removal without disagreeable after-effects. During the entire operation breathing was carried on through the tube. Cocaine had been applied to the tracheal mucosa, so that there was no inconvenience from secretion, though at first the cough caused some annoyance. Septic pneumonia was the ever-present danger when foreign bodies in the air passages were treated on the expectant plan. Hence it was necessary to have well-defined courses of procedure to follow as occasion required. When the body was so large as to lead one to believe that it was still in a main bronchus, tracheotomy with exploration by straight tubes was the course to follow. If the smaller size of the body had carried it down to a secondary bronchus, we might still operate if there was a good chance of reaching it after illuminating the primary bronchus. This might be done especially on the right side. A body which was moving to and fro in the windpipe was not so dangerous as the same body impacted in a bronchus. We should therefore sedulously avoid everything calculated to excite respiratory spasm. Consequently cocaine was preferable to ether for tracheotomy. Occasionally it might be possible to pass a straight tube down through the glottis, but care must be taken to avoid pushing a loose body farther down. Here it was wiser to attempt to reach it by tracheotomy from below. The most rigid rules of surgical cleanliness must be followed. We knew that the lower trachea and the bronchi were quite flexible, and this was a favoring circumstance, as it allowed us to bring into a straight line the bronchus under observation.

Dr. H. L. Swain, of New Haven, related the histories of two cases. Statistics showed that foreign bodies were frequently expelled, sometimes months after they had found lodgment. Then ulcerative processes caused their dislodgment. In one of the cases mentioned by him, a shingle nail had remained in the bronchus for several months, when the patient was struck by a train and knocked senseless. Upon coming to, he was seized with a fit of coughing, and the nail was brought up.

Dr. Roe declared that after looking over the statistics of thousands of cases, he had come to the conclusion that the best procedure was to leave the body alone if it was not producing active symptoms, for in the vast majority of cases the body had been expelled later.

Dr. Roaldes believed that operation should not be deferred. In eight cases which had come under his personal observation, operative intervention had been undertaken, and the body was removed in seven. A low tracheotomy should be done and the bronchus titillated so that a reflex cough would be set up, the edges of the tracheal wound being held widely open. He would object to the association's advising a policy of non-intervention in this class of cases.

Dr. Woolen thought that if there were no immediate symptoms, and if the body was of such a nature that it might as a possibility be easily expelled, it was prudent to wait; but if the reverse conditions obtained, one should operate at once.

Exhibition of a Case of Stammering, with Demonstration of the Methods Employed in Treatment.—This paper was read by Dr. G. Hudson Makuen, of Philadelphia. His patient was a civil engineer, twenty-nine years of age, who had suffered since childhood without assignable cause. The condition appeared to be the outcome of a congenital neurosis. The main feature of this defect was a spasmodic action of the palatal muscles whenever attempts at speech were made. There resulted a sudden closure of what the writer would call the posterior palato-lingual chink. The frequency and duration of the attacks varied. They came on at most unexpected times, giving the speech a jerky character and at times stopping it completely. Attempts at reading increased the difficulty, and the patient seemed at times to be unable to think connectedly. We must study out the site of the neurosis in each individual case, for no two were exactly alike. A younger brother of this particular patient began to stammer, but was cured by giving attention to his malady. The occurrence of the speech difficulty in two members of the same family, and at such an early age, rendered the theory of a congenital neurosis in this particular case extremely probable. In the patient shown, the chief neurosis was in the nerves going to the respiratory and not those going to the pharyngeal muscles, the spasm of the latter being secondary and due to a reflex overflow of nervous energy from the respiratory and vocal mechanisms. The vocal element of speech was lacking in promptitude. It was as if the bow-hand of one playing the violin should cease to operate in unison with the string fingers, and as if the latter should try by increased energy of action to make up for the defective bowing. This forced and unnatural fingering had its counterpart in articulatory and other spasms of the stammerer. Normal speech was characterized by automatic action of the various muscles, and when any portion of the complex mechanism failed to functionate, this automatic sequence was broken and stammering resulted from a failure to make the various sets of muscles co-ordinate. In this particular case, inasmuch as the primary fault was in

the respiratory mechanism, resort was had to direct nervimuscle training. In this the faulty muscles were singled out and by voluntary exercises made to act properly. This plan was superior to the indirect method which led the patient unconsciously by means of correct speech to use the muscles properly. The advantage of the former was that it developed the nerves as well as the muscles, and established a volitional control over the faulty mechanism. The essential parts of the respiratory mechanism were the thorax, the muscles regulating its size, and the nerves supplying them. The muscles were divided into two sets according as they elevated or depressed the ribs. The levators were inspiratory and the depressors expiratory. We could train our patients to develop the action of any of these muscles, even the diaphragm. Then we could combine the muscular mechanism with the vocal.

At the close of the morning session the following specimens and instruments were exhibited: By Dr. Farlow, large adenoids removed from a woman fifty years old; also, an intra-nasal splint. By Dr. Swain, for Dr. Thomas R. French, of Brooklyn, post-nasal forceps, mouth-gag, and a modification of Bosworth's nasal speculum. By Dr. Coolidge, a nasal splint for external injuries, and a laryngeal applicator devised by Dr. J. Payson Clark, of Boston. By Dr. Casselberry, a nasal snare.

Afternoon Session.

Septic Phlebitis with Thrombus as a Complication of Peritonsillar Abscess; Report of Two Cases.—This paper was by Dr. M. R. Ward, of Pittsburg. Dr. Ward briefly discussed the pathology of this condition, saying that the lungs were most frequently infected, an infarction resulting with subsequent septic pneumonia and even gangrene. Less frequently the liver suffered, along with the kidney, spleen, and brain. He had been unable to find recorded more than three cases exactly identical with his own, and gave a summary of the clinical features of each. His own first case was that of a woman thirty years old, who for three weeks had pain and soreness in the left tonsil. These subsided, and then in three days a tumor appeared in the right side of the neck with right peritonsillitis, though no fluctuation could be made out. The post-cervical glands were swollen, as were also the muscles of the neck, and the temperature rose to 102° F. Soon pain developed in the lower portion of the right lung, with speedy chill and a pyæmic course. Pus was present under the superficial fascia of the neck. No connection between this focus of inflammation and the abscess about the tonsil could be made out. The pneumonia extended, and the patient died on the ninth day. A thrombus was found in the interal jugular extending up to the tonsillar plexus. The second case was that of a German, aged forty-two years, who died four hours after admission to the hospital. It was found that he had had a left peritonsillar abscess which had been incised, and that two days later his symptoms returned with chill and a commencing pyæmia. He died on the sixth day. The autopsy findings were the same as in the case preceding, with, in addition, the presence in the kidneys of numerous small abscesses.

Report of Cases of Chronic Empyema of the Antrum of Highmore Operated upon by the Caldwell-Luc Method.—This was a paper by Dr. A. W. de Roaldes, of New Orleans. Five cases were reported. In all of them, a radical and speedy cure was obtained. The writer expressed surprise that this plan of operation originally devised in this country had not been more generally followed. It was believed to be superior to the older plans. The various steps of the operation could be summarized as follows: (1) A buccal incision was made parallel with and near enough to the upper gingivo-labial fold in order to allow of the subsequent easy union of the muco-periosteal flaps. (2) The anterior wall of the antrum was opened in the canine fossa, the opening being ovoid in shape. Its extremities gave easy access to the tuberosity on one side and to the nasal wall on the other. (3) The cavity was thoroughly curetted and all diseased tissue removed. (4) A portion of the anterior extremity of the inferior turbinate was removed. (5) A large artificial opening was made in the nasal wall of the antrum as close as possible to the angle formed by the floor and anterior wall. (6) The cavity was finally inspected, cleansed, dried, and lightly dusted with iodoform, followed by suture of the muco-periosteal flaps. Iodoform gauze was gently packed into the antrum and also into the nasal fossa, changed on the third to fifth day, and afterward on alternate days until about the twelfth day. The patient was then allowed to irrigate the cavity with a syringe and cannula, using boric-acid solution. In all the cases forming the basis of the paper radical cure resulted in from four to six weeks. In one of them a little secretion could sometimes be found at the entrance of the sinus, but this was ascribed to an old ethmoidal trouble, the pus leaking into the sinus through an opening in its nasal wall from old necrosis. Dr. Roaldes dwelt especially upon the importance of locating any other possible focus of suppuration, as the latter might prove a serious complication or materially retard healing.

In discussing this paper, Dr. Roe remarked that one should bear in mind the level of the antrum floor with reference to that of the nares, and also the fact that pockets and septa might exist in the antrum.

Dr. E. L. Shurly did not think that operation was always necessary. Dentists and general surgeons were more likely to see these cases frequently than was the laryngologist. The acute form of the disease, such as followed upon influenza, often got well of its own accord, while in the chronic cases curetting was often necessary. He thought that the opening into the nasal cavity would offer far greater likelihood of infection than one into the mouth.

Dr. Makuen observed that the law of gravitation did not seem to hold good in drainage of the antrum. There seemed to be a sort of capillary drainage going on which was increased by nasal respiration.

Dr. G. A. Leland, of Boston, called attention to the fact that man was not always an upright animal, and that the cavity drained by gravity when he lay down. The establishment of free drainage through the natural openings would often cure the discharge. The Caldwell-Luc operation was in reality a combination of those of Mikulicz and Jansen.

Acute Suppurative Processes in the Faucial Tonsils.—Dr. J. L. Goodale, of Boston, read this paper, which was based upon a study of eight cases of intrafollicular abscesses. He would desire to mention especially the etiological relation of special bacteria to this form of abscess, the relation of the abscess to peritonsillitis, its prognostic significance, and its clinical recognition. He spoke of the histological changes of this form of tonsillar inflammation, remarking that streptococci were more numerous than staphylococci. Two of the intratonsillar abscesses had been followed by peritonsillar inflammation. All were characterized by severe infection, as was evidenced by the clinical history, the severe type of fever, and the adenitis. In most of the cases, the clinical course of the disease afforded no suggestion of this special lesion. The superficial foci varied in size and number. The fibrinous exudation was more marked than in simple proliferative tonsillitis. Many polynuclear

neutrophiles (pus cells) were found in the lymph channels near the base of the tonsils. The pyogenic infection of the follicles seemed secondary to that of the crypts; in the two peritonsillar cases it was evident that a discharge of the abscess into the efferent lymph channels had taken place. The importance of this special lesion was obvious when it was borne in mind that acute pyogenic infection of the follicles might lead to pyæmia. Its presence might be suggested by whitish sub-epithelial spots, and by the bursting of the abscess contents through the overlying tonsillar tissue to the surface that condition might be produced which E. J. Moure and other French observers have named "acute ulcerative tonsillitis."

Peritonsillar Abscess.—This paper was read by Dr. G. A. Leland, of Boston. He believed that a thorough discission of the tonsil was the best method to be followed in these cases. A long incision should be made through the tonsil from top to bottom, and then the sterilized finger was passed in, and all pus pockets were broken down. Circumtonsillar infection was an extension of the process from the lacunæ in the direction of least resistance. Cold, rheumatism, etc., did not signify as exciting causes anything but temporary lowering of vitality and of resistance power. The digital method was not dangerous. There was no dangerous hemorrhage. It was very painful, but a few whiffs of an anæsthetic might be given. Its advantages were that the abscess was drained from below; there were no relapses, and the patient was able to swallow liquids in six hours and solids in twelve. If the vertical incision was slow in healing, daily applications might be made of tincture of iodine in glycerin. This operation was merely the rejuvenating of a procedure which was followed fifty years ago.

Peritonsillar Abscess Associated with Diphtheria; Report of Case.—This was a paper by Dr. Thomas Hubbard, of Toledo. His first case was that of a farmer, aged thirty years, with acute tonsillitis. On the fifth day, a right peritonsillar abscess appeared, and on the next day the trachea showed the presence of false membrane. Antitoxin was given, but the dyspnœa from the tracheal condition became so urgent that a tracheotomy was done. The patient stopped breathing, but was brought to by artificial respiration continued for nearly an hour. Death ensued from pulmonary œdema in eighteen hours. The second case illustrated the vagaries of mixed infection, for the various members of the same family suffered from all grades of throat inflammation from ordinary tonsillitis to fatal diphtheria. In viewing such cases care should be taken accurately to locate the pus, so that the incision for its evacuation should be made through tissue devitalized by softening, and not through healthy tissue, which site might permit a further diphtheritic infection.

Dr. F. C. Cobb, of Boston, showed a series of photographs illustrating wax injections made into the pharyngo-maxillary space. The direction the injected material took was the same as that taken by pus in the course of the evolution of a clinical case.

Dr. Newcomb mentioned a case recently reported by Sendziak in which diphtheria had been followed by multiple abscesses in the various tonsillar structures and double antrum inflammation. Rupture of the peritonsillar abscess on the base of the tongue was followed by a profuse hemorrhage.

A Case of Lipoma of the Tonsil with Microscopical Section.—This paper was read by Dr. T. Amory De Blois, of Boston. The patient was a man aged forty years, who showed a mass the size of a peanut kernel, with a thin pedicle projecting from the upper part of the left tonsil, attached apparently to one of the crypts. It was removed by the hot snare under cocaine. Under the microscope, it showed a delicate connective-tissue structure with fatty contents.

Second Day—Tuesday, May 23d.

Discussion: The Relation of Pathological Conditions in the Ethmoid Region of the Nose, and Asthma.—The question of pathology was discussed in a paper by Dr. Henry L. Swain, of New Haven. He asked whether one should consider the nasal condition as the cause or merely as a complication of the asthma, or were they both the outcome of some constitutional vice; and if the latter was true, what was the exact rôle played by the nasal affection? The conception of asthma which was here assumed was that there existed an irritability of the bronchial structures which might be the result of disease and which was increased by frequent repetition. Next it was assumed that some other structure was abnormal or over-sensitive. An excitation of the latter set up asthma. To connect the two, there was a connecting link in the shape of the vasomotor system, or, as it was often called, the neurotic habit. The nose, therefore, was only one of the many organs which might stand in a causative relation to the asthma. The next questions to be considered were, what was the initial feature of the attacks, and why did they occur? The most obvious cause was the inhalation into the nares of some direct irritant. In other cases, even with polyps present, the exciting cause was not so clear, especially when the attacks came at about the same time each day. If we gave our patient certain remedies, or sent him away to another climate, some link in the chain was broken, and he did not suffer. The minute he returned to his old environment, he became as great a sufferer as before. In such a case it was evident that the mere presence of the polyps did not explain the attack. The change in environment or in mode of life necessary to break up the vicious sequence might be almost trivial. In one case of the writer's, a change from a feather pillow to a hair pillow at night was sufficient to effect a cure. Various intranasal lesions were present in this case, but their removal did not relieve the asthmatic attacks. But when the pillows were changed, one of the middle turbinates, without any treatment whatever, diminished in size. Hence we had plainly one cause of nasal disease assured, namely, that certain irritations applied to certain nerve fibres would produce congestion and chronic inflammation with swelling and watery discharge. This led to soaking of the tissues of the middle turbinate region, and œdematous hypertrophies appeared, and later these assumed the form of polypi. A peculiar hypersensitiveness of the nerves allowed of such results. This condition might be inherited or acquired. But in either case there seemed to go hand in hand with this a thinness or flabbiness of the vessel walls and a vasomotor responsiveness to irritation, which made possible the explosions which were the bane of the existence of these afflicted mortals. This peculiar condition of the vessel walls might be the inherent peculiarity of the neurotic subject. Such a theory would account for his neuralgias, headaches, asthmas, dyspepsias, etc., all of which were at the start nothing but vasomotor explosions. Frequent repetition of the latter might lead to a permanent relaxation of the vessel walls, and thus result in organic disease. In the main, the ethmoidal lesions were of an œdematous nature. Asthma was rare with atrophic disease. The lesions, therefore, were hypertrophic in character and at first confined to the mucosa. In a series of sixty cases of asthma, purulent ethmoidal disease was present only three times. Disease of the bony structures without purulent conditions occurred some six or eight times, and was here due to polyp formation. The disease in the mucosa always preceded that of the bone. Spurs and deviations of the septum tended to keep up middle turbinate disease, and increased the possibility of pressure. Hence the

immediate question to be solved was how to explain the occurrence of the œdematous hypertrophies. Some cause might produce congestion of these, with consequent increase in volume and of vasomotor sensibility. These congestions were more stormy and more often repeated than in simple hypertrophy, and stretching of the venous trunks occurred. In simple hypertrophies and in non-neurotic subjects the veins were well supplied with muscular coats and soon contracted again to their normal size. But given locally in one small area, or throughout the whole membrane, vasomotor ataxia or deficiency in the amount of muscle fibre, such as is inherent to the neurotic habit, and the result was inevitable permanent stretching and relaxation. As a result of all this, the intranasal structures became more and more œdematous. Then gradually polyp buds began to force themselves through the weakened tissue. Their formation was favored by pressure and contact areas. If at the same time the bronchial apparatus was diseased or susceptible, any irritant, such as the recumbent position, night air, etc., stimulated the sensitive nerves in the œdematous areas and induced an increased flow of blood to the part. Some swelling of the bronchial mucosa also took place, which stimulated the pneumogastric filaments and produced a disturbance in the vasomotor equilibrium. Our asthmatic patient was then in the toils. If we could remove pressure in the nose, we could remove one great excitant of this train of phenomena. But when intranasal treatment did not effect this happy result, it might be that even the slightest irritant became sufficient to cause bronchial spasm without there actually being any pressure on the contact areas. Of course, there were many asthmatics who did not have this nasal type of the malady. Even here great relief was often afforded by intranasal treatment. These people suffered after excesses of any kind, from an impaired kidney, rheumatic onset, or the recurrence of a menstrual period. But in all the explosion in the bronchi was doubtless through the agency of the vasomotor system. Many cases baffled us entirely, but oftentimes our reward came by the discovery of some etiological factor quite outside of our ordinary conception of the causation. Occasionally change of environment, and that alone, sufficed to cure the patient. The deduction, therefore, was plain, that when treating many of the pathological conditions of the nose, whether asthma existed or not, we should look outside of the latter organ, and even outside the body, for the causes which led up to them.

Clinical Aspects of the Subject.—This topic was treated by DR. E. FLETCHER INGALS, of Chicago. Asthma in association with polyps was not so common in his experience as seemed to be the case with others. Many persons suffered when riding behind horses or when near a stable. They could ride behind oxen or on a wheel without trouble. In three of his cases, the patients had referred their distress in breathing to one side of the chest only, and they had unilateral lesions in the nose corresponding to the side affected. One patient suffered when living on the ground floor of a house, but was relieved by sleeping in the sixth story. A girl who suffered in a certain house was cured by going to live in the same kind of a house six blocks away. Another patient, who suffered in one part of a certain house, was relieved by moving his sleeping quarters to another part of the same house, but which was built out of another material. Some persons suffered while in town but not when in the country. He had seen some relief from the inhalations of a solution of three per cent. cocaine with five per cent. of sodium nitrite. This probably caused a reduction of the swelling in the bronchial mucosa.

Treatment.—This was discussed by DR. F. H. BOSWORTH, of New York. He said that this whole question turned upon the matter of the respiratory function of the nose. The bronchi were only air-conductors, but a relation undoubtedly existed between their mucosa and that of the nasal passages. The true condition in asthma was not a spasm but a vasomotor paresis. But behind the polyps, the polypoid degeneration, and the œdematous hypertrophies was an ethmoiditis. The former indicated it and were its symptoms. Polypoid degeneration of the middle turbinate was pathognomonic of a similar condition in the ethmoid. The cells of the latter burrowed into the turbinate, so to speak, and became its outlying boundary; or again, they might crowd the turbinate out against the septum and not hollow it out. The trouble was, that the anterior and posterior ethmoidal cells became occluded by mild inflammation, as from cold. This was one of the adventitious results of chronic inflammation of the nasal mucosa. In the ethmoid cavities, this change took on an œdematous character, and intracellular pressure caused distention. Now came the neurotic symptoms. Probably the vasomotor centres for this division of the body were not far from the ethmoid. The indication, then, was to cure the ethmoiditis. We must relieve the intracellular pressure and break down the honeycombed mass. The operation must be radical. The removal of polyps was not enough. We must uncap the eggshell-like ethmoid and remove the points of contact principally because they encroached upon the nasal lumen. Personally he did not find the curette, forceps, or gouge satisfactory. He preferred to use small burrs, rounded and ovoid. We should burr down, then stop, and use the burr as a probe; burr down again, and so continue until we had established free drainage. He had never had bad results from this procedure. He formerly believed that if cocaine did not relieve the asthmatic seizure, an intranasal operation was useless, but he had modified this view. Purulent ethmoid disease did not give asthma, but inflammatory disease did. Many colds in the head, so-called, were doubtless acute ethmoiditis.

DR. E. L. SHURLY opened the general discussion, saying that the question was a difficult one to settle, owing to the complex physiology of the vasomotor system. We should go further back than ethmoiditis and œdematous rhinitis. Recent observations had shown the existence of fine filaments from the cranial nerves and spinal centres, and that they were conducting cables having in the same strand nerve channels for various functions. In different animals and in different individuals of the same group there was a difference in the arrangement of those branches connecting the nerve trunks. These anatomical variations might explain the differences in various individuals. Again the nose was the seat of the olfactory sense, though in man this was very rudimentary. Hyperæsthesia might result from breaks in the insulation, so to speak, in these various sensory filaments. We must divide our asthma cases into those which were due to local disease and those due to psychical causes. He did not believe that the bronchi were merely air-conduits. There was a special arrangement of the adenoid tissue in them about which we knew but little. The cilia in the bronchi had an important office in expelling secretion. In his experience, the majority of asthmatic cases were not accompanied by sensible derangement of the nose.

DR. J. N. MACKENZIE said that the primal course of asthma did not reside in any special peripheral organ, but in the individual himself. The area of nerve explosion depended on the seat of the local pathological process. Irritation might come from a peripheral organ as the nose, a distant organ as the uterus, or from some systemic dyscrasia as gout or rheumatism. Contact areas or pressure points cut no figure in this

theory. Nasal cough might come from atrophy as well as from hypertrophy. The explanation of all these facts was not to be found in alterations of the nasal or bronchial function, for all of the theories thus far advanced failed to come up to the requirements of a logical hypothesis. All polypoid degeneration was not due to ethmoid disease, as could be proved by both clinical and pathological data. In treating these cases, it is useless to temporize with the curette. The forceps and gouge had been useful in his hands. It was often advisable to remove the anterior end of the middle turbinate, and this could readily be done with the snare.

DR. MAKUEN said that asthma depended upon faulty nervimuscular action, which might arise from any one of a thousand causes.

DR. THOMAS HUBBARD called attention to the autotoxæmia theory, the importance of which he thought was underestimated. This might be of two types, gastro-enteric infection and defective elimination.

Recurrence of the Tonsils after Excision; A Case of Hysterical Larynx.—This was a paper by DR. F. E. HOPKINS, of Springfield, Mass. The particulars of these cases will be found in *The Laryngoscope* for February, 1899, page 97. Under the first heading, Dr. Hopkins gave a *resume* of the teaching upon the subject from the literature of modern laryngology.

Wednesday, May 24th—Closing Session.

The session opened with a general discussion of Dr. Hopkins' paper upon the subject of the recurrence of the tonsils after excision. DR. FARLOW said that a partial removal might leave behind diseased tissue, especially in the lower prolongation of the organ, which was its hardest part. Friction of the tongue at this point might set up irritation which would lead to recurrence. The instrument usually employed was the guillotine, but the ideal instrument was one which would get in between the faucial pillars, anterior and posterior. The borders of the pillars were not the landmarks of the amount of tissue, but the bulk of the tissue itself. He preferred in many cases the scissors and punch. In many young adults there was developed the plica triangularis or fold of tissue running down across the anterior portion of the tonsil, which was often mistaken for a part of the faucial pillar itself. It should be removed along with the tonsil.

DR. NEWCOMB said he thought that in institution patients recurrence was favored by the fact that they were obliged to return to the same general bad environment which had been such a potent factor in the development of the original disease.

DR. WOOLEN said that a tonsil could not return if it was once removed. He looked upon the tonsil as upon a wart or papilloma, removal of which might or might not be necessary. He had given up the use of the word "removal" in this connection and used "enucleation" instead. Enucleation could be done with the guillotine if properly constructed. He preferred the French instrument with the fork removed. The tonsil was at the same time lifted from its bed with the vulsellum. The nubbins of tissue left behind in imperfect removal might excite a later quinsy. He was accustomed to test the tonsil after removal by passing a blunt probe down to the bottom of its crypts. If he found a solid bottom, he felt that he had done a complete operation, but if the probe passed all the way through the mass removed, he felt that he had not gone deeply enough.

DR. D. BRADEN KYLE said he would look upon a recurrent tonsil as purely pathological. It was a benign hyperplasia. It was the large, soft, spongy tonsil which was apt to recur. Recurring masses were more tumors than tonsils, and were to be regarded as on the order of adenomata.

DR. MAKUEN dwelt upon the importance of dissecting away the faucial pillars from the tonsils, and had constructed a special set of knives for this purpose.

Fibro-Lipoma of the Base of the Tongue.—This was a report of a case by DR. E. FLETCHER INGALS, of Chicago. His patient was a farmer, aged twenty-eight years, who for three or four years previous had suffered from difficulty in speaking, swallowing, and breathing. Some time previous to his coming under observation, the cautery along with scissors and snare had been applied with some relief. For the last two months, all the symptoms had been aggravated, especially dyspnœa on lying down. On examination a smooth tumor with congested surface could be seen situated in the laryngo-pharynx, apparently attached to the right two-thirds of the tongue and the right pharyngeal wall. It seemed to be of a fibrous nature. Removal with the cold wire (No. 5) snare was attempted, but the wire broke three times. A uterine écraseur carrying a No. 8 wire, properly bent, proved to be the ideal instrument. One large mass measuring from one inch to an inch and a quarter in its various diameters was removed at the first sitting, and later other smaller masses were removed. Some were fibrous, some fatty, and others were of the mixed type. Attachment was found to be to the right side of the epiglottis, the right pharyngo-epiglottidean fold, the right side of the pharynx, and possibly the base of the tongue. The patient had been seen that very day, and it was noted that there was an adhesion between the epiglottis and the right side of the pharynx and the base of the tongue. This would prevent the epiglottis from shutting down over the larynx during deglutition, but there was no difficulty in swallowing.

DR. WOOLEN said he had seen a similar case. The wire had been slipped over the growth several times, as he had shown the case to students to demonstrate the mode of removal. When operation was finally attempted, the patient suddenly ceased to breathe. After resuscitation, the attempt was again made, and just as the wire was tightened cessation of breathing again occurred and this time resulted fatally. No anæsthetic, local or general, had been used. If such had been the case and death had ensued, it would have been attributed in all probability to the anæsthetic.

Confined Suppuration of the Frontal Sinus with Spontaneous Rupture, Including the Report of a Case.—This paper was read by DR. D. BRADEN KYLE, of Philadelphia. The patient was a woman, aged sixty years, who was seen first in January, 1898. Her complaint had begun a short time before with an initial fulness at the inner angle of the left orbit and a profuse nasal discharge. The face was swollen on the same side, and there was a slight tenderness. She had an influenza about this time, but this complication did not seem to increase any of the original symptoms. Two months later, there was an increase in the size of the orbital swelling, and finally pus appeared through an opening on the forehead a little to the left of the median line. Dr. Kyle had been unable to find any case identical with his own in all particulars. Several closely resembled it, and brief notes from their clinical histories were given.

The Importance of Septa and Pockets in the Antrum of Highmore with Reference to Operation.—This was a paper by DR. JOHN O. ROE, of Rochester. He said that too little consideration had been paid to the anatomical details of this cavity. Four features should always be taken into consideration with reference to operation: the position of the sinus; its size, shape, and conformation; the thickness of its walls, and the relation to it of the roots of the teeth. He exhibited a series of skulls which had been prepared to illustrate these points. He also exhibited an an-

trum-searcher, which consisted of a flexible wire spring with probe point. It ran in a cannula and could be extruded from the latter after it had been passed into the antrum. In this way it was possible to get a very accurate idea of the interior of the cavity even through a very small opening.

DR. MACKENZIE did not think that septa often interfered with operations upon the sinus. He would operate only in extreme grades of inflammation. He would also call attention to the fact that the ostium maxillare might be above and posterior to its normal site. In such case, the pus might appear up in the naso-pharynx. Politzerization of the sinus through the ostium would often relieve the pain and enable us to determine its exact site. As to drainage tubes, he thought that they were often pus-producers.

DR. ROE, in closing the discussion, said that he preferred a fine saw for enlarging the opening in the antrum after it had been penetrated. Gouges often splintered the bone.

"Taking Cold."—This paper was read by DR. G. V. WOOLEN, of Indianapolis. He reviewed the extant theories upon the subject. External influences were reflected upon internal surfaces, thereby causing nutritional disturbances. The latter acted by producing deficient calorification. Persons who habitually took cold, frequently had a subnormal temperature, as low at times as 95° F. They appeared as a rule properly nourished, but this subnormal temperature might explain much of their indefinite malaise. In this condition of deficient body heat there was defective hæmatosis, which probably acted through the vasomotor system. The condition was frequently set up by improper care as to bathing, etc., during the first week of life. It might be the reflection of hereditary syphilis in the third or fourth generation. If a child passed into adolescence without acquiring the habit of taking cold, he regarded it as safe for life. Nasal stenosis might also lead to defective hæmatosis and low body temperature.

DR. GOODALE called attention to the influence of micro-organisms in producing what we call a "cold." They acted through the adenoid or lymphoid tissue. The symptoms of a cold were those of a bacterial infection. In moderate cases the staphylococcus, and in severe cases the streptococcus, predominated.

DR. BOSWORTH said that the onset of a coryza was frequently too quick to allow of micro-organisms having anything to do with the case as causative factors. Acute rhinitis was a manifestation of a general systemic disturbance. The regulation of the function of the skin was of the utmost importance. Prophylaxis could be summed up in two words—proper clothing and the cold bath.

A Report of the Operative Treatment of Several Cases of Frontal and Maxillary Sinusitis.—DR. FRANK WHITEHILL HINKEL, of Buffalo, contributed a paper which gave the histories of one case of frontal and three cases of antral disease. The first was that of a man, aged thirty-eight years, who had influenza in February, 1898, with severe pain over the left eye, followed by offensive purulent discharge from the left naris. He came under observation seven months later with persistence of the discharge. Pain and tenderness over the eyeball were at times present. Examination showed disease of both the frontal and maxillary sinuses. The alveolus was opened, and irrigation begun, which nearly stopped the nasal discharge, but not quite. Some weeks afterward the patient reported an increase of symptoms referable to the left frontal region, and opening of the sinus was recommended. The operation was done in January of the present year, and the sinus was found to be filled with greenish pus. It was thoroughly irrigated, and its walls were curetted. The fronto-nasal canal was enlarged, and a strip of iodoform gauze was introduced into the nasal chamber through the enlarged infundibulum, as suggested by Bryan. The external wound was closed by silk sutures. After suturing, the wound was dressed with cotton pad and bandage. Dr. Hinkel said he preferred this to any form of collodion dressing, as the difficulty of securing good union after evacuation was increased by any dressing that confined the exudate about the wound and prevented evaporation. The drain was taken out on the third day, and the stitches were removed on the sixth. Recovery was uneventful, and the patient was permanently cured. The points of interest in the case were the masking of the primary frontal empyema by the signs and symptoms of the secondary antral abscess, the persistence of the antral discharge in spite of the drainage and cleansing, and its immediate cessation as soon as drainage of the frontal sinus was secured.

Dr. Hinkel also reported three cases of antral disease. He followed the Caldwell-Luc method exploited in the paper by Dr. Roaldes. He found the hemorrhage following the gingivo-labial incision to be lessened by the injection of a one-per-cent. solution of cocaine beneath the mucosa just as the anæsthetic was about to be administered. In one case in which he had been treating the antrum through a cannula beneath the inferior turbinate, he was able to reduce the hemorrhage that was so profuse when the antrum was opened, by injecting into it just before the operation about a drachm of the solution of suprarenal extract. The limitations of this operation for antral disease, and the proper choice of cases for its performance, would be facilitated by the reports of its results, whether successful or otherwise. Dr. Hinkel had found the introduction of the drainage tube to be the most difficult step in the operation. To facilitate this he had had made a modification on a small scale of Bellocq's cannula. Introduced into the nose with the probe point thrust upward and forward into the antrum, it readily brought into reach the ligature, to which the drainage tube or strip of gauze could be attached and then drawn through the opening in the nasal wall and out at the nostril. The suturing of the gingivo-labial incision did not seem, according to Dr. Hinkel's experience, necessary. It was difficult to keep the stitches already inserted from being somewhat torn out during the later stitching, on account of the manner in which the parts must be drawn upon to secure access to the lips of the wound. The parts coapted readily without stitches, and there was little motion at this point. The wound did not need to be disturbed if the patient was fed upon soft food, care being taken to use the opposite side of the mouth in eating and to avoid violent blowing of the nose. Under these precautions, healing took place readily, as shown by the cases narrated.

During the Congress the following additional papers were read by title: "Dermoid Cyst of the Nose," by Dr. H. S. Birkett, of Montreal; "Atrophic Rhinitis, with Report of Cases," by Dr. James E. Logan, of Kansas City; "Tuberculosis of the Pharynx with Report of a Case in a Child," by Dr. T. Melville Hardie, of Chicago; "Syphilis of the Antrum of Highmore," by Dr. H. L. Wagner, of San Francisco; "Report of Two Cases of Accessory Thyroid Gland at the Base of Tongue," by Dr. A. W. Watson, of Philadelphia; "Remarks on Intra-Nasal Operations," by Dr. W. F. Chappell, of New York; "Pemphigus of the Larynx," by Dr. J. H. Bryan, of Washington; "The Early Diagnosis of Aneurism of the Aortic Arch," by Dr. William Porter, of St. Louis; "Report of a Case of Abscess of the Frontal, Ethmoidal, and Sphenoidal Sinuses; Meningitis; Death," by Dr. J. H. Bryan, of Washington.

This closed the scientific proceedings of the Congress. The next meeting of the association will be

held at Washington in connection with the Triennial Congress of the Association of American Physicians.

During the executive sessions of the Congress, the following gentlemen were elected to active fellowship: Dr. F. C. Cobb, of Boston; Thesis, "Peritonsillar Abscess." Dr. J. F. McKernon, of New York; Thesis, "A Contribution to the Technique of Modern Uranoplasty." Dr. Max Thorner, of Cincinnati; Thesis, "Direct Examination of the Larynx in Children."

The election of officers for the ensuing year resulted as follows: *President*, Dr. Samuel Johnston, of Baltimore; *First Vice-President*, Dr. T. Amory De Blois, of Boston; *Second Vice-President*, Dr. Moreau Brown, of Chicago; *Secretary and Treasurer*, Dr. Henry L. Swain, of New Haven; *Librarian*, Dr. J. H. Bryan, of Washington; *Member of Council*, Dr. William E. Casselberry, of Chicago.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 18, 1899.

WILLIAM H. THOMSON, M.D., PRESIDENT.

Recent Methods of Local Anæsthesia for Minor and for Major Surgical Operations.—DR. ALEXANDER B. JOHNSON read a paper with this title (see page 810).

DR. H. LILIENTHAL said that he would probably have agreed with the reader of the paper two years ago, but he could not do so at present. It was very common for the patients to cry out, not from actual physical suffering, but from apprehension. He had learned this by careful inquiry in many cases in which the patient had complained a great deal during the operation, but had admitted afterward that there had been little or no suffering. It would be noted in many such cases that while a patient cried out, he did not flinch or struggle.

Eucaine.—It was well known that without any warning whatever very small quantities of cocaine might produce extremely disagreeable symptoms, such as dangerous collapse. In such a case the pulse became small, feeble, and irregular, and the pupils were dilated. Eucaine, on the other hand, acted in an opposite way, stimulating the heart. He had often employed eucaine in doses of from four to ten grains without unpleasant consequences. It was true that the injection of eucaine was associated with a disagreeable burning pain for a short time, but after that the operation was painless. The burning pain experienced after the operation could be obviated entirely by plugging the wound with a bit of orthoform gauze.

A Caution.—He would not recommend any one to use eucaine in connection with a rubber constrictor, as the drug, under such circumstances, was exceedingly prone to produce sloughing of the skin.

Cataphoresis.—There was another useful method of applying cocaine, *i.e.*, by cataphoresis. He had had this method employed for himself by a dentist, for the purpose of excavating teeth and removing the live pulp. This was ordinarily an exceedingly painful procedure, yet by cataphoresis both the excavation and the removal of the pulp had been absolutely painless. He had himself anæsthetized the uninflamed skin by this method successfully.

The Field for Local Anæsthesia.—He had done three cholecystotomies under local anæsthesia, and in none of them had there been more pain than that caused by the manipulation of a tense gall bladder. The incision had not been painful, and there had been no pain experienced until the gall bladder had been drawn upon. The sewing of the gall bladder into the wound had not been painful. He had operated for strangulated hernia under local anæsthesia. In most of these cases there had been very little suffering, although he had operated for the radical cure of the hernia.

His Method.—He began by giving the patient an injection of sufficient morphine to produce mental quiet—usually one-fourth to one-third of a grain. After this, eucaine was injected into the skin, and the operation was begun. If the dissection happened to come in close proximity to the nerve, he injected a few drops of the solution, if possible, into the nerve. By this method he had succeeded in doing a number of operations that he had formerly supposed to be impracticable under such circumstances. When the patient had become unruly during an operation, and it had seemed necessary to resort to general anæsthesia, he had not hesitated to use chloroform after eucaine, and had seen no unpleasant results from this practice.

Cocaine in Ophthalmic Surgery.—DR. W. H. BALES said that he had not found that cocaine produced a satisfactory anæsthesia in the eye, particularly for operations on the ocular muscles. When the cocaine produced complete anæsthesia, the eye was whitened; when it failed to anæsthetize the eye, the latter became reddened. When the cocaine alone did not produce the desired anæsthesia, the addition of suprarenal extract would blanch the eye and aid markedly in inducing anæsthesia. If the patient was worried or very apprehensive, it would be exceedingly difficult to whiten the eye and anæsthetize it. The opening of a lacrymal abscess was usually a very painful operation, but by combining cocaine and suprarenal extract the operation could usually be done painlessly.

DR. JOHNSON, in closing the discussion, said that he was constantly using either cocaine or eucaine for the producing of local anæsthesia, and while such anæsthesia was extremely useful, his experience had taught him that the proper field for it was rather limited. He did not take a pessimistic view of local anæsthesia, but he would insist that the profession and the laity should have a right understanding of the limitations of this method.

Further Experimental Researches on the Effects of Different Anæsthetics upon the Kidneys.—DR. ROBERT COLEMAN KEMP read this paper. He said that about one year ago Dr. William H. Thomson and he had found that ether had a distinct and peculiar action upon the circulation of the kidneys. Any anæsthetic whatever might be a factor in causing disturbance of the renal function, and hence renal complications might follow general anæsthesia by any method. But, although this was true, the occurrence of such complications depended very largely upon the patient, the rapidity of operating, and the skill of the anæsthetist. Personally he had noted a very marked difference in the action of the various anæsthetics upon the kidneys. Tracings were exhibited, to show by the graphic method what had been determined experimentally with the aid of the instruments of precision in the physiological laboratory of Columbia University. It had been estimated that when the kidney was in full functional activity, an amount of blood equal to the weight of the organ itself flowed through it each minute.

Specific Effect of Ether on the Kidney.—The effect of ether on the general blood pressure was to increase it from the beginning. Under moderate anæsthesia there was at first a slight increase in the renal secretion, but as the ether was pushed there was a great diminution of the secretion, and even a suppression. Even with the newer anæsthetic mixtures the specific effect of ether on the kidney was evident. Albumin appeared early, even with moderate anæsthesia, and increased until just before complete suppression of the urine it amounted to sixty per cent.

Chloroform.—The experiments with chloroform were performed on six dogs. There had been an evanescent rise in the blood pressure at the beginning, followed by a fall of pressure. As the chloroform had been pushed, the fall of blood pressure had become more marked. In contrast with ether, the kidney tracings closely corresponded with the simultaneous carotid tracings. The renal secretion remained fairly copious, and diminished only as the general circulation became much depressed. Albumin appeared only after prolonged narcosis, and then in but small quantity, although the general circulation had become dangerously low.

A. C. E. Mixture.—Experiments with the A. C. E. mixture (one part alcohol, two parts chloroform, and three parts ether) had been made on four dogs. When administered by the open method, the carotid tracings had been like those of chloroform; when administered by the semi-closed or closed method, the chloroform effect had been very noticeable. By the open method the kidney tracings had been the same as those of chloroform; by the other methods the tracings had been like those characteristic of ether. The renal secretion had been more copious than with pure ether, but less than with chloroform. There had never been actual suppression. Albumin had appeared quite early. The effects, in short, had been those of the inhalation of chloroform alone when the air had been freely admitted, but when the mixture had been given by the semi-closed method, the specific effect of ether had been obtained, with an increased chloroform effect on the circulation.

Schleich's Mixtures.—The various solutions of Schleich had been tried on four dogs. The carotid tracings had corresponded with those of the A. C. E. mixture, except that there had been a more aggravated chloroform heart. The urinary secretion had diminished, but there had not been complete suppression.

Nitrous Oxide.—This anæsthetic had been administered to three dogs by Mr. Hasbrouck, an expert in giving this gas. The general blood pressure had been rapidly and markedly raised, but there had been no depression of the heart until the respiration had become much affected by pushing the narcosis. When the anæsthetic had been suspended the blood pressure had very rapidly fallen to the normal. The effect on the circulation of the kidney had been very transient, and had been apparently due to contraction of the renal vessels only, and not to any specific effect on the kidney circulation. Under complete narcosis there had been a moderate quantity of albumin, but it had soon disappeared. The urinary secretion had been markedly diminished, but this action had been only very temporary, the renal secretion returning immediately upon the withdrawal of the anæsthetic.

Anæsthol.—This mixture had been recently devised by Dr. Willy Meyer, of New York. It was composed of ether, chloroform, and chloride of ethyl. With this anæsthetic agent the following symptoms had been noticed. While being administered by the semi-closed or closed method, in order to anæsthetize the animal for the preliminary tracheotomy, the breathing had been markedly stertorous, in spite of all precautions, and difficulty of respiration had been noted constantly. When this anæsthetic had been pushed there had resulted tremors and convulsive twitchings of the lower extremities. He believed the constituent causing these symptoms was the ethyl chloride. An aggravated depressing effect of chloroform had been plainly demonstrated in the carotid tracings. During the administration of this anæsthetic there had been absolute suppression of urine from the beginning of the anæsthesia. A few drops of urine had been obtained at the close of the experiment from the cannula in the ureter, and this specimen had been found to consist largely of blood. The animal had recovered rapidly from the anæsthetic. This aggravated effect on the renal secretion, he thought, was due to the ethyl chloride.

Ethyl Chloride.—The effect of ethyl chloride had been found to be chiefly respiratory. A cat had been first anæsthetized with chloroform, and on changing to the ethyl chloride there had been tremors and convulsive movements, and indications of serious interference with respiration.

Deductions.—Dr. Kemp concluded that ether produced a special contraction of the renal arterioles, with a consequent damaging effect on the renal secretory cells. The kidney diminished in volume, and with this there were marked albuminuria and suppression of the urinary secretion. It was not due to diminished tension. Ether was, therefore, contraindicated in renal disease, and particularly when with the albuminuria there was a tendency to pulmonary œdema. The effect of chloroform on the kidney seemed to be *nil;* the urinary secretion continued up to the last, and the albuminuria was exceedingly slight and transient. The A. C. E. mixture showed the special effect of ether on the kidneys, and of chloroform on the heart. He saw no advantage in using this mixture, but rather the reverse. The same was true of the Schleich mixture. In the latter case the chloroform was absorbed as chloroform and the ether as ether, while the petroleum ether had been shown by Dr. S. J. Meltzer not to be a true anæsthetic at all. When this mixture was administered with a closed cone, a dangerous proportion of chloroform was absorbed; if given by the open method, the proportion of ether was greatly diminished. Anæsthol he believed to be a dangerous anæsthetic because of the aggravated chloroform heart produced by it, the respiratory symptoms, and the ether effect on the kidney.

Effect of Etherization on the Urine.—Of one hundred cases at the Roosevelt Hospital recently in which urinary examinations had been made twenty-four hours before and twelve or thirty-six hours after etherization and operation, in 59.8 per cent. there had been no albumin in the urine before etherization and a trace afterward; in 18.5 per cent. there had been no albumin before and none after etherization; in 11.47 per cent. there had been some albumin before and no increase after etherization; in 6 per cent. there had been some albumin previously and some increase after etherization; in 2.1 per cent. there had been albumin before and none afterward. In these two cases in which there had been an actual decrease in the albumin, it was to be explained by the fact that pus kidneys had been removed. Dr. Kemp said he thought if the deaths from ether subsequent to operation were fairly considered, it would be found that chloroform was really a safer anæsthetic than ether. It had been found that indican was produced, or increased, by ether; less so by chloroform and nitrous oxide.

Relations between the Administration of Anæsthetics and Disease of the Kidneys.—Dr. Thomas L. Bennett read a paper on this subject. He said that the popular opinion, that the disturbance observed in the kidneys after operation was due to the anæsthetic, must be modified by the consideration of the fact that the same disturbances were noted after operations in which the effect of the anæsthetic could be eliminated.

Other Causes for the Ill Effects on the Kidneys.—Exposure, the operation itself, and sepsis were common and important factors in producing some of these disturbances. It was very common to neglect to provide proper clothing and protection for the anæsthetized patient, both during and after operation. There were many recorded instances of suppression of urine and of the occurrence of albuminuria and uræmia fol-

lowing operations done without narcosis. The effect of the anæsthetic agent upon the kidneys was probably not dissimilar from its action on other organs, as, for instance, the brain. In the lighter degrees of narcosis he was convinced that the effect of anæsthetics on the kidneys was slight, particularly as the elimination of the anæsthetic was chiefly effected by the lungs. Patients with slight disease of the kidneys generally took chloroform or ether with but little aggravation of the renal condition.

Choice of Anæsthetics.—The anæsthetic selected for a patient with disease of the kidneys should be that which showed the least stress upon these organs, and in this respect they might be mentioned in the following order, viz.: (1) Local anæsthetics; (2) nitrous oxide with oxygen; (3) nitrous oxide with air; (4) chloroform; and (5) ether. The difference in action on the kidneys of chloroform and ether was probably due to the different action of these two agents on the circulation. It was exceedingly important that the smallest quantity of the anæsthetic that would produce narcosis should be used. When the kidneys were damaged the surgeon should be satisfied with a less degree of narcosis than usual; the eye reflex should not be abolished, the pupils but little affected, and slight reflex movements might be allowed. For such patients nitrous oxide was very appropriate.

Nitrous Oxide and Oxygen.—Hewitt's method of combining oxygen and nitrous oxide enabled one to prolong the anæsthesia indefinitely without producing asphyxia. At first the patient was allowed to breathe air, then two per cent. oxygen with the nitrous oxide; after a few more respirations six or eight per cent. of oxygen should be given with the nitrous oxide. At the end of about one minute the signs of anæsthesia were present—the eyes became fixed and the corneæ insensitive, and there was moderate snoring. The patient was then ready for operation. By proper manipulation of the apparatus cyanosis could be avoided and the anæsthesia maintained as long as desired. The contrast was marked when this form of anæsthesia was compared with that of ordinary nitrous oxide. Unfortunately, however, all patients did not take the mixture nicely, and in a certain percentage the anæsthesia was not well maintained. The apparatus was somewhat bulky, and the administration of the mixture required great skill and watchfulness. Again, the prone or semi-prone position made it too difficult to produce anæsthesia by this particular method. After prolonged anæsthesia by this method the patient often vomited once or twice. Headache occurred in about half of the cases in which the anæsthesia was prolonged. Recovery of consciousness usually occurred in one or two minutes, so that in very painful operations the suffering was often intense. The method was, however, exceedingly useful when the kidneys were damaged and when other anæsthetics were contraindicated.

The Blood Pressure.—Dr. S. J. Meltzer said that the pressure in the large arteries depended upon the quantity of blood thrown into them and out of the arteries into the smaller ones and into the organs. If a substance like ether, which caused an increased tension of the small arteries, was introduced into the system, the quantity of blood in the large arteries would be increased, and consequently the blood pressure would be raised. If the small arteries became so much contracted that very little blood could be thrown into the capillaries and veins, then less blood would be thrown into the large arteries, and, as a result, there would again be a fall of the blood pressure in the large arteries. In the organs and veins, however, there would be a constant fall in pressure in proportion to the stimulation of the vasomotor centres. This being the case, one would expect to find the same changes in other organs that were found in the kidneys. The spleen or the testicle could be studied experimentally just as the kidney had been, and such an investigation would prove or disprove the theory as to the effect of ether on the kidneys being really, as had been stated this evening, a "specific" one.

Caffeine and the Salicylates in Urinary Suppression.—Caffeine had the opposite effect of that attributed to ether on the kidneys. The action of this remedy had been studied experimentally, and it had been found that at first there was a fall, and then a constant rise, in the blood pressure, associated with increased secretion of urine. It would be interesting to know if the introduction of caffeine into the circulation during ether narcosis would not re-establish the normal balance of the circulation. In connection with some experiments that he had made regarding the absorption of colored fluid from the peritoneal cavity, he had discovered that the volume of the urinary secretion could be decidedly augmented by the administration of sodium salicylate. In one case of suppression of urine after etherization this effect had been very marked. The combination of sodium salicylate and caffeine would seem to be especially indicated under such circumstances.

The Urine in Etherized Patients.—Dr. Robert Abbé said that the experiments detailed had given some useful information, but they had not changed his opinion regarding the clinical action of ether. In fifteen hundred or more etherizations at the hospital, it had been found that within the first few hours after etherization hyaline casts and albumin were present in about fifty per cent. of the cases. He had recently, in fifteen cases, found that there had been a diminution in the urinary secretion during the administration of ether and an increase in the specific gravity. The urea had been increased in four, and decreased in seven. After anæsthesia the urine had been increased in eight and decreased in three, suggesting an arrest of elimination of urea during, and an early restoration after, anæsthesia. In two of the fifteen cases only had there been a trace of albumin before anæsthetization. Of the other thirteen, seven had developed a trace of albumin in the urine secreted during anæsthesia, and five had continued to have a trace of albumin for the next few hours; but in all the trace of albumin had disappeared within thirty-six hours. Coincident with this had been the appearance of renal casts. Of the fifteen cases, a few casts had been found in ten, and seven had continued to have the casts for a few hours afterward. In all of the cases the casts had disappeared within a day or two. He did not think that there was any evidence that repeated etherization gave rise to an interstitial nephritis; the derangements referred to had all been very evanescent. The case of suppression of urine alluded to by Dr. Meltzer as having been promptly relieved by the use of sodium salicylate had occurred in his practice. The patient had had seven per cent. of albumin before the operation, and twelve per cent. after it. Only two ounces and a half of urine had been secreted the first day, and six ounces the second day, and the man had been nauseated and very ill. Immediately upon the administration of the sodium salicylate the urine had increased greatly in volume, and the patient had been markedly relieved. He was constrained to say, however, that in only one of several other cases in which he had used this same remedy had he observed any marked benefit that could be fairly attributed to the drug itself.

Confidence in Ether Unshaken.—He hoped that the interesting physiological study presented this evening would not have the effect of diminishing the confidence of the profession in the safety of ether as an anæsthetic. In this connection he would most heartily indorse the remarks of Dr. Bennett.

Dr. J. E. Kelly said that after listening to the discussion it seemed to him that it was only necessary to combine the ingredients of the A. C. E. mixture and anæsthol to obtain a perfect death-dealing anæsthetic mixture. He had been educated to the use of chloroform, yet he could recall two fatal cases, in both of which the chloroform had been administered by a skilled anæsthetist. He could also recall five or six cases of death from the administration of ether, but in only two of these could he attribute the fatal termination directly to the manner of its administration.

Dr. Kemp closed the discussion. He said that he did not claim that an interstitial nephritis resulted from anæsthetization, but certainly the kidney was often acutely congested. The fact that albuminuria was only temporary did not negative the proposition that that anæsthetic agent should be selected which caused the least renal congestion.

Committee on Public Baths.—Dr. S. Baruch, on behalf of this committee, which had been appointed in 1897, presented a report. He said that ex-Mayor Strong had taken an interest in the proposed erection of a public bath, and the plans had been drawn for a new bath-house in Rivington Street, to cost $95,900, and to have sixty-five rooms, or accommodations for two thousand persons. Mayor Van Wyck had just assured him that steps would be taken to secure the erection of two more public baths.

SECTION ON MEDICINE.

Stated Meeting, May 16, 1899.

Louis Faugères Bishop, M.D., Chairman.

Simulated Dislocation of Thoracic Viscera.—Dr. Louis Faugères Bishop exhibited a colored man who claimed to be able voluntarily to displace his thoracic viscera downward. By vigorous muscular contractions he succeeded in producing an apparent protrusion of these viscera downward, and a conveyance of the heart sounds in the same direction, but careful physical examination proved that there was no true dislocation of the heart or other thoracic viscera.

Atypical Forms of Pneumonia: A Clinical Study.—Dr. Emil Palier read a paper with this title, based on one hundred cases coming under his observation, most of them in tenement-house practice. He said that metapneumonias were commonly complicated with purulent pleurisy. By reason of the accelerated respiration in pneumonia there was an excessive demand on the energy of the nerve centres. The pain in the abdomen could be explained on the same theory as the occurrence of pain in the knee in cases of hip-joint disease. The increased feebleness and irregularity of the heart action in pneumonia could also be explained in a similar way, and it seemed to him more rational than to attribute it to the toxæmia. It was generally admitted that heart failure was not common in children, and on the toxæmic theory it would be difficult to explain this discrepancy, but not so on the theory just advanced, because the nervous distribution was different in children and in adults. The physician's main reliance should be upon strychnine because of its property of inducing an increased discharge of nerve energy. As an example of "cerebral pneumonia" a case was cited in which a boy of two years had presented symptoms closely simulating those of tuberculous meningitis. By "wandering pneumonia" he meant successive involvement of different lobes. Abortive pneumonias terminated in recovery in a few days, and the physical signs did not manifest themselves. By "chronic pneumonia" he meant both croupous and catarrhal pneumonia running a subacute course from the beginning. The symptoms closely resembled those of pulmonary tuberculosis. Most of his cases of pneumonia had been in children, and he was of the opinion that if not more than two lobes were involved at the same time, recovery would be complete. In the treatment of pneumonia he did not make use of the coal-tar products except when the temperature reached 104° F. or over, and then only in small doses. When there was much prostration in children, small doses of tincture of nux vomica were given; in the case of adults, strophanthus was also administered. No local applications of any kind to the chest had been used. In cases of pneumonia of ordinary severity he did not think any special therapy was indicated or needed.

Dr. Morris Manges said that although the nervous origin of pneumonia and other pulmonary disorders was upheld by a number of authorities, the general consensus of opinion was in favor of the toxic theory. The condition of the lung mechanically in pneumonia, it should be remembered, was exactly the same after the crisis as before, and yet there was a great difference in the patient. Certain wandering pneumonias presented a complicated problem to the clinician. Since the advent of the grippe there had been abundant opportunity for studying this type. It was usually associated with small peribronchial deposits rather than with a massive croupous pneumonia. The rapid and successive involvement of small portions of lobes would hardly be considered by most physicians, he thought, as true wandering pneumonia. He felt sure that in a large number of the author's cases of chronic pneumonia there had been serous or purulent effusion into the pleura, and the reason this had not been detected was because of the author's reluctance to use the aspirating syringe in these pneumonias of children. If the cases were seen early enough, one could prophesy with a fair degree of success whether or not the case would be complicated with pleurisy. Dr. Babcock, of Chicago, had shown, by a collective investigation comprising twenty-two thousand cases, that the mortality from pneumonia in adults was between eighteen and twenty per cent.

Dr. S. Baruch said that in pneumonia the toxic action was upon the peripheral vessels, just as it was in Bright's disease and in typhoid fever. The toxic theory seemed to him to be well supported by clinical observation, for it was well known that whenever in pneumonia the peripheral circulation could be restored to a more nearly normal condition the patient would be relieved. This was best accomplished by stimulating the vaso-dilators by means of the application of cool water. It was far better than causing the relaxation of the vaso-constrictors by warm applications. When, therefore, cold compresses of linen, wrung out of water at a temperature of 60° F., were applied to the chest or to the abdomen, this stimulation of the vaso-constrictors was very apparent, as was also the relief afforded to the heart by thus diminishing the peripheral resistance. Another very important element in the treatment, especially in young children, was dependent upon the deepening of the inspiration, thereby improving the oxygenation of the blood. This could be secured by these same cool applications. As there was in the pneumonia of children more cerebral oppression than in adults, he occasionally resorted to a warm bath, beginning with a temperature of 90° to 95° F., and reducing it to 85° or 90° F. The use of digitalis in toxæmic disease was comparable to whipping a jaded horse; on the other hand, strychnine stimulated the cerebro-spinal centres, and in this way improved the action of the heart.

Dr. Alfred Meyer, referring to masked pneumonia, made the statement that pneumonia not infrequently masked typhoid fever, and that therefore it was well to resort more frequently to the Widal test in cases of pneumonia.

Dr. Am Ende said that he met with the so-called abortive pneumonias not infrequently, and he attributed this to the early administration of tincture of strophanthus in doses of half a drop at intervals of about three hours. This treatment had been employed in about thirty cases.

Demonstration of the Schott Treatment of Chronic Cardiac Disease.—Mr. Taussig, for Dr. S. Baruch, gave a demonstration of the Schott movements, especially the resistance movements. These included principally long, slow, and steady sweeping movements of the arms, trunk, and lower extremities, made by the patient and resisted by the operator.

Dr. S. Baruch said that the object of both the movements and of the saline effervescent baths was the same, *i.e.*, to drive the venous blood from the muscles, and, by increasing the arterial flow, to relieve the heart of some of its labor. In order to accomplish this it was important that the movements should be made very deliberately. There should be a rest of one minute between each movement. He differed from Schott regarding the theory of the bath. Schott claimed that there was reflex stimulating effect produced by the carbonic-acid gas, resulting in a slowing of the heart. Dr. Baruch said that when a person was immersed in a bath of a temperature eight to fifteen degrees below the normal temperature of the body, the blood would be driven from the surface into the muscles beneath, with the result that the tension of the pulse would be augmented by increased resistance in the muscles. But with this there was an abnormal activity of the arterioles, and this relieved the heart. The carbonic-acid gas and the saline in the bath added an extra stimulation, as shown by the redness and tingling, and this counteracted the chilliness which would otherwise be produced in a person with heart disease if put in an ordinary bath of this kind. This seemed to him the secret of the success attendant upon the use of these special baths. As the baths also excited the excretory organs, the elimination of toxins was also favored. The environment at Nauheim was a most important adjuvant of the treatment, being in perfect accord with its restful character.

Dr. Manges emphasized the necessity for rest between the movements. The full number of movements, he said, should not be given in every case, and the amount of counter-pressure must be very carefully regulated and adapted to the individual case. It should not be forgotten that the Nauheim treatment and the treatment at Nauheim were entirely different. The tendency in this locality was to neglect many of the important details, not only in the treatment itself, but in the coincident regulation of the habits of life.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, May 15, 1899.

Frederick Holme Wiggin, M.D., President.

A Case of Resection of the Intestine and Sigmoid Flexure for Carcinoma.—Dr. Frederick Holme Wiggin reported this case. The patient, a woman, thirty-eight years of age, had been well, with the exception of constipation, up to two years ago. She had then begun to experience pain at stool, and sometimes to have profuse hemorrhage. The fecal discharges were thin and ribbon-like, and were passed only after considerable straining. When she first entered the hospital the house physician had supposed her to be suffering from hemorrhoids, but on attempting to stretch the sphincter he had discovered a stricture. The speaker said that on physical examination he had found an organic stricture, and had operated by an incision through the perineum down to the anal border, around the anus and down the coccyx. By the use of silk retractors above and below sufficient room for manipulation had been obtained, and there had been no necessity for excision of the coccyx. The sigmoid flexure, meso-rectum, and meso-sigmoid had been found involved in the disease. He had brought up the lower end of the descending colon through the left rectus muscle, and had made an artificial anus, after which both the abdominal and perineal wounds had been closed. Some suppuration had occurred in both wounds, but healing by granulation had taken place quite promptly. Examination by the vagina a few days ago had shown no recurrence. The case proved that even such an extensive operation could be done with safety.

Dr. E. D. Ferguson asked whether an attempt had been made to carry the lower end of the descending colon well toward the anal region, whether the attachment of it had been made to the skin, and also if there had been any particular tendency to prolapse.

Dr. Wiggin replied affirmatively to the first two queries, and in the negative to the last.

Dr. Ferguson said that by splitting the recto-vaginal septum and by dissecting off and throwing the posterior vaginal wall forward, it was possible in women to get free access to the higher portions of the pelvis. Of course, such facility of operation could not be secured in men. He had been especially impressed with the expedient mentioned in this report—opening the abdomen and taking away all that portion of the bowel intervening between the section of the bowel at the sigmoid and the anus. Last year Dr. W. W. Keen, of Philadelphia, had suggested the shutting off of the upper portion of the bowel and leaving it there permanently, but this had seemed to him a surgical error. The line of dissection was not one of great difficulty, and it seemed better to take it all away.

Child Suffering from Gastric Ulcer.—Dr. Louis Fischer presented a girl, thirteen years of age, who had applied for relief of a pain that had been almost constantly at a certain spot in the abdomen for the last four years. Three years ago she had had an attack of hæmatemesis, but none since then. The appetite had not been good, and she had suffered from constipation, dizziness, nausea, and vomiting. Examination had shown her to be very anæmic but not hysterical. The pain was situated in the epigastrium. The heart action was irregular. A diagnosis had been made of gastric ulcer, and the stools had been watched, but no blood was discovered. The child still complained of pain after eating, and of vomiting She had been treated by liquid diet, rest, and bismuth. Any form of the latter seemed promptly to give relief.

Dr. H. B. Sheffield asked if Dr. Fischer had made a chemical examination of the stomach contents.

Dr. Fischer replied that this had been done on one occasion, without noteworthy result, and it had not been repeated because of the fear that it might excite a hemorrhage.

Dr. Sheffield said that it seemed to him essential, in order to establish a diagnosis of gastric ulcer, that an extensive examination should be made of the contents of the stomach. While it was probable that this case was one of gastric ulcer, it was also not impossible that it might be neurotic in nature.

A Case of Impaction of a Foreign Body in the Larynx; High Tracheotomy; Recovery.—Dr. Francis J. Quinlan reported the case of a boy who, on April 26th, had been admitted to St. Vincent's Hospital, suffering from severe dyspnœa. He had succeeded in locating the foreign body, which had lodged on the true cords. After cocainization of the throat, he had attempted its removal by the intralaryngeal method,

but this had proved futile because of the impaction and the danger of lacerating the tissues. Accordingly a high tracheotomy had been done, and the body exposed. Even then, owing to a flange on the foreign body, it had been difficult to dislodge it. When finally extracted, it had proved to be a screw having a double flange. Contrary to the advice of some of the surgeons present he had closed the wound, fearing that if left open there would be great danger of pneumonia.

The boy had made an uneventful recovery, and a very slight scar was all that now marked the site of the operation.

Foreign Bodies in the Larynx.—Dr. William T. Jenkins presented specimens and reported a series of such cases. The first specimen had been taken from a boy who, while playing in Bryant Park, had suddenly become cyanotic, and had died before a physician could be called. One coroner had made a diagnosis of heart disease, but Dr. Jenkins had doubted the correctness of this view, inclining to the opinion that death had been due to asphyxiation. At the autopsy he had found an ordinary horn collar-button which had formed a valve between the vocal cords, entirely preventing inspiration. He said that a number of cases of sudden death had been reported in which death had been due to asphyxia produced by the lodgment of a bolus of food in the larynx. Several such specimens were exhibited. He had, in a number of instances, made the diagnosis by simply removing the larynx without making a complete autopsy. Another case was referred to in which a child had gotten out of bed, picked up a screw, and swallowed it. Death had occurred after a few gasping efforts. In still another case, a man had been struck on the jaw by an elevator gate and two or three teeth had been knocked out. On reaching the hospital the patient had been comatose. At the autopsy the teeth had been found located in one of the bifurcations of the bronchi. Dr. Jenkins said that he had also had a case which he believed was one of impacted epiglottis. On taking out the larynx, the epiglottis had been found crowded between the vocal cords, and although a complete autopsy had been made no other cause had been found to explain the sudden asphyxiation and death. A case was referred to in which a bronchial gland had ulcerated into the trachea, causing sudden death. He had known of several cases of sudden death while an intubation tube had been in the larynx, but of course in these instances it had been impossible to say whether death had been due to the diphtheria or to sudden occlusion of the tube.

Dr. R. H. M. Dawbarn spoke of a case, occurring about two years ago, in which, while performing an excision of the upper jaw, the patient had suddenly become cyanosed. He had immediately made an opening in the crico-thyroid space, and had thus succeeded in saving the patient's life. The symptoms had been produced by a clot in the larynx. Shortly afterward he had had a second experience of this kind, and had learned from Dr. Gerster that he had had just such an occurrence in connection with a bloody operation about the mouth. Dr. Delavan had also told him recently that, according to the records in this State, there appeared to be as many as one death in a hundred from this cause in operations for the removal of false tonsils of the pharynx. In these cases the children had been kept in a fairly upright position. It was better to place the child with the head so far back that the blood would run by gravity into the vault of the pharynx instead of into the larynx. It should be remembered that in these acute cases the surgeon should immediately perform a laryngotomy; for the chronic cases of obstruction the operation should be tracheotomy.

Dr. J. W. S. Gouley referred to a well-known case, recorded in Dr. Gross' monograph on foreign bodies in the air passages—the case of a child who had swallowed a thimble. The late Dr. James R. Wood had been called in hurriedly, and without waiting for instruments or anything else he had introduced his finger into the child's mouth, and by inserting it into the thimble had removed the latter.

Dr. E. D. Ferguson said that the death of his son would have probably occurred from the lodgment of a piece of food over the opening to the larynx, had he not quickly removed the foreign body with his finger inserted into the throat.

Dr. Quinlan, in closing the discussion, said that there could be no doubt that many cases of sudden death were due to the lodgment of a foreign body, although often wrongly diagnosed. On the other hand, it was remarkable to note how, in some instances, the larynx seemed to be especially tolerant of foreign bodies. Cases were on record in which teeth, pieces of glass, and similar substances had lodged over the larynx without giving rise to urgent symptoms.

Some Considerations Relative to Colloid Cancer in the Abdomen.—Dr. Edward D. Ferguson, of Troy, read, by invitation, a paper with this title, although the author considered chiefly the question of the origin and dissemination of cancer. He cited a case of a man, sixty years of age, upon whom he had done an exploratory incision with the expectation of finding an inoperable cancerous growth. This expectation had been justified, because he had found several cancerous growths and the peritoneal cavity had contained a large quantity of colloid material, some of it free and some of it contained in slender vesicles. The entire peritoneal surface of the abdomen had been studded with these. The patient had died soon afterward from the natural progress of the disease. About November 1, 1898, he had been consulted by a woman, fifty-five years of age, who had presented a notable abdominal enlargement. The physical examination made the diagnosis of cancer with ascites probable. On November 7th the abdomen had been opened. A large quantity of colloid material had been found, and a firm cancerous mass in the right iliac fossa. There were many firm cancerous growths throughout the peritoneal cavity. He had also removed a peculiar rope-like mass, which was exhibited. The patient had been relieved by the operation, but could not be expected to live many months more. The epithelioid cells in the nests invaded by the colloid change were not all changed, he said; hence when rupture occurred, and the glue-like material escaped, it must carry with it cells which probably retained their original anatomical and pathological characteristics. This was interesting in connection with the dissemination of cancer, and raised the question as to whether it was necessary to invoke a special germ to explain metastases. Some evidence had been adduced to support the claim that cancer could be communicated by inoculation. The strongest statements regarding the cancer microbe had recently come from Italy. But it was only in the collocation of the elements of a tumor that they could be said to be pathological, unless it was finally demonstrated that some parasite was an essential element in the growth. All nutritive changes, both in life and disease, took place under certain conditions, subject to change. When the single cell of the ovum divided into two cells, one into the epiblast and the other into the hypoblast, was it necessary to suppose the presence of a bacillus to effect this change? In view of the great frequency of cancer in the genital tract in women, the fact that only twenty-eight cases of cancer of the penis were recorded in men having wives affected with cancer of the vulva or cervix was important negative evidence in connec-

tion with the theory that cancer was an infectious disease. The theory of Cohnheim that certain embryonal cells had "rested" in the tissues, and only took on activity subsequently, found much in clinical experience to support it. The problems connected with cancer houses were intricate, but no valid conclusions from them had yet been drawn. From our present knowledge of cancer no reason could be given for the great increase of the disease, claimed by some to have occurred. The fact that the English death rate from cancer had risen greatly, and that the death rate had nearly doubled in our own State during the past ten years, certainly claimed attention, but proof was lacking that there had been actually such an increase. The apparent greater frequency of appendicitis might be adduced as a familiar instance of how fallacious might be such statistics.

The author's conclusions were: (1) That the dissemination of cancer to or through remote areas of an individual's body was a fact so frequently observed that one must accept the idea of some kind of infection; (2) the rarity of direct infection from person to person—though the opportunity for such infection must occur very often, as between husband and wife, surgeon and patient, etc., showed that the infective agent was one not readily transplanted, or which required a specially prepared soil; (3) that the vital properties of the anatomical element of the growth furnished as adequate an explanation of this limited infective power as would any protozoa, but one could not deny the possibility of the existence of extraneous organisms which, by irritation, might result in the production of cancer; (4) that it was a question whether the supposed increase of cancer was a fact, or was explicable on the theory that the disease was more commonly recognized now than formerly; and (5) the idea of auto-infection from the cancer elements themselves furnished a basis for hopeful treatment, *i.e.*, thorough removal at the earliest practicable moment of the parts involved.

Dr. R. H. M. Dawbarn was invited to open the discussion. He said that he was under the impression that to-day one woman in every twenty died of cancer, and hence the importance of considering the matter of treatment. At the present time, unusual efforts were being made to secure radical and complete removal of the growth. In this connection perhaps more was due to Dr. W. S. Halsted of the Johns Hopkins Hospital than to any one else. According to his method, the entire pectoralis major and pectoralis minor, together with the entire axillary contents, whether apparently diseased or not, were removed, and some operations even went above the clavicle. In his opinion the technique should be, not, as was usually the case, the removal of the cancer, and lastly the axillary contents, but just the reverse of this, for the former method caused massage of the parts, and favored the dissemination of the cancer juice. Halsted now taught that in every case it was best not to make such close incisions that it was possible to bring the flaps together by suture, but that it was better to make use of Thiersch skin grafts. Regarding the treatment of sarcoma by toxins, Dr. Coley had only the other evening made the statement that he now only relied upon this method in the treatment of fusiform-cell sarcoma.

Starving Out Cancer by Ligation of Vessels.—Dr. Dawbarn said that he was especially interested in treating cancer by a process of starving it. About twenty years ago Dr. Bryant had stated that he would like to try the experiment of treating a case of cancer of the naso-pharynx by tying both carotids. The suggestion had been received with ridicule, but the experiment had been tried by Dr. Bryant nevertheless, with the result that the tumor had shrunken and the patient was still alive. The experiment had been repeated in other cases, but in these the result had been that the tumor had shrunken temporarily, but had again begun to grow as soon as the collateral circulation had become established. Dr. Dawbarn said that he had determined to try the plan of excising both carotids, and had now done it sixteen times. The procedure was not so difficult or dangerous as might have been supposed. The mortality had been almost *nil*, and he was very hopeful that the method would eventually prove of value. The first case in which he had tried this method had been operated upon three years ago, and the patient was still alive. He had at first feared that gangrene of the tongue might result, but such had not been the case.

Microbic Origin of Sarcoma Probable.—Dr. J. W. S. Gouley said that while we would have to wait some time before reaching a conclusion regarding the nature of epitheliomatous cancer, it seemed to him that we were very much nearer the microbic origin of sarcoma. He expected that a micro-organism would soon be discovered in sarcoma, perhaps the causative agent. Sarcoma was certainly very much more common in the lower animals than in man. It was not strange that colloid degeneration of abdominal cancer should prove so fatal, for it had a tendency to a much lower organization. He had seen, with Dr. Wiggin, a very interesting case of colloid degeneration of an intestinal epithelioma. There had been in this case very extensive degeneration of tissues, and toward the last very profuse hemorrhages. Death had resulted very largely from this loss of blood. The method of ligating the blood-vessels for the purpose of causing a shrinking up of cancerous tumors had been abandoned many years ago because of the poor results obtained. Among the old surgeons, Dr. James R. Wood and Dr. Carnochan had tried this method. The latter surgeon had experimented extensively in the ligation of arteries about the face and head, but with no great success. The thorough method suggested by the previous speaker should at least cause a shrivelling of the growth. Spindle-cell sarcoma was prone to run a slow course, even without treatment, and sometimes to undergo contraction. But the round-cell sarcoma—the variety which was likely to prove to be microbic in nature—ran a rapid course, terminating fatally in a few months. In such cases he did not think the ligature of any artery would be of any avail. In a discussion on malignant tumors some years ago he had asserted that every form of tumor should be removed as soon as detected, but other surgeons had disagreed with him, claiming that they would wait until the tumor gave rise to symptoms or was evidently growing rapidly. Many years ago Dr. Gross had stated that a tumor on the surface of the body, no matter how small, should be removed, simply because it was a tumor, and would eventually grow. But the opinion of surgeons had changed since that discussion, so that scarcely any surgeon would now hesitate to remove even a benign tumor, however small.

Willy Meyer's Operation.—Dr. Parker Syms said that the microbic origin of cancer seemed to him extremely probable from a consideration of the mode of its dissemination. An early diagnosis was essential in order that the growth might be completely removed instead of cutting through certain unseen portions of the disease. He corroborated what the last speaker had said about the present surgical practice regarding the removal of all so-called benign tumors, giving as a reason that these benign tumors were apt eventually to become malignant growths. He was sorry that Dr. Dawbarn had given so much credit to Dr. Halsted, because Dr. Willy Meyer of this city had first planned the modern radical operation, and certainly the method seemed to him preferable to that of Halsted. In both

operations the aim was to remove the highest attainable portion of lymphatics, together with the fat, fascia, and muscle, and to do this from above downward, the breast being removed last along with the pectoral muscle. In this way no incision was made through the carcinoma if the operation was done sufficiently early. He thought a good deal of credit was due to Dr. Dawbarn for his perseverance in the treatment of cancer by ligation of vessels; nevertheless the method seemed to have been quite thoroughly tried by others and abandoned.

Dr. John J. McGrath said that colloid degeneration occurred usually in those cancers involving the mucous membranes—in other words, chiefly in cancers of the stomach, the large intestine, and rectum. This colloid degeneration seemed to be analogous to the fatty or cystic or calcareous degeneration of a tumor; it appeared to be a change of the cells of the tumor into a mucoid substance. At times the stroma of the tumor was also involved. He, too, inclined to the opinion that sarcoma would be found to be microbic in nature, but sarcoma was made of elements normally present in the body. As the same was true of fatty tumors, it would seem logical to expect these tumors to be of microbic origin also—a theory which certainly appeared absurd. As long as the parenchymatous cells did not increase more rapidly than the connective tissue, the normal relations would be preserved, but as soon as the parenchymatous or epithelial cells gained the ascendency they would develop first an adenoma, and then a malignant disease. These facts seemed opposed to the microbic theory of the etiology of cancer. Regarding metastases the speaker said that it did not seem to him necessary to assume a microbic infection to explain them; it was rather the result of an embolic process.

Dr. D. P. Austin referred to a case of colloid cancer of the abdomen observed in a woman of eighty years. At the autopsy the abdominal cavity had been found filled with a large quantity of semi-fluid material presenting a great variety of colors. More than fifty quarts of this material had been taken away. Apparently the disease had originated in one of the ovaries.

Dr. Dawbarn explained that he had not recommended merely ligating the carotids; the only hope from this treatment lay in cutting them out from end to end.

Dr. Wiggin quoted Dr. Goler, of Rochester, as saying that there had been one hundred and twenty-five deaths from malignant disease in a population of one hundred and twenty-five thousand, and that as a result of charting for a number of years the houses in which deaths from malignant disease had occurred, he had noted that these houses occurred in groups.

Dr. Ferguson closed the discussion. He said that the starvation treatment of cancer seemed to him to have some merit. It might be practised in certain inoperable cases by the hypodermic injection of alcohol into the periphery of the growth. He was a believer in the transplantation of cancer, and this meant that he was a believer in the theory of infection. He did not, however, feel at present prepared to accept the theory that the origin of cancer was to be found in an extrinsic micro-organism.

Epiphora.—Dr. J. H. Woodward read a paper with this title. Epiphora, he said, was dependent upon several conditions, and was characterized by a more or less constant overflow of tears upon the cheek. In the uncomplicated cases the lacrymal sac was not inflamed, nor were its contents altered. When the sac was inflamed, constituting a dacryo-cystitis, the contents were changed. In dacryo-cysto-blennorrhœa there was an accumulation of glairy mucus in the lacrymal sac, the presence of which impeded the passage of the tears into the nose. This affection might continue for a number of years without alteration in the discharge. In dacryo-cystitis the discharge from the lacrymal sac was purulent or sero-purulent, and all of the symptoms were intensified. Should an abrasion of the cornea occur from any cause, infection from the contents of the lacrymal sac would quickly ensue, and an ulcer would form. Dacryo-cystitis was a chronic process presenting, often for many years, only the symptoms of a weeping eye, but a large number of cases had acute exacerbations, which were often wrongly diagnosticated as erysipelas of the face. If an abscess formed and ruptured, a lacrymal fistula would result. The causes of epiphora could be grouped under (1) conditions producing excessive flow of tears, and (2) interference with the drainage system of the eye. Among the first class were emotional states, acute and chronic inflammation of the conjunctiva, foreign bodies in the eye, eye strain from excessive use of the eyes, bad light or enfeebled health, anomalies of the muscles, and exposure to cold winds. The conditions which interfered with the drainage were largely mechanical, as, for instance, those connected with the puncta lacrymalia, and particularly with the inferior canaliculus and inferior punctum. The edge of the eyelid might be inverted or everted, thus interfering with the drainage. An abnormal state of the canaliculus might be due to congenital abscess, or to obstruction by foreign bodies or mucous polypi. Frequently there was a stricture at the point where it entered the lacrymal sac. It was probable that an inflammatory process in the tear-sac was, in some instances, propagated by continuity of tissue, and in others by reflex irritation of the veins in the lacrymal sac, and those forming the plexus surrounding the duct, through irritation of the fifth nerve. Common observation showed that congestion of the mucous membrane resulted in the secretion of thick mucus. Inflammatory strictures of the nasal duct were less common than at the nasal end of the inferior canaliculus. Bony obstructions due to fracture had been encountered, but were more often the result of a periostitis produced by careless and rude probing. Rhinitis played an important part in the production of epiphora, as did all forms of intra-nasal growths.

Treatment.—The management of epiphora evidently consisted in something more than simply probing the nasal duct. The removal of a V-shaped segment from the posterior wall of the punctum and canaliculus was the most satisfactory procedure. Having done this, the patency of the drainage system could be determined by injecting boric acid through the canaliculus with the aid of a hypodermic needle. It was well to avoid probing whenever possible. The simple slitting of the canaliculus was not sufficient. For a number of years he had been accustomed to remove a portion of the posterior wall of the canaliculus, and was convinced of the effectiveness of this method. Probes should be used in these cases on the same principles that govern the introduction of sounds into the urethra. Syringing of the tear-sac might be practised daily until the inflammation of this sac had been subdued. Lacrymal abscesses should be treated like other abscesses. In bad cases the surgeon might be tempted to excise the lacrymal sac, but in such instances this should not be done until the effect of curetting the sac had been tried. Even extirpation of the entire lacrymal gland, it should be remembered, would not cure some cases of epiphora. The removal of the gland appeared to be a perfectly safe operation, but this procedure was very seldom required. Cocaine would produce sufficient anæsthesia for nearly all these cases.

To Keep Alcohol Absolute place in it a sheet of gelatin, which by its affinity for water maintains the strength.

Correspondence.

ANTITOXIN AND DIPHTHERIA.

To the Editor of the Medical Record.

Sir: By a typographical error in my article on "The Failure of Antitoxin in the Treatment of Diphtheria, in the Medical Record for May 27th, it is stated that Dr. A. J. Dower's tracheotomy mortality for croup, without antitoxin, is 27.3 per cent. The corrected statement should credit him with a mortality record of 25.3 per cent. Dr. Dower has operated sixty-seven times, without the use of antitoxin, with a loss of only seventeen patients. The fact that two of these patients were but twenty-two months old is of timely interest when the claim is being advanced that never before antitoxin times were such young children saved by this operation. Dr. Joseph E. Winters in his exhaustive and conclusive article in the Medical Record, December 13, 1884, entitled, "Is the Operation of Tracheotomy in Diphtheritic Croup Dangerous?" enumerated ninety-three successful tracheotomies for croup in children two years of age and under.

J. Edward Herman.

1098 Bushwick Avenue, Brooklyn, May 29, 1899.

ANTITOXIN IN DIPHTHERIA.

To the Editor of the Medical Record.

Sir: I have read with interest and amazement the article published in the May 27th number of the Medical Record, by J. Edward Herman, M.D., on "The Failure of Antitoxin in the Treatment of Diphtheria."

Dr. Herman has displayed great diligence and is entitled to credit for his painstaking in collecting such a vast amount of statistics and such a large number of figures on this subject. That they all come from sources of high authority cannot be denied; yet, nevertheless, happily for myself and those who will trust me to prescribe for them in the future, my faith in the virtue of antitoxin as a curative remedy in diphtheria is not one whit lessened, nor is my fear of injurious results from its use one particle increased, by the doctor's seemingly cogent argument in this direction. It is said that we do not know what antitoxin is or how it acts, whether it is beneficent or sinful in its effects. My only answer to this is that of the blind man who had his sight miraculously restored by the Lord, and was told that his benefactor was a sinner; he said: "Whether he be a sinner or no, I know not; one thing I know, that whereas I was blind, now I see."

It has been my privilege to practise medicine a little over twenty years in a community where diphtheria prevails extensively, and in a very malignant form. During the first sixteen of these years it was my constant dread to be called to treat diphtheria, and I almost shrank from it, as more than half of my patients, I believe, died, and nothing is so painful to me as to see a child torn from its mother's arms by death. In February, 1895, I treated my first case of diphtheria with antitoxin; it was that of a young married woman, and was malignant, presenting all the extreme symptoms that I had been accustomed to see in my hitherto fatal cases. The right tonsil was swollen and covered with a patch of false membrane as large as a nickel; the glands on the same side of the neck were very much enlarged; the temperature was 104.4° F., and there was profound prostration. All this occurred within five hours of the onset of the disease, and the patient was extremely ill. I used 1,000 units of serum at once. The temperature fell at the rate of one degree an hour, and the membrane did not extend nor appear in any other place. In five hours the temperature was normal and the patient was practically well. No other treatment was used in this case. From then until now I have treated all my cases of diphtheria, which number many, and the exact number of which I can give in time, with antitoxin, and have not lost a single case. From about sixty per cent. of deaths for sixteen years before antitoxin, I have had during the past four years one hundred per cent. of recoveries with antitoxin, and have never seen a single bad effect from its use.

One other recent case to illustrate the value of antitoxin. A child, six years old, came home from school, threw herself on the bed, vomited, and complained of sore throat. The mother telephoned for me. Both tonsils were covered with patches of grayish membrane, which I recognized at once as diphtheritic; the temperature was 103.2° F.; the child was restless, prostrated, and vomiting incessantly. I at once started home for my syringe and bottle of antitoxin (I always keep it in my house). When I returned, one and one-half hours later, the membrane had extended to the half arches, and the temperature was 104.6° F. —a very sick child, you will say. One thousand units of antitoxin were injected; eight hours later there was no improvement. One thousand more units were injected; eight hours following this the temperature was normal, and the child was eating soft boiled eggs. No other treatment was used in this case. How will Dr. Herman explain these cases, which are but two of dozens which I might relate did space permit?

Every case that I have treated has been subsequently confirmed as true diphtheria by bacteriological report, and no case of any other disease has been treated by mistake with antitoxin.

To wait for a laboratory report in cases of diphtheria is as fatal as to take some of the ejecta in a case of corrosive sublimate poisoning, send it to the laboratory for analysis, and if it proves to be real corrosive sublimate call around the next day and tell the patient (if the undertaker has not already taken him away) to swallow an egg. Every practitioner should be able to diagnose diphtheria by its gross appearances, coupled with other symptoms. Antitoxin must be given at once in large doses, and repeated every eight hours until the temperature begins to fall rapidly. This I have done many, many times, with such uniformly good results that I now laugh at diphtheria and never hesitate to tell the anxious parents that their child will be practically well within twenty-four hours.

The doctor ends his article by alluding to the time-honored remedies for diphtheria. There are no time-honored remedies for this disease; they are all absolutely useless and worthless. I have sat up night after night with children, and used all the remedies hitherto recommended for diphtheria, faithfully, thoroughly, and at the risk of my own life, and have seen them die right before my eyes. Solutions of peroxide, bichloride, Monsel's solution, chlorate of potash, carbolic acid, papoid, trypsin, sulphur, chlorine, and a lot of others which I have forgotten—they have all failed without exception scores of times; antitoxin has never failed, and I hope the producers of this valuable remedy will not be influenced by the paper of Dr. Herman, but will continue to give us, who believe in it, an abundant supply of good, reliable antitoxin right up to the standard potency.

In closing, I would like to ask Dr. Herman two questions: First: Has he ever treated a case of diphtheria like the one last mentioned above, and in the same manner? If so, what was the result? Second:

How many cases of diphtheria has he treated with antitoxin, and how many of these were treated during the first twelve hours of the disease?

WILLIAM A. CLARK, M.D.

TRENTON, N. J.

A SIMPLE AND EFFECTIVE DEVICE TO ARREST EPISTAXIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Apropos of an article which appeared in the MEDICAL RECORD of May 27th, by Dr. B. Scheinkman, of New York, describing an instrument devised by him for the relief of epistaxis, I wish to describe a simple appliance which I have used many times with entire satisfaction, both to myself and patient. The appliance consists of an ordinary medium-sized condom and a flexible catheter, either rubber or linen, and the mode of applying is as follows: After sterilizing the condom and catheter I insert the end of the catheter into the open end of the condom about one inch, and tie a cord around both tight enough to exclude air, but not so tight as to compress the catheter, if rubber, so that air cannot enter through it. The condom is then pushed back along the floor of the nasal cavity till the posterior nares are reached, the condom becoming invaginated and reflected back over the catheter, as it is pushed back through the nasal canal. If now the catheter be carefully withdrawn the condom will straighten out and remain in position. The only thing that remains to be done is to inflate the condom by blowing air into it through the catheter, until it is distended sufficiently to fill up completely the nasal cavity and thus stop the hemorrhage. A cord is now tied tightly around the condom in front of the end of the catheter and close up to the anterior nares, and the condom is cut off, which completes the operation. The condom may be left in place as long as necessary, and it can be easily withdrawn by simply puncturing the bag and letting the air escape. The advantages I claim for this are, that it is quite easy of application, the materials needed are usually either at hand or readily obtainable, it is comparatively inexpensive, it is not uncomfortable to the patient nor unsightly, and, above all, it is effective. I wish to say in conclusion that this procedure is not original with me, but has been used here by several physicians for some years; but as I have never seen it described in any journal I thought it worthy of notice.

W. L. CARROLL, M.D.

401 RIVER AVENUE, TORONTO, OHIO.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 3, 1899:

	Cases.	Deaths.
Tuberculosis	142	139
Typhoid fever	13	5
Scarlet fever	214	14
Measles	420	19
Diphtheria	249	46
Laryngeal diphtheria (croup)	7	10
Cerebro-spinal meningitis	0	13
Chicken-pox	36	0
Smallpox	11	12

Medical Science in India.—Every viceroy of India has done his best to encourage medical science, and at a meeting of the Dufferin Fund in Calcutta the other day Lord Curzon was able to quote Mr. Kipling in one of his last verses—the verse of the "White Man's Burden"—which tells him to "bid sickness cease." The illness of the white man himself at that moment did not lessen the appropriateness of the quotation.—*London News.*

"Cavendish."—The death of Henry Jones, M.R.C.S., recently announced, removes from the medical profession a physician who was more widely known in another field. Dr. Jones, better known as "Cavendish," was universally recognized as an authority on whist. He studied medicine at St. Bartholomew's Hospital, and was in general practice from 1852 to 1869. He was a member of the Court of the Apothecaries' Company, but retired from active practice about thirty years ago, devoting his life to the pursuit of indoor games.

Human Odors.—According to Dr. Bet (*Archiv der gesammten Physiologie*), every man has his own particular odor, while but few possess a sufficiently keen sense of smell thus to recognize the individual. Dogs, however, possess the power of accurate discrimination. The author has observed one individual whose powers were marked in this respect under severe test. It is furthermore believed that every family has an odor of its own possessed to a greater or smaller degree by its various members.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ending June 3, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, Los Angeles	May 27th	3	
San Francisco	May 19th	1*	
Dist. of Columbia, Washington	May 20th	..	1
Florida, Jacksonville	May 27th	1	
West Tampa City	May 20th	3	
Georgia, Savannah	May 9th to 29th	13	
Kansas, Emporia	May 20th	3	
Kentucky, Frankfort	May 23d	2	
Louisville	May 20th.....To date	475	4
Mt. Sterling	May 20th	2	
Louisiana, Morgan City	May 21st	7	
New Orleans	May 22d to 29th	9	
Massachusetts, Fall River	May 28th	10	
Swampscott	May 31st	20	1
Missouri, St. Louis	May 12th to 29th	16	
Nebraska, Omaha	May 29th	1	
New York, New York	May 29th	..	3
Ohio, Cleveland	May 15th to 22d	13	
Massillon	May 27th.	1	
Pennsylvania, Johnstown	May 15th to 22d	1	
Philadelphia	May 27th	29	
Pittsburg	May 26th	2	
Virginia, Newport News	May 25th to 30th	9	
Norfolk	May 31st	7	1
Portsmouth	May 31st	7	
Washington, Seattle	May 30th	1	
Spokane	May 30th	4	

* Soldier in army hospital.

SMALLPOX—FOREIGN.

Africa, Sierra Leone	April 22d to 29th	40	
Austria, Prague	May 6th to 13th	2	1
Brazil, Bahia	April 15th to 30th	3	
Rio de Janeiro	April 7th to 14th	2	9
Egypt, Cairo	April 22d to 29th	..	2
England, London	May 6th to 13th	..	1
Germany, Breslau	April 26th	*	
Greece, Athens	May 6th to 13th	24	8
India, Calcutta	April 15th to 22d	..	8
Madras	April 22d to 28th	..	1
Japan, Formosa, Tamsui	March 11th to 31st	19	
Nagasaki, Nagasaki	April 21st to 30th	..	2
Mexico, Mexico	May 14th to 21st	16	8
Nuevo Laredo	May 13th to 20th	..	1
Russia, Moscow	April 29th to May 6th	6	
Odessa	May 6th to 13th	8	3
St. Petersburg	April 29th to May 13th	22	5
Warsaw	April 29th to May 6th	..	1
Turkey, Constantinople	May 1st to 8th	..	2
Uruguay, Montevideo	April 1st to 8th	2	

* Black smallpox reported from consular district.

YELLOW FEVER.

Brazil, Bahia	April 15th to 30th	115	53
Rio de Janeiro	April 7th to 14th	39	26
Colombia, Cartagena	May 6th to 13th	1	1
Mexico, Vera Cruz	May 1st to 25th	154	104

CHOLERA.

India, Calcutta	April 15th to 22d	..	16
Japan, Yokohama	April 14th to 21st	1	1

PLAGUE.

India, Calcutta	April 15th to 22d	..	83
Japan, Formosa, Tainan	April 24th	24	18
Taichu	April 25th	6	
Taihoku Ar	April 25th	2	
Tamsui	March 11th to April 12th	807	583
Straits Settlement, Penang	May 27th	Present.	

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Original Articles.

SUMMER COMPLAINT IN CHILDREN.

BY LOUIS FISCHER, M.D.,
NEW YORK.

THIS dreaded complaint is caused by malassimilation and improper feeding during the hot weather. Children of all ages are predisposed to these attacks, although an infant at the breast, if properly fed, that is, at regular intervals, usually remains exempt. The greatest number of cases occur in the hand-fed, so-called bottle babies. The most frequent cause is certainly overfeeding of children and feeding them too often with food that is both improper in quality and quantity. The digestive powers of a child are reduced to a minimum during very hot weather, and thus greater caution must be exercised than in cold weather. If we have been overfeeding, as previously stated, then the first symptom met with is vomiting. This is nature's means of trying to relieve an overloaded stomach. Food that has remained in the stomach for some time, especially when the gastric secretions are diminished, and chiefly when the pepsin and hydrochloric acid are deficient, will permit micro-organisms to develop putrefactive changes terminating in fermentation. Fermentation develops gases, and thus it is that the ultimate result will be eructations or a fermentative diarrhœa, plus considerable flatus or emptying of gas. Such stools usually smell sour and contain large quantities of bile and also undigested particles of food. This is the usual form of summer complaint met with, in which the children will suddenly get intensely thirsty, lose their appetite, and if they do not have spells of vomiting they will surely have greenish or liquid, foul-smelling stools. Whenever the stomach has thus been disordered, nature very properly tries to eliminate the contents by producing either vomiting or diarrhœa.

It is a safe plan to aid nature by giving a large dose of castor oil, and if the same is thrown up to repeat the dose. Another valuable remedy is calomel. This can be given not only with the object of stimulating the flow of bile, but also as an intestinal antiseptic, as it is converted into bichloride of mercury, which is a powerful antiseptic, and neutralizes by its presence fermentative action in the bowels. The best reason for giving calomel is that it cleanses the stomach and bowels and thereby removes the cause of the disease.

Irrigation.—Whenever possible, it is wise to have the stomach thoroughly washed by using warm table-salt solution, and continuing this until the contents of the stomach flow away clear. This should never be done by any one but a physician, as some of the most serious accidents can happen, as, for example, instead of pushing the rubber catheter through the mouth into the œsophagus and into the stomach, it has happened that the tube has been drawn by inspiration into the trachea or windpipe and the lungs have been flooded, causing instantaneous death. This accident happened to a trained nurse with one of my patients.

So much for cleansing the stomach; in washing the bowel we practically pursue the same method as when we flush the stomach. The process consists in taking a fountain syringe, filling it with warm water, the temperature of which is 110° F., and adding a teaspoonful of table-salt to each pint of liquid used. The catheter used should be soft rubber, of the proper size, and should be lubricated with sweet oil, vaseline, or glycerin; the point of the catheter should be gradually introduced and great care taken lest the mucous membrane, which in this disease is already inflamed, should be irritated and bleeding ensue. Undue pressure by having the syringe at too great a height must be avoided by raising it only two feet above the child's body. If carefully carried out, the gradual flushing of the lower bowel will not only cleanse it from fecal matter, and wash out fermentative gases, but will also cause a large amount of liquid salt solution to be absorbed into the body through the intestinal glands, and thus add to the volume of the blood. It is understood that a continual looseness of the bowels with mucous discharges will drain the system to such an extent that liquids are called for, and thus it is that we can supply, by this simple method of washing, some liquid through the rectum. Nature's signal for liquid is usually given by an intense thirst, and one of the wisest things to do is to administer large draughts of sterilized water (boiled), which can be cooled by placing it on ice. Cold tea, very weak, should also be given as a stimulant and to quench thirst. One of the most beneficial and grateful drinks is acidulated water made thus: To a tumblerful of plain boiled and cooled water add five to ten drops of either dilute hydrochloric or phosphoric acid. The same can be sweetened by adding some glycerin (which is a powerful anti-fermentative) or some saccharin. I do not advocate the addition of sugar in fermentative conditions of the stomach and intestines. The injection, hypodermically, of several pints of warm saline solution having the temperature of the blood, technically known as hypodermoclysis, is one of our most valuable means of restoring the circulation when children suffer from collapse during the course of a severe attack of cholera infantum; it is a safe plan to apply an ice-bag over the top of the head, especially if we are dealing with severe pulsations of the fontanelle; my plan is to insist on giving a very strong mustard foot-bath at or about the time of applying the ice-bag to the head. These would be the usual indications in the ordinary cases of summer complaint, requiring immediate treatment.

Dietetic Treatment.—This is the most important part in the management of a case of summer complaint. And this is really the part which, if faithfully carried out, will do more toward the completion of the cure than almost all medicinal treatment.

The first point to be borne in mind is to discontinue all kinds of food which were given at the time of the attack; so, for example, if milk has been given, the same must be discontinued, and in its place a food more easily assimilated, as for example barley water, rice water, farina water, sago water, cornstarch water, and arrow-root water, can best be given. These are simple preparations, and are usually made by adding a

tablespoonful of barley, rice, or farina to a pint of water, boiling the same, and straining it and warming it immediately before feeding; it should be given in the same quantities as the child has been in the habit of taking prior to this attack, but at longer intervals, thus allowing the stomach much more time for the digestion and absorption of a lighter article of food and giving it a little more rest; for example, if a child has been fed on four ounces of cow's milk and two ounces of barley water, and the feeding was continued every three hours, then it is a good plan during an attack of summer complaint to stop the milk and give only the barley water, six ounces, and feed every four hours. During the interval, if the child is very thirsty it is a good plan to give boiled water plain, or boiled water to which the white of a raw egg (albumen water) and some salt are added, and, if the child is old enough, an occasional few drops of the expressed juice of meat, made by broiling a steak over a fire and expressing the juice in a lemon squeezer or meat press. When the infant's normal condition is again restored and all disease symptoms have passed away, then we can gradually return to nature's remedy—milk feeding. Every mother knows how difficult it is to keep milk fresh and pure during hot weather, and therefore greater care must be taken thoroughly to destroy any and every possible source of contamination, namely, germs of all kinds, by steaming the milk in a sterilizer at least forty-five minutes. When milk is to be kept only a short time, pasteurization can be resorted to. Pasteurized milk is really milk that is sterilized at a lower temperature, but for all practical purposes the common milk steamer will answer.

External Applications.—The choice as to whether a towel wrung out in cold water should be applied if there is excessive heat in the body, or a hot application if the child's body is cold and has a subnormal temperature, should be left to the discretion of the physician.

The Temperature.—While in most diseases the thermometer is our guide and should be cautiously watched, we are well aware of the fact that in some diseases, more especially brain affections, the thermometer will show a normal or subnormal temperature; on the other hand the thermometer will be one of the most valuable guides in detecting the slightest elevation of temperature, and it will be a great comfort if, for example, a temperature which yesterday was 105° F. will gradually come down under proper treatment to within normal in one or two days.

It is not my intention in the course of this brief paper to give any elaborate details of drug treatment; my object is rather to elucidate a few points which occur in the course of this disease and thus contribute to an understanding of what the treatment really should be. The most important point, and, if I may say, last but not least, is the enforcement of change of air. It is a well-known fact that a child suffering from summer complaint in the midst of a warm city will suddenly become almost constipated on being given a sea voyage. Hence the importance of a change to the seashore at the first appearance of this disease.

Cold Sponging with sea-salt water and also cooling the spine by douching with several pitchers of iced water are beneficial and grateful. It is self-understood that cleanliness and change of clothes are of the most vital importance.

General Management.—Nothing is so pleasing to an infant as the removal of all unnecessary clothes, and hence it is our duty to make these suffering children comfortable.

The first point after properly cooling the body with bathing, sponging, and using either alcohol and water or some perfumed toilet water, is to check perspiration. To do this effectively we must keep the child in a large, well-ventilated room, the temperature of which should be maintained at about 68° to 72° F. if at all possible. The room should be darkened, and all unnecessary noises and irritations are to be strictly avoided.

Children seem to lie comfortably in hammocks, and as these permit plenty of air to surround the patient they are certainly advantageous. The bad habit of rocking the children should be avoided, as it is uncalled for and frequently promotes gastric disturbance ending in vomiting.

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REFLECTIONS ON THE NOSOLOGY OF THE SO-CALLED FUNCTIONAL DISEASES.[1]

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Scope of Presentation.—By way of introduction, the writers desire to say that the following outline of an inquiry into the nosology of diseases that are not associated with definite and recognizable morbid anatomy does not limit itself to the familiar so-called functional diseases of the nervous system. It embraces, as well, some of the general bodily diseases, which have not as yet a definite patho-anatomical or patho-physiological demarcation, whose study and interpretation are considered usually to belong in the domain of the general practitioner and pathologist. We shall hope to lay before you certain facts and analogies, as well as definite conceptions and hypotheses, which will tend to show that many of these diseases, as well as many of the symptom groups designated as diseases and supposed to be associated with morbid alterations of different tissues of the body, are in reality components of one whole. It will be pointed out that symptoms incident to functional perversion have been considered indicative of disease of the parts or systems through which they happen to be manifest, unmindful and heedless of the fact that the forces antecedent to, and causative of, such functional overthrow may be more or less remote and operative through other systems of the body than the tissue immediately manifesting it. Furthermore, in the course of our argument we shall endeavor to show the interchangeability of many of these diseases, their pathogenic and etiological commutativeness.

If at the outset we ask ourselves how the functional diseases, diseases without known or demonstrated morbid anatomy, have been viewed, studied, and interpreted heretofore, the answer must be: Almost exclusively from an anatomical, chemical, and therapeutical standpoint. Again, if we ask, Do we know more of the nature of gout, of diabetes, of rheumatism, of asthma, of the neurasthenic state, than did our predecessors of a generation or a half-century ago? we must answer unequivocally, No. The explanation of this inertia is to be found in the fact that our researches have been too narrowly confined; our ideas of pathogenesis too centred on the tissues or system manifesting the prominent symptom or group of symptoms; our conception of the disease too one-sided; and our view-point not sufficiently elevated.

Before proceeding further, it may be well to enumerate the diseases entering into the category which we desire to interpret and subsume. They are: In-

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sanities not accompanied with gross lesions; epilepsy in all its varieties; hysteria and allied conditions; the neurasthenic state and its various congeners; migraine and its varieties; angeio-neurotic œdema, and allied conditions manifest in the skin and subcutaneous tissues; asthma; non-pancreatic diabetes mellitus and insipidus; Graves' disease; rheumatism, rheumatoid disorders, and arthritis deformans; arterio-capillary fibrosis; gout and the uric-acid diathesis; obesity (pathological), etc.

On cursory examination and on first sight this may appear a rather formidable list, and it may be contended that some of the diseases enumerated stand on a firm, well-known pathological foundation. Such a contention, however, we would be unwilling to admit. These diseases may be divided, for convenience' sake and for discussion, into three groups:

I. Those in which the symptoms, although they are almost sure to recur, are more or less transient, and are followed by longer or shorter intervals of health, or a comparative physiological state. This group includes epilepsy, insanities with lucid intervals, neurasthenia, asthma, angeio-neurotic œdema, etc.

II. A group made up of rheumatism in all its varieties, pathological obesity, arterio-capillary fibrosis, and others of the above list whose one-time existence is always indicated by morbid conditions in the shape of structural change.

III. A transitional group midway between these two, including hysteria, Graves' disease, emphysema, etc. The distinguishing feature of this group is that the disease may show itself by some distinctive manifestations, but the general clinical features are absent. For instance, the only manifestation of profound hysteria may be hysterical sensory disturbances without other symptoms; Graves' disease may reveal itself by exophthalmus and struma without other symptoms of a more subjective nature; and emphysema may exist as a secondary condition of the lungs without seizures.

Contention and Statement of Point of View.—We shall advance the claim that each and every one of these diseases is more legitimately interpreted by positing disorder or disease of the sympathetic nervous system as the *sine qua non* of their existence, than by any other explanation, be it chemical, reflex, or anatomical, that has heretofore been advanced. This disorder or disease may be of its central representation in the brain and spinal cord; of the ganglia; or of the fibres. It is extremely probable that the diseases that result from implication of the sympathetic in any of these three divisions will correspond to the groups above enumerated.

It will be admitted without demur that none of the diseases that we have enumerated has been investigated by the pathologist from the standpoint of the sympathetic nervous system, although a few of them, such as Graves' disease and angeio-neurotic œdema, have been looked upon as sympathetic neuroses, and these opinions have been founded on some experimental and post-mortem evidence. As a rule, when individuals who have suffered from one or another of the diseases enumerated above, and who have died of them or of more fatal intercurrent maladies, all the systems and tissues of their bodies have, at one time or another, been carefully studied and investigated, with one exception, the sympathetic nervous system. The result of this study has been that every decade, or at least every generation, has seen a new theory advanced to explain the occurrence of these diseases. The fact that the resultant explanations or hypotheses advanced have differed materially, one from the other, and that none is susceptible of absolute proof, indicates that a satisfactory one is still being sought. As a matter of fact, it would seem that despite our familiarity with the diseases above-mentioned, and our apparent knowledge of their pathogenesis, nothing that is not conjectural is yet known of their real nature. During the present generation the trend of thought has been to associate the occurrence of some, if not all, of the diseases in our list with certain chemical changes which go on primarily in the alimentary tract, and secondarily in the blood and the tissues which it nourishes. As a result of this, the physiological chemist has had dinned into his ears that a promising field, viz., the interpretation of the functional diseases, awaits his industry and energy. Thus far, his contributions to the advancement of our knowledge of these diseases have been very unsatisfactory, scarcely justifying the warmth of his reception.

One cannot have studied the functional diseases seriously without having been struck by the fact that in their genesis and in their evidences they have many factors in common. This sameness in development and in manifestations is alone sufficient to prompt the thought of their common origin. In nearly all of them an undefinable influence, summarized under heredity, plays a more or less conspicuous part. If we take any of the diseases enumerated above, and consider its known etiology, it will at once be seen that all writers concur in the statement that hereditary influence plays an important part. When hereditary influences are absent, the special etiological factor in the production of the given disease is of a nature analogous to those operative during intra-uterine or more or less remote ancestral life to cause the hereditary transmission. It will be seen, furthermore, that this hereditary predisposition is not always for the same disease. In other words, the changeability, or transmutability, of the hereditary influence is a remarkable feature. For instance, the ancestry of an individual who develops asthma or hysteria may show these diseases, but, if it does not, close investigation will reveal in the vast majority a history of some other functional disease. Let us contrast this for a moment with the results of an inquiry into the same matter concerning the organic diseases; that is, diseases with a definite anatomical foundation. In none of the latter does heredity play any considerable rôle, except in so far as it causes lowered vital resistance and thus makes some organ or system more vulnerable to accidental cause of disease such as infection and intoxication. We are mindful that exceptions to this rule may be instanced, but closer investigation may show that the interpretation of such exceptions are to be found in coincidence. It has been noted, for instance, that certain forms of Bright's disease, such as chronic parenchymatous nephritis, have a tendency to show themselves in generation after generation; but even though this be true, it does not invalidate the rule as given above, for these very cases may be nothing more or less than diseases of the vascular system conditioned through the vegetative system of nerves. Again, it may be claimed that such diseases as Friedreich's ataxia and the dystrophies form an important exception to this statement; but to this we reply that Friedreich's disease, the myopathies, and other familiary and hereditary degenerative diseases of the nervous system especially, are not hereditary diseases properly speaking; they are developmental or teratological defects. No one of the ancestors of Friedreich's ataxia has had anything similar.

Biologists have striven to show what heredity really is, but so far they have only been able to formulate a few fundamental laws governing it, without giving explanation of many of its occurrences. It is highly probable that the explanation of pathological heritage must be sought in the sympathetic nervous system, which is primigenial in development and which conditions the growth-tendency and capacity of the soma. We know how commonly some form of neural shock

is apparently the causation of functional nervous diseases, and the hereditary influence discernible in so many cases may be but an expression of the unconscious memory of the individual of some such shock in an ancestor.

A very important feature which the possessors of functional diseases have in common—and it would seem not to matter what the functional disease is—may be summarized under the phrase "stigmata of degeneration." We desire to emphasize that these so-called stigmata of degeneration are found preponderately, but not exclusively, in those who have had or are liable to have functional diseases, and they do not often occur in those who are liable to the accidental diseases, or, let us say, the organic diseases; in short, that they have no relation whatsoever to the organic diseases. During the past decade the medical and philosophical mind has been intent on detecting somatic and psychical abnormalities, departures from the standard normal to the present evolutionary stage, and in interpreting their significance. In the former direction much progress has been made, but that which they are supposed to indicate is, so far as we can determine, purely speculative. Such speculation may be couched in scientific phraseology, but to say that the coincident possession of a number of somatic and psychical evidences of degeneration means a more unstable organism in no way illumines the obscurity of their occurrence or indicates their developmental significance. No more is our understanding of them advanced by saying that such possessions are an evidence of the disordered relationship of such an individual to the scale which he occupies in the evolutionary cycle. The explanation or interpretation of these stigmata in the past has left out of consideration, apparently to facilitate matters, the individual graced by the appellation, "superior degenerate." Not infrequently he is posterity's landmark of family, racial, and national progress. His name is written ineffaceably on the tablets of time. Yet he has very often the same physical and mental stigmata of degeneration as his brother the inferior degenerate. Yet if the one is not attuned to his evolutionary lyre, no more is the other. Our own conception of the occurrence of stigmata of degeneration has the advantage of simplicity, and of applicability to the one type as well as to the other. We believe that the sympathetic nervous system, the so-called vegetative system of the body, is the architect; as it were, of the body. It presides over the anatomical and physiological construction of the individual and the race. In other words, that the sympathetic nervous system is destined to play the part of monitor in the developmental (ontogenetic) progress of the organism. When it is derelict in the performance of its duties there occurs what we may figuratively call an ataxia of the growth tendency, which is represented in the organism by deviations from the somatic standard of the normal organism, as a rule reversions toward a more primitive type; while on the psychical side they are manifest by certain limitations, or (and what is of greater importance) of potential possessions, which the normally evoluted organism is lacking.

If this process of reasoning is legitimate, then it will not seem at all strange that the sufferers with functional diseases, which we believe to be diseases standing in relationship to disorder and disease of the sympathetic nervous system, are the ones who have somatic and psychical stigmata of degeneration; no more will it be that those who have such stigmata should be liable to such diseases.

We would call attention to what we may call the interchangeability of symptoms or groups of symptoms of the functional diseases. Witness, for instance, an attack of asthma taking the place of the articular manifestations of gout, or an attack of œdema of any part of the body replacing or substituting the mental symptoms of hysteria. This interchangeability of symptoms or groups of symptoms is characteristic of the functional diseases, and is never seen, we believe, with the organic diseases. Another very important feature of the functional diseases, and one which in a measure justifies us in thinking of them all in one group, is their clinical career. In the first place, this is characterized by indefinite periods of remission and exacerbation; or, better said, by shorter or longer intervals of health. It is probable that none of the organic diseases has this feature. We are mindful of the fact that disseminated insular sclerosis is a disease characterized by prolonged periods of silence; but even in these states of quiescence it is to be borne in mind that evidence of this disease is always to hand. The termination of the functional diseases is another very important feature which they all have in common. Their tendency is to terminate in recovery, although some of them, attended with marked and extensive changes in the sympathetic system, such as Addison's disease, etc., tend toward dissolution. The organic diseases, on the other hand, all tend toward dissolution, and few of them end in recovery.

Some other features which the functional disorders have in common, and which have suggested the unity of their grouping, are that they are all materially influenced in their manifestations by telluric and atmospheric conditions. These symptomatic variations are immediately conditioned by changes in blood pressure. No physician requires specific citation to be convinced of the truth of this statement. It is at the basis of the rheumatic's ability to forecast the weather; it is the limbo of the neurasthenic's life; it is the antecedent of the asthmatic's inclination to seek more salubrious environment; in short, it is the foundation in fact of so many apparent whims, as well as realities, of sufferers from functional diseases that to enumerate specific instances would be idle.

Another striking characteristic of the functional diseases is the way in which they manifest themselves. Their onset is almost invariably insidious, and the patient can give but little information of the initial phenomena. Contrast this with the organic diseases, in which the direct opposite is the case. In these the patient can tell with astonishing accuracy not only the very day on which the symptoms appeared, but he can closely differentiate and discriminate the various initial phenomena. Then the manner in which the sufferer from functional diseases unfolds the plan of his affliction is quite the antithesis of that used by the sufferer from organic disease. The former is not infrequently lost in the maze and intricacies of his own symptom complexes. His usual introduction is that he scarcely knows where to begin; he is the man with a few little papers or with many big papers, each containing references to his hydra-headed disease. The man with organic disease describes his complaints in a few words, and makes light of them; the man with functional disease finds the vocabulary of his native tongue too poor to subserve his thoughts, and the mint in which words are coined inadequate to denote suffering.

And finally, the basis, the manner of treatment of all the functional diseases is the same, it matters not whether that disease be rheumatism, or neurasthenia, or psoriasis, or exophthalmic goitre. The indications every time are to increase the patient's nutrition; in other words, to attack the vegetative system. We do not mean to say that other and pointed duties are not to be performed, such as making the blood less acid in rheumatism, counteracting hyperthyroidation in exophthalmic goitre, cauterizing the turbinated bones in asthma, etc., but such indications in treatment are secondary, and their influence is subsidiary and contributory to the one important end: to wit, to restore the

patient's nutrition. If an inventory were made of the various substances that have found favor in the treatment of the functional diseases, it would include but few remedies. There is a sameness in their therapy that suggests the grouping of them as a unit. There are many other interesting etiological, symptomatic, and terminal coincidences of the diseases enumerated that might be mentioned in support of our assumption that basically they are all of the same generic order, but if we have enumerated enough to invite your attention to the matter, we rest content.

In our discussion of the evolution of some of the diseases in the list that we have given above, we may seem at times to underestimate the rôle of the etiological factors that are known to play an important part in calling the disease into being. We have no desire to do this. We wish only to go behind the apparent *modus operandi* of the exciting factors and seek the primary causes of the disturbance of function. It is probable that no one will deny that many of the diseases or symptom complexes in our list are due to disorder of the sympathetic nerves. Moreover, it may be asserted that the pathogenesis of others has been satisfactorily explained.

One of the diseases that has been assiduously studied in modern times is neurasthenia. What do we know of the so-called neurasthenic state to-day that was not known to Beard a generation ago? The fact that we have learned to employ with greater efficaciousness hydric, hygienic, and climatic measures to a more beneficent and satisfactory end does not by any means signify that we have increased our understanding of the pathogenesis of neurasthenia. The definitions of neurasthenia which writers give is but a more or less laborious transcription of the permanent symptoms of that condition. True, it is taught that the neurasthenic state is an increased fatigability of the cerebro-spinal system or of different segments of this system, which may be predisposed to by that which is called a neuropathic heritage, and acquired by giving receptivity to certain factors that are known statistically to precede its occurrence. But so far this merely attests our capacity for accurate observation. A similar knowledge would be forced upon a clinical clerk whose sole duty was to record the cases that come before him. The fact that the vast majority of neurasthenics show abnormal conditions of various secretions and excretions (symptoms of the disease, we think, and in no wise to be construed as causative) have led many observers to undertake elaborate investigation of these functional abnormalities. Unfortunately, we believe, they have not rested their labors at this point. They and the theorists have set to work to show that these abnormal substances exercise such pernicious effect upon the cerebrospinal system that they cause the disease. It is the premises, and not the logic, of such theorists that concern us. No one will deny that secretory and excretory abnormalities are present in every case of neurasthenia. But how, we ask, can symptomatic and essential accompaniments of a diseased state be held responsible for the diseased state? That is the question.

The exhaustion of the cerebro-spinal nervous system may be the result of tissue and glandular over-activity, or under-activity, or of the action of poisons generated within the body. But what conditions these states? We do not ask what causes them, but how are the causes mediated? Many painstaking experimenters have striven to show that there exist certain definite histological changes in the cells of the central nervous system which are responsible for the occurrence of the symptoms of the disease. A few years ago Hodge, of Clark University, made a series of experiments which seemed to show that fatigue caused varying changes in the constitution of the cell body. Other physiologists have confirmed his findings as the histological changes in the basis of cell metabolism. On the other hand, Berkeley and others have shown that changes analogous to these in the cell body take place when certain exogenous or endogenous poisons circulate in the system. As a result of such experimentation, many theoretical superstructures have been raised to show that the neurasthenic state arises when such changes as those described resulting from fatigue, from poisoning, etc., go on in the system. According to these, neurasthenia becomes a primary disease of the central nervous system, but that this explanation does not satisfactorily encompass the pathogenesis of neurasthenia is shown by the great number of credible investigators who look upon it as secondary to the products of defective oxidation and belonging to the same group as gout, diabetes, pathological obesity, and other morbid states dependent upon abnormal oxidation processes in the organism. The theory that neurasthenia, as well as the conditions just enumerated, are due to defective oxidation, is more fortified by scientific investigation corroborative of it, than most of the other contentions. Attention has recently been called anew to the matter by Biernacki, who was apparently of the belief that the pathogenetic relationship had not before been suggested save in an obscure way. Vigouroux soon set him right in the matter. Biernacki has, however, discussed the subject more lucidly than any one heretofore, and has in addition shown that the blood in cases of neurasthenia and hysteria undergoes such histochemical changes that it sediments as slowly as defibrinated blood, but the sediment is eventually much greater than normal. In other words, the fibrinogen, and possibly the fibrin ferment, are deficient, and this is in reality an expression of deficient oxidation.

The fatal shortcoming of every theory that has so far been propounded to explain the pathogenesis of neurasthenia is that the subject-matter is viewed too narrowly. Investigators have striven to show that cause and effect must needs be close together. We venture the belief that no one can be satisfied with the reputed explanations which the various theories of neurasthenia give, if he will consider the question from a point of view that will allow him to survey the entire disease, its development, its course, and its termination.

If we were asked to state didactically the nosology of neurasthenia, we would say that it is a disease of the nervous system in which we are unable to correlate the abnormality of function which we recognize with a definite abnormality of structure which must exist because no normal cell performs its function abnormally. If it is not primarily a sympathetic neurosis, it at least must be admitted that the peccant factors that precede its occurrence with such frequency that they are held to be causative are operative primarily on the sympathetic system, the immediate result being deterioration of nutrition and incapacity for reconstruction which is at the bottom of the inertia, mental and physical, which is the striking feature of the disease. Were we to take up the symptomatology of neurasthenia and pass in review the prominent features of the disease, we would find that disorder of sensation and of motion do not play the most conspicuous part. On the contrary, the symptoms are in the main referable to perversion in the domain of the sympathetic system of nerves. We would not be understood to deny that histological changes of importance occur in cells of the cerebro-spinal system after the action of such poisons as strychnine and tetanus toxins; after exposure to excessive heat and cold; after prolonged fatigue; after the ingestion of poisonous quantities of alcohol, etc. Every one must admit that such factors produce changes in the chromophilic substance of the

ganglion cells in the cerebro-spinal system, and a variety of granular degenerations detectable by the Nissl method of staining; but even though such changes were constant, they are nowise sufficient to explain the symptoms which they are reputed to produce. It is very much more likely that these poisons or noxious influences, call them what we may, exercise first and primarily injurious effect upon the sympathetic nervous system, and that these injurious consequences become manifest directly in the systems of the body cared for by that great trunk of nerves and its ramifications. We believe that study of the sympathetic system, clinically and anatomically, will be rewarded by a fuller understanding of neurasthenia than we are in possession of to-day.

It is quite impossible to take up *seriatim* the various diseases or diseased conditions that we have enumerated as coming under the head of those conditioned through the sympathetic nervous system, but we shall refer in some detail to a few of them. And let us begin with arterio-capillary fibrosis, a disease whose attributed causations and clinical course have been very much studied since attention was centred upon it by the first communication of Gull and Sutton. Its morbid anatomy is known to be a gradual hardening of the middle and external coats of the small blood-vessels and eventually, but not essentially, of the internal coat due to connective-tissue formation, developed at the expense of the structural elementts. Its pathogenesis is a closed book. Numerous theories have been suggested to explain the mode of its attack. We know that chronic indigestion, rheumatism, gout, and certain forms of poisoning, such as lead, and possibly alcohol and syphilis, are the most important apparent factors in producing it. We know that it occurs in the inferior races more frequently than in the superior, negroes being especially liable. And finally we know that a great number of causes conveniently grouped under the head of neural trauma: worry, excitement, overwork, anxiety, and disproportionate amount of the burdens of life may be enumerated. And that is all we know of its causation. How these factors act to bring about the gradual death of the blood-vessels which is at the basis of the disease, has not been shown. There are those who believe that the physical dissociation of the components of the blood which is apparently the basis of rheumatism or the chemical destructions and combinations forming the morbidity of gout, or the retention in the blood of substances resulting from defective metabolism in chronic indigestion, so act upon the blood-vessels, in a mechanical sort of a way it would seem that they mean, as to produce this sclerosis. But this seems neither probable nor logical. If this encompassed the explanation of arterio-capillary fibrosis, the changes must needs be more uniformly distributed and more regularly progressive than they are. Moreover, if the *materies morbi* were operative through the blood circulating in the vessels, the immediate result should be an endarteritis like the desquamative inflammation of the uriniferous tubules which results from irritant matters in the system thrown off by the kidneys, but we have already stated that endarteritis does not form a part of the disease, or at least not until a very late period. It therefore seems incumbent to seek some other explanation for the pathogenesis of this affection, and without consideration of the theories that have been heretofore advanced, we desire to suggest that the disease is conditioned both directly and indirectly through the sympathetic nervous system. If we take, for example, chronic indigestion and trace its relationship to this condition, we shall see that the primary disorder, whether it be due to improper food or excessive food, or what not, is a disturbance of the glandular secretions in the alimentary tract, and a perversion of the circulation in the parts. Now the function of maintaining the integrity of glandular secretion and of circulation is intrusted to the sympathetic nervous system. When agencies cause disturbances of these functions, they do it through the sympathetic nervous system. The immediate consequences are seen in the sympathetic supply of the part, but the remote consequences are oftentimes manifest in the distant sympathetic nervous system, and particularly in those parts which are incessantly active. These parts are particularly the kidneys, the heart, and the vital centres situate in that part of the cerebro-spinal system known colloquially as the base of the brain. It is in these organs or parts that the lesions of arterio-capillary fibrosis are first manifest. But it is not entirely, or perhaps not in large part, through the conjoint disturbance of the various segments of the sympathetic nervous system that such lesions in these organs are brought about. The various injurious substances which result from the original disturbance of glandular action and circulation act upon those parts where metabolism goes on with greatest intensity, and they act directly through the vasa vasorum of the vessels of these parts and of the larger vessels. The vasa vasorum being distributed predominantly to the tunica media, this is the first to reveal the lesion. A similar explanation holds for the relationship of gout, rheumatism, and neural trauma to arterio-capillary fibrosis.

Rheumatism is another disease that has resisted the efforts of the nosologists and the pathologists in a particularly grim and obstreperous way. Its pathogenesis is one of the most obscure chapters in medicine, and its treatment one of the most unsatisfactory. Of the great number of theories that have been propounded to explain its development, none is adequate. Most, if not all of them, make the fatal error of postulating the conditions found in full development of the disease as causative of the disease itself. To us it does not seem legitimate to contend that because the blood is excessively acid the acidity is responsible for the rheumatism. On the contrary, the lactic acid, or whatever acid it may be, is the result of the rheumatic condition, and in all likelihood it has absolutely nothing to do with causing the rheumatism. It seems to us necessary to admit, first of all, that rheumatism is attended in its development by profound dissociation of the physical components of the blood, and with this physical dissociation there are certain chemical changes. Now, how are these conditions brought about? From reflections on the causation, the manifestation, the course, and the terminations of the disease, we are led to the belief that they are brought about through the sympathetic nervous system. This system being disordered from exposure to colds and dampness, or certain climatological and meteorological conditions which we in no way understand, the immediate effects are expended upon the blood-producing and the blood-elaborating tissues, the result being the physical dissociation and resultant chemical changes above spoken of. The disturbed hæmogenesis and the hæmolysis account for the apparent symptoms of the disease, such as the fever, the periarticular effusion, the anæmia, and the acidity of the excretions. The recurring reports of a specific infection as the cause of rheumatism need not be considered, for there would still remain the rheumatic predisposition which is generally admitted to be most important.

A similar process of reasoning might be attempted to explain the pathogenesis of gout. Here, of course, it becomes necessary to inquire into the formation and development of uric acid, which is the antecedent of the chemical change essential to the formation of the compound which exists in the blood when the gouty diathesis is fully established. If our argumentation has been comprehensible, it is unnecessary again to go over the ground to show the relationship between

disorder of the sympathetic nervous system and the development of uric acid. Every one admits, we believe, that the formation of uric acid is the result of defective and incomplete nitrogenous metabolism. Our contention is that for incomplete nitrogenous metabolism, or defective metabolism of any kind, to exist, there must be necessarily dereliction of the sympathetic nervous system. Naturally, we admit that insufficient oxidation is a stage or a factor in incomplete metabolism, but defective oxidation does not result, providing the oxygenating forces are properly at work, if the sympathetic nervous system is not disordered.

The relationship of the sympathetic nervous system to the development of gout is in all probability the key to the intricate problem of the relationship of the uric-acid diathesis to neurasthenia, to epilepsy, to migraine, to tachycardia, and to various other disorders of the sympathetic and cerebro-spinal system which Haig and others have unswervingly contended for during the last ten or twenty years. The contentions of the investigator just spoken of have been made light of by many, and repudiated by others, and with a good show of reason on the part of both, because Haig has overestimated the importance of uric acid in bringing about these conditions, and has not, apparently, had a comprehensive conception of their interrelationships. We hold that it is absurd to say that uric acid causes epilepsy, just as much as we hold it absurd to say that constipation causes epilepsy. Moreover, we see the ridiculousness of claiming that a majestic disease like migraine, or neurasthenia, is brought about by the retention in the system of an amount of uric acid which might be given to a pigeon without causing any serious disturbance. Nevertheless, we believe that the occurrence of an attack of uricacidæmia precedes, accompanies, or follows migraine, epilepsy, neurasthenia, etc., very frequently, and is in reality at times a part, but not an essential part, of these diseases. The formation of uric acid is an index of the derelict duty or perverted activity of the sympathetic nervous system, and so is the attack of migraine and gout and epilepsy. In reality it has the same relationship to the occurrence of attacks of epilepsy as has constipation. The latter points to an atony of the intestinal walls which in turn indicates disordered sympathetic innervation.

And so we might proceed to adapt the different diseases or conditions that we have set down in the above list to disorders of the sympathetic nervous system, but we shall content ourselves in referring to two more of them—Graves' disease and hysteria.

Like all the other functional diseases, the theories that have been advanced to explain Graves' disease are almost innumerable. They are so familiar to this audience that we shall not take the time even to enumerate them. The theory of the present day that is most accepted seems to be that it is an acute toxæmia of thyroidation, and this is in reality one-half of the truth. In other words, the hyperthyroidation probably bears the same relationship to Graves' disease as uric acid does to gout. It is a stage in the disease. Itself a symptom; it causes other secondary symptoms, but such symptoms are not essential to the fulfilment of the clinical picture of the disease. Graves' disease is primarily a disorder of the sympathetic nervous system, not alone of the cervical sympathetic, which is most profoundly deranged, but of the sympathetic nervous system all over the body. How else can be explained the visceral symptoms, the secretory symptoms, the psychical symptoms, the amyosthenia, the circulatory symptoms, the cutaneous symptoms, and the many other symptoms that are as important, if less conspicuous than the triad of bulging eyes, enlarged neck, and rapid beating of the heart? Some may say that all those are explained by the poisoning of the system from the hyperthyroidization.[1] But this objection may be summarily dismissed, and for the following reasons: These symptoms occur just as frequently in cases in which there is no thyroid enlargement (and therefore probably no excessive thyroid secretion) as in those in which there are enlargements. If we look upon Graves' disease as primarily a disorder of the sympathetic nervous system, a neurosis of the emotional nervous system, as Burney Yeo calls it, we shall have no difficulty in interpreting all the symptoms, even to the von Graefe and the Stelwag symptoms, which have perhaps offered as much difficulty of satisfactory explanation as have any of them. According to this explanation, the excessive thyroid vascularization is the result of impaired vessel tonus in this highly vascular tissue.

Perhaps the most convincing, if not the most scientific argument in favor of the view that Graves' disease is a derangement of the emotional nervous system is to be found in the resemblance between exophthalmic goitre and fear. As Mackenzie[2] has suggested, the descriptions given by Darwin and Sir Charles Bell of the condition of man in intense fear might be taken to stand for a delineation of the early stage of exophthalmic goitre. It is universally admitted that terror, and shock which it produces, are anatomically dependent upon derangement of the sympathetic nervous system, the most profound feature being an inhibition of the tonus of the solar plexus with a consequent accumulation of blood in the paretic great veins of the abdominal cavity.

It we were inclined to use the therapeutic test as a factor in bolstering our contention that diseases of which we have been speaking are in reality sympathetic neuroses, we could not make use of any to better advantage in support of this than exophthalmic goitre, for the treatment that has been found of genuine service in the disease can be interpreted only in the light of its influence on the sympathetic nervous system.

Hysteria is the functional disease *par excellence* that has baffled so far all modes of investigation, pathological, anatomical, chemical, and speculative. At the present time we are taught to look upon it as a mental disease. Recently a histological explanation has been offered for its manifestations. This theory is founded on the attributed shortening and elongation of the dendrites, which break or close the contact between the cell body and the fibre. It is needless to say that this theory has not met with much favor or wide acceptance. If it is a mental disease, as most modern writers seem to teach, it is remarkable that it is the only one of this order having a permanent somatic symptomatology—a somatic signature, as it were—hemianæsthesia.

Looked at from the standpoint outlined above, hysteria is a disease eminently hereditary; that is, it is a disease occurring and developing in a suitable soil, a sympathetic nervous system of lessened stability. The only seeming exception to this is traumatic hysteria, but if the patho-mechanical working of the special etiology is investigated, the analogy with and sameness to other forms of hysteria is established. No one can deny that the emotional element is of far greater importance in causing traumatic hysteria than the physical injury. If this was not so, how could we explain the fact that epileptics who not infrequently receive violent injuries do not develop traumatic hysteria? Perhaps we ought to say that a person who is partially unconscious, as from alcohol, sleep, or syncope, never develops traumatic hysteria after injury, though the latter be profound.

Hysteria is more prevalent in the degenerating races and in the upper strata of society, with their intermar-

[1] See Greenfield's Bradshaw Lecture on the Thyroid Gland, British Medical Journal, December 9, 1893.

[2] Clinical Lectures on Graves' Disease, Lancet, September, 1890.

riages and decadent tendencies, than in the middle classes. It is a disease which begins, as a rule, in the earlier years of life. We have studied a classical example in a child five years old. When it shows itself at other periods, the provocative agencies are accidental.

Aside from a soil suitably prepared by heredity, the most potent and perhaps the exclusive etiological factor in its causation is emotional traumatism. Witness the rapidity with which emotional disturbances are evident throughout the whole system: pallor and flushing, trembling of the knees, amyosthenia, profuse perspiration, etc. When an attempt is made to explain the occurrence of these symptoms, it will be found necessary, we believe, to admit that the causative factors operate primarily on the sympathetic system. Not one of the clinical symptoms that this disease calls forth resists explanation according to the theory which we offer. The locality of the display only offers some difficulty, and this will have to be explained by searching for individual etiological conditions and local predisposition. To illustrate how closely hysterical phenomena are parallelized by the features of a sympathetic disorder which we outlined in the beginning of this essay, we may say that the general characteristics of an attack are: (1) Sudden onset and disappearance; (2) spasmodicity and periodicity; (3) onset preceded by some sort of an announcement; (4) disappearance of the symptoms when the emotional superintendent, the sympathetic or vasomotor system, is disengaged or temporarily paralyzed—during sleep, for instance—when the attention is distracted, and so on; (5) disturbance of function is almost always coupled with sensory disturbance of the same organ.

In conclusion, we shall make brief reference to the pathogenesis of acromegaly. It is taken for granted that it has been proven beyond cavil that this disease stands in relationship to disease or disordered function of the pituitary body. If there are those who do not admit this, they are immune to scientific evidence. On account of the obscurity of the functions of the pituitary gland, pathologists have been greatly handicapped in offering a laudable explanation of the pathogenesis of acromegaly. Recently de Cyon has shown that excitation of the pituitary body manifests itself by a marked change in blood pressure and by a considerable slowing of the beats of the heart. This slowing of the heart beat, which has been attributed to the direct stimulation of the nerve endings of the pneumogastric in the oblongata from variations in pressure, is in reality due to a reflex stimulation, the origin of the stimulus coming from the pituitary body. He has also shown that extracts of the pituitary body injected into the veins of an animal produce effects on the heart and blood-vessels identical with those which are brought about by electrical or mechanical stimulation of the organ. These experiments suffice to show that the pituitary body is functionally at least, and we believe morphologically as well, a part of the sympathetic nervous system. Admitting that this is so, it requires no great stretch of the imagination to follow out the evolution of acromegaly, or, better said, the devolutionary changes in the body which eventuate in acromegaly. The prolonged lowering of blood pressure and slowing of the circulation is manifest first and most persistently in the extremities, the pedal, carpal, and cephalic. The result of this is a slowly developing hyperplasia in all the structures entering into the formation of these parts. The trophic symptom, the metabolic phenomena, the impairment of physical capacity and mental faculties—in brief, the salient accompaniments of the disease, aside from those caused by mere mechanical conditions of an enlarged pituitary—are easily explained according to this theory.

In closing, we hope that we may be permitted to say that no one can be more keenly alive to the fragmentary character of the foregoing contentions and observations than the writers. Despite this, we have hazarded its presentation as a preliminary communication.

TRAUMATIC RUPTURES OF THE HEART, WITH A CASE.*

By RICHARD COLE NEWTON, M.D.,
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F. M——, aged twenty-eight years, American born of German parents, carpenter. This young man was a wheelman of some experience, and was reported to have ridden in some races. On the 19th of September, 1898, at about ten minutes after five o'clock, he was riding his bicycle rapidly, when the front wheel came in collision with a stout rubber and canvas hose, four inches in diameter, which was lying on the ground across the road and was distended with water, which it was conveying under pressure from a hydrant to a water car. There were only two or three eye-witnesses to the occurrence, and their accounts of it differ somewhat. There seemed to be no doubt, however, that the so-called head of the wheel was broken near its junction to the fork by the force of the collision, and the rider was thrown up a foot or two in the air and fell heavily near his broken wheel. It is probable that he kept hold of the handle-bar and took it with him when he left the saddle. As he struck the hard macadamized road the handle-bar was turned over, and its post, a straight steel rod, six or eight inches long and an inch in diameter, was interposed between his body and the ground, and consequently struck him with great force in his chest. He got up, holding his hands to his left side, and staggered a few feet, and then fell down in the road, where he remained groaning and writhing with pain. Dr. Wilson, of Bloomfield, saw the man a few minutes after the injury, and found him collapsed, cold, and sweating. He was nearly pulseless, and was lying curled up and in great pain. He was partly conscious, but gave no clear account of himself. A hypodermic of brandy was given him, which seemed to revive him somewhat. No marks or bruises were detected on the body or the head. In the mean time, a wagon having been brought, the man was removed as carefully as possible to the Mountainside Hospital. Before he arrived there he revived enough to tell his name and residence. He was still in great pain and had a tendency to throw himself over on to his left side. He did not vomit nor raise any blood, nor did the bowels or kidneys act. After he had been carried into the hospital, the writer, who was at this time the surgeon on duty, was summoned. The man's pulse was then 78 and moderately strong. He called for water, but was able to swallow only a very little. There were no convulsions. Before the writer arrived at the hospital the man had quietly died at 6:45 P.M., a little more than an hour and a half after the fall. Dr. Washington, the county physician, was notified, and at about eleven o'clock the next morning he viewed the body and directed a partial autopsy.

The autopsy was made seventeen hours after death. The body was that of a well-developed, muscular young man about five feet six inches tall, and weighing about one hundred and forty-five pounds. Rigor mortis was marked. Two or three unimportant bruises were noted on the shins and about the knees. A small semicircular, freshly made, depressed mark was seen on the skin over the sixth rib about half-way between

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the nipple line and the sternum on the left side. This had apparently been inflicted by a piece of tubing or other hollow cylindrical body about an inch in diameter. A small depression, about an inch internal to this mark, was noted, as though one of the costal cartilages had been fractured and depressed; and pressure at this spot showed that this lesion had occurred. When the chest wall was opened, nothing abnormal was detected except the fracture of the sixth costal cartilage, near its junction to the sternum, and some laceration of the intercostal muscles. The pericardium was intact, but was somewhat distended. When it was opened, it was found to contain from eight to ten ounces of dark, clotted blood. When the heart was lifted up, its cavities were partly distended with blood. Its weight was eleven and one-quarter ounces after all the blood had been washed out of it. A transverse rent was discovered at the apex of the right ventricle, extending through its wall. The tear had partly separated a triangular flap of the heart substance. The measurements of the flap were as follows: From apex of the heart to the upper extremity of the posterior tear, one and one-fourth inches; from the apex to the upper extremity of the anterior tear, one and five-eighths inches, and at each of these extremities the epicardium was torn several lines farther than the muscular tissue. This tear of the epicardium was more extensive on the anterior aspect. On turning up the flap the rent measured from side to side externally one and one-half inches, and internally through the endocardium three-eighths of an inch. The internal rent was immediately contiguous to the interventricular septum. In other respects the heart walls and valves were normal and competent.

Showing point of rupture near apex of heart.

A photograph of the heart was kindly taken for me by Dr. Henry Power and is reproduced herewith. The cause of death was evidently the cardiac rupture, apparently produced by the same force that had fractured the sixth costal cartilage.

Rupture of the heart from contusion without penetration of the chest wall is a rare accident. Gamgee had collected twenty-eight cases when Ashhurst's "Surgery" was printed in 1871, and this number is quoted in Dennis' "System of Surgery," printed in 1895, and in Gould and Pyles' "Anomalies and Curiosities of Medicine," printed in 1896. Gamgee's list was also referred to by Mr. Cecil Robertson in 1897,[1] who, however, placed the total at twenty-two. So it seems certain that this accident must be very rare if there have been no additions to the published list in twenty-five years. My impression, however, is, after a partial review of the medical literature for that period, that the next compiler can considerably augment, if not double, Gamgee's list. This, however, only confirms the previous observations upon the rarity of the accident.

Rupture of the heart from any cause must be a very infrequent mode of death, as, for example, Kouskoff[2] reports that he has observed only three ruptures of the heart in 8,000 autopsies. In the West Riding Asylum, Wakefield,[3] only one rupture of the heart was noted in 4,516 deaths. This last was a spontaneous rupture due to disease of the heart muscle. And of the three cases observed by Kouskoff one at least, and probably all, were due to similar causes, and were in elderly people. I have, however, found a few recent cases of death from rupture of the heart from a bruise or kick, some with and some without fracture of the ribs or sternum, without penetration of the chest walls, which are of so much interest that they will bear recapitulation.

1. A lad aged sixteen years[4] was caught between the shaft of a trap drawn by a runaway pony, and some wooden railings. He lived a month, though autopsy revealed no injury to the superficial tissues or the ribs. A rupture one-third of an inch long was found in the posterior aspect of the left ventricle. The myocardium was perfectly healthy except at the point of rupture. The accident had caused a partial rupture of the inner portion of the left ventricular wall opposite the spot where the wagon shaft had pressed against the breast. This had developed into a cardiac aneurism which had subsequently burst.

2 and 3. Vestberg[5] gives two cases of aneurism of the heart due to traumatism in a collection of sixty cases of cardiac aneurism, published in the *Nordiskt Med. Ark.*, January 10, 1898.

4. J. B. Gibbons[6] gives the following case in the *Indian Medical Gazette*: The patient, a cooly thirty years old, was struck across the chest with a bamboo walking-stick. He fell to the ground, and vomited. He was taken to a hospital, where he died three hours afterward. It was thought that he had sustained a fracture of the spleen. This viscus was found upon autopsy to be intact. The pericardium, however, was distended with a quantity of blood, estimated at about fourteen ounces. The heart was contracted, and there was a small irregular-shaped rupture in the apex communicating with the right ventricle. The muscle fibres appeared healthy, and the wall of the ventricle was of the usual thickness, except at its apex, the point of rupture, where the wall was unusually thin. There were no signs of myocarditis either recent or of old standing. The arteries and valves of the heart were quite healthy. The stomach contained forty-eight ounces of rice and water. The organs generally were healthy. The reporter observes that ruptures of the healthy heart are comparatively rare injuries even in cases where the chest has been submitted to great violence, and when present are commonly associated with fractures of the ribs or sternum and often with ruptures of other organs such as the lungs, liver, or spleen. The chief peculiarity of this case was that a blow with an ordinary walking-stick hurriedly struck by a man of poor physique should have ruptured the heart, an organ which generally escaped injury even when the thorax had been subjected to great violence.

5. Hutchinson[7] reports that a farm laborer aged fifty-

nine years was brought to a hospital at midday, having received a kick of a horse on the forehead and the chest, two hours before. A hæmatoma occupied almost precisely the præcordial area. The skin was unbroken, and there was no evidence of fracture of the ribs. The extremities were very cold. The pulse was 60 and regular, but of small volume and low tension. At 12:20 the patient was suddenly attacked with severe pain in the cardiac region and between the scapulæ. He complained much of want of air. The pain was relieved somewhat by hot fomentations. In his struggles for breath the man nearly jumped out of bed, and on being restrained seemed to derive some comfort by lying on his left side. He died at 2 P.M. On autopsy no fracture of the ribs was found, and there was no ossification of the cartilages. A rent of the pericardium was noted anteriorly and a second one communicating with the pleural cavity. The heart was lying in its normal position and in diastole. A rupture was discovered at the extreme apex of the right ventricle. This was direct and not valvular in character. The cavities of the heart contained no blood. The valves appeared quite healthy. The left pleural cavity, however, contained considerable blood, causing partial collapse of the left lung. There was slight atheroma of the aorta, and the heart muscle looked pale. There was no evidence of disease or injury elsewhere. The reporter said that this man had probably lived four hours because he had a rupture of the pericardium and adjacent pleura which permitted the escape of the effused blood from the pericardial sac, thus preventing its over-distention and the consequent compression and rapid stopping of the heart.

6. Dr. Bennett[8] reports a case of rupture of the heart from explosion of a bomb. There was no rupture of the pericardium. The man lived three hours.

7. M. Terrillon[9] reports that a lad aged twelve years died four hours after a fall with tear of the cardiac wall.

8. He also reports that a man aged twenty-one years was kicked in the chest by a horse. He got up and walked toward the stable, but fell dead after taking a few steps. There was fracture of the sternum, although there was no outward appearance of the blow. The pericardium was intact and was filled with yellowish serum and coagulated blood. There was a rupture half an inch long in the right ventricle, also a fissure in the interventricular septum and an incomplete tear at the circumference of the auriculo-ventricular orifice.

9. A case of traumatic rupture of the pericardium and both ventricles from fracture of the sternum, no ribs or costal cartilages having been broken, is reported[10] in the *British Medical Journal*, October 14, 1893.

10. Dr. Anskoff[13] reports a case of a mechanic killed by an explosion. The autopsy showed fracture of the third rib and of the fifth costal cartilage. The left wall of the pericardium was torn, but the auricles were intact; whereas both ventricles were torn, also the interventricular septum. There were no ecchymoses on the cardiac walls. The endocardium was almost intact, but it was transparent at the apex of the left ventricle. The papillary muscles and the tendinous cords were pulled from their attachments in the left ventricle. The valves were intact and presented no appreciable change to the naked eye. According to Dr. Anskoff, rupture of the heart in this case may be compared to that of a balloon filled with water to which a violent blow has been given.

11. Mr. Cecil Robertson[1] reports in *The Lancet* a case of a man aged forty-nine years, apparently healthy, who opened the door of a railway carriage just as the train began to move, and fell somewhat heavily, striking his left shoulder on the ground. When asked if he was hurt he replied "No," and proceeded to walk some two or three hundred yards to his work, where he died three-quarters of an hour after his fall from the train. The pericardium was intact, but was distended with a mass of blood-clot and fluid blood. On the front of the left auricle was a rent one and one-fourth inches long. The wall of the auricle was very much thinned at the point of rupture. The ventricles were hypertrophied. The heart weighed twenty-two ounces. Beyond a slight abrasion over the right knee, there were no external marks of violence, and there is little doubt that the cause of the heart rupture was the violent impact of the left shoulder upon the platform.

12. Whitaker[14] says that Ward reports a rupture of the heart from external violence without breach of the skin.

13. Fischer reports the rupture of an apparently sound heart.

14. Dransart gives a rupture of the heart without involvement of the endocardium.

15. I clipped the following from the New York *Sun* of April 2, 1899: C. McCoy, aged seventeen years, received a blow over the heart while boxing. He sank to the ground and died in ten minutes. On autopsy he was found to have an enlarged heart, which had burst.

16. Dr. John H. Larkin reported to me verbally the case of an Italian laborer, who was struck in the breast by a flying missile and died in a few hours. The autopsy showed a rupture of the heart without penetration of the chest wall.

Of Gamgee's[3] twenty-eight cases of traumatic heart rupture, in nine there was no fracture and "either no bruise of the parietes or a very slight one." The pericardium was intact in at least one-half of the cases, and in twenty-two in which the precise seat of the lesion was noticed, the right ventricle was injured in eight, the left in three, the left auricle in seven, and the right in four.

The longest period which any patient survived the injury was fourteen hours.[6]

The peculiarities of my case, which render it nearly or quite unique in medical literature, are: (1) That it is, so far as can be ascertained, the first rupture of the heart due to a bicycle accident. (2) That I can find no record of a case in which a blunt instrument fractured one costal cartilage and drove the fractured extremity of that cartilage through the apex of the heart without tearing the pericardium. (3) Had the site of the blow or its direction been slightly altered the heart rupture would not have occurred, and therefore the chances of the same accident occurring again seem infinitely remote.

A consideration of the mechanical aspects of this accident shows that the heart was probably in systole when struck, since, as M. Terrillon has pointed out, if the blow is received in systole the contracted state of the cardiac muscle fibres predisposes the rupture to take place at the point struck, probably the right ventricular wall, and the shock, if of sufficient force, may also affect the pillars and septa and cause there also a solution of continuity; whereas, if the blow is received while the heart is in diastole the heart cavities are filled with blood and are communicating, so that eccentric compression may produce a tear in the resisting valves or the septum.

In speaking of this aspect of cardiac rupture Prof. A. F. Holmes, after reporting an instance of rupture of the wall of the right ventricle without a tear of the pericardium in a case of gunshot wound of the chest, says: "Entertaining, therefore, no doubt that the wound was caused by the direct contact of the ball driving the pericardium before it, I think that the manner of its formation may be more readily understood by supposing that at the instant of being struck the heart was in the act of contraction, its fibres hard and rigid from their muscular action. In this state

the ball, suddenly impinging, produced an effect similar to what happens to an overbraced harp-string when struck; the fibres snapped across."

In Professor Holmes' case the man when shot was making strenuous exertion, endeavoring to force his way against armed opposition up some steps and into a house. He was a young man eighteen years of age and, so far as known, in good health. His heart was also healthy. In all these respects the case resembled mine. My patient was young, strong, and vigorous, and at the time of the injury was making powerful exertion. Whether he tried to "jump" his bicycle over the extended hose, as is sometimes done, or not, cannot be determined, but his heart surely was pulsating with great vigor, and as the apex was pushed upward and toward the chest wall in systole, it met the fractured end of the broken costal cartilage, which was driven against it with great force, and the rupture resulted. As the unfortunate man was impaled upon his detached handle-bar only for an instant, this force was only momentarily exerted, which in addition to the limited power of movement of the cartilage (restrained by the muscular and tendinous structure of the chest wall), and owing to the fact that its extremity was smoother and softer than the end of a broken bone would have been, may account for the limited extent of the heart rupture and the non-penetration of the pericardial sac.

If any one believes that this rupture could have occurred from within outward, a glance at the heart itself will show that the anterior or external leg of the triangular tear is longer by three-eighths of an inch than the posterior or internal leg, which is strongly confirmatory of the assumption that the wound was caused as described, by the exterior fragment of the broken costal cartilage of the sixth rib being pushed inward and upward by the external force. I make the above statement, although I am aware that Fischer[24] remarks in his celebrated essay, that "ruptures of the heart caused by either external or internal violence have a similar appearance, so that from the anatomical changes no conclusions can be drawn as to the mode of injury. When the thorax has been subjected to severe concussion or violence the appearances are the same as where fracture of the rib or ribs has given rise to the rupture, or almost so."

And lastly, my case is peculiar in this respect, that the heart seemed to be quite healthy and normal, whereas in nearly all the reported cases of ruptured heart from contusion of the chest wall there was some atheroma, hypertrophy, or other abnormality or disease present. Even the cooly, whose heart was healthy in other respects, had a congenitally abnormal thinness of the apex of the right ventricle. Nevertheless, had he not eaten so freely of rice that his heart was forced against the chest wall by distention of his stomach, the stroke of a bamboo cane would not have ruptured it.

Cunningly as nature has done her work in surrounding the "citadel of life" with many safeguards, and affording it also a marked degree of mobility so that it may escape from very severe crushing wounds of the chest, occasionally, as it were, nature is caught off her guard by some peculiar and unforeseen combination of circumstances in which a usually harmless amount of force does an entirely unexpected amount of damage. Firm and powerful as the healthy heart muscle is, it will sometimes be subjected to a pressure which will rupture it, if exerted while the fibres are tense and rigid as in systole. Of the cases I have quoted I think that the entire sixteen may be added to Gamgee's list, which with my own case make forty-five in which heart rupture has occurred from traumatism or violence without penetration of the chest wall, and with, generally, little injury to the overlying parts. All of the cases seem to have been fatal, whereas a large number of stab and bullet wounds of the heart have been recovered from. It surely seems scarcely credible that so severe an injury as rupture of the heart wall from contusion can be recovered from. Fothergill says:[18] "There is no recorded case of the healing of a rupture, but on the other hand, according to Velpeau, even a wound which penetrates the entire thickness of the ventricular wall may heal by cicatrization."

Still it is conceivable that my case could have been successfully treated surgically, had a positive diagnosis been possible immediately after the injury. At all events, Rehn[16] reports a successful case of suture of a wound of the right ventricle 1.5 cm. long; and Williams[17] reports a case in which the pericardium and heart wall were both wounded. He successfully stitched up the former.

In Capellen's[18] case of suture of the heart wall and pericardium the patient lived two and one-half days. It has been found that the heart will bear sewing of its walls very well;[19] and also that aspiration of the right ventricle may not only prove to be harmless but may be of positive benefit; as, for example, a case reported by Sloan[22] and another by Roger. Other cases in which heart puncture and aspiration were resorted to are reported by Westbrook, Dana, Colwin, Evans, Bouchut, and Fischer. "In some instances temporary relief was afforded; in all no harm was done" (I quote an editorial in the MEDICAL RECORD).

A number of experiments have been performed to ascertain if possible the exact amount of injury which can be inflicted upon the heart and repaired surgically without killing the animal. Some of these have been recently reported from Breslau,[20] in which sutures were passed even nearly around the heart without doing serious damage, if secondary injuries were avoided. One-third or even one-half of the ventricles could be excised after applying a proper suture above, and the ventricles and even the interventricular septum might be freely incised and sutured. All these assaults upon the hearts of small animals were survived in four cases out of six, when severe hemorrhage could be avoided.

Verily, as the wise Otis[21] said years ago, "we are still ignorant of the degree of injury the organ may sustain without destruction of life, and can only conjecture the causes of delay in the termination of some rare cases presenting lesions that are generally instantly fatal."

The last point which seems worthy of note in my case is that the man revived perceptibly from the shock of the injury. When seen by Dr. Wilson his pulse was very bad. It improved somewhat after a hypodermic injection of brandy; and after the hospital was reached it was reported to be quite strong. The man's mental condition also cleared up so that he gave his name and address correctly. This shows, I think, that he was coming out of shock, and that his death was due to the gradually increasing effusion of blood into the pericardium. The causes of immediate death, we are told,[18] after heart injuries are two in number, nervous and mechanical. The former act by interference with the ganglia presiding over the movements of the organ, and the latter by the effusion of blood into the pericardial sac. For the former lesion surgery is of no avail. For the latter it might be of obvious advantage. Inasmuch, however, as in ruptures of the heart from traumatism both of the morbific causes mentioned are apt to be effective, the part that operative surgery can play in this class of cases must always be an uncertain factor. Another obstacle to successful interference in such a case as mine would be, of course, the difficulty in making a positive diagnosis. In cases in which there is laceration of the chest wall, a portion of the pericardium may be laid bare so that it can be inspected. In such a case it

might safely be incised and the heart examined, and, as has been occasionally done, wounds of its substance might be repaired by sutures.

Elaborate directions for operating on the heart have been given, but from the difficulties and uncertainties surrounding the treatment of heart traumatisms without penetration of the chest walls, not to speak of their extreme rarity, the benefit to be expected from operative interference must be, generally speaking, quite problematical. Exploratory operations upon the heart and the surrounding structures must, it seems to me, be, as a rule, unjustifiable.

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CONGENITAL CATARACT IN THE RABBIT: AN HISTOLOGICAL STUDY.[1]

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NEW YORK.

THE lower animals as well as man present congenital anomalies of the organ of vision. The rabbit, owing to the frequency with which it is made the subject of experiments, provides a suitable study of these deficiencies. This animal, like most animals of tropical climates, practises coition at a very early age, regardless of relationship. Consequently with them it is not strange to observe congenital defects. Professor Hirschberg has noted, in a collection of some thirty animals, a number of them presenting congenital malformations. This article, however, is not the result of an investigation made with the object of studying this point, but the specimen fell into our hands by accident.

As we were working in the experimental department of the Physiological Institute, of this city, studying plastic operations, and just as we were about to remove one of the eyelids of a rabbit, we were struck by the appearance of a whitish reflex from the pupillary centre of the animal's eye. An ophthalmoscopic examination was immediately made, which revealed the presence of an opacity of the lens, situated in the centre and apparently adjacent to its posterior pole. The other eye was similarly affected. An enucleation was performed, and after the bulbus had been slightly rinsed in running water, it was passed directly into a ten-per-cent. solution of formol, in which it remained for twenty-four hours. The globe was then divided by two parallel meridional sections, traversing the corneal margins. The parts were passed through a series of absolute alcohol of seventy, eighty-, and ninety per cent. strength, embedded in celloidin, and microtomized. Hardening with formol renders the crystalline somewhat opaque, but it is a whitish, diffuse, and homogeneous opacity, which does not in the least hinder an examination, and, what is more, does not alter the histological arrangement of the parts. The sections were stained by Van Gieson's method, which seems to us the one best adapted for a study of the lens. By a naked-eye examination of one of the unstained sections, the presence of opacities in the lens is plainly evident, as shown in Fig. 1. There is a concentric, peripheral, lamellar opacity, followed by a clear zone, and then comes a rather large opaque portion of the nucleus, which is not exactly central but in the vicinity of the posterior pole, having a point of connection with the peripheral opaque zone. This opacity is more or less circular; it is pear-shaped, having its prolongation toward the posterior pole. Enlarged forty-seven times, it can be seen that the sclerosed parts are stained yellow, while the remainder of the lens structure is of a more or less deep-red color. The nucleus is sclerosed, presenting even with the stronger magnifying power a homogeneous and almost structureless appearance. This condition is well represented in Fig. 2. It is to be noticed that the capsule seems to be thickened at the centre, and when magnified this is found to be a pathological change of the following nature: Upon examination, the capsule is found to be normal almost throughout. A portion is detached from the body of the lens, and permits of a minute examination. Lying upon the surface of the capsule is an agglomeration of very fine granular cells, with no nucleus to be detected. These cells are round, and occasionally slightly oval. They have taken the red stain. They are arranged in three or four rows, those in immediate contact with the capsule being smaller in diameter than those farther away from it. The foregoing arrangement applies also to the vicinity of the posterior pole; but at the point of convergence of the lenticular fibres these cells are ir-

FIG. 1.

FIG. 2.

[1] Read before the Ophthalmological Society of Berlin.

regular and broken-down, as though necrotic, and it is difficult to differentiate them.

At this point, too, the capsule participates in this degenerative process, and can no longer be traced. The lens substance also becomes infiltrated by these cells at the very place where the capsule is wanting. Up to now we have applied the name of cells to these structures, but if the strict sense of the word is considered, we find we have been at fault. As the nucleus is wanting, the term is incorrect.

The questions now arise, What are these structures, what is their office, and whence do they originate? And, again, is the defect in the posterior capsule primary or secondary to the presence of these structures? It is not easy to give an answer with the clearness and exactitude we should wish. Being a congenital defect, we thought that a remnant of the hyaloid artery would account for this condition, and at all events this is our explanation of the cause, deeming that the starting-point has possibly been a portion of the distal stump adherent to the posterior pole. A careful search in the direction of the optic nerve has revealed no signs of embryonic remains.

Progress of Medical Science.

Hysterical Muscular Paradox is the name given by Aldrich (*Philadelphia Medical Journal*, May 13, 1899, p. 1,069) to the condition characterized by paralysis or weakness of a muscle or group of muscles for one purpose and not for another. Thus an hysterical patient may be able to stand or walk, but be unable to use the muscles for other purposes; on the other hand, in astasia-abasia, the patient is unable to stand or walk, but is able to perform other movements.

Carcinoma of the Œsophagus.—The Swiss correspondent of *The Lancet* relates a case of carcinoma of the œsophagus, beginning at the level of the cricoid cartilage and extending almost to the arch of the aorta, in which de Quervain performed, first, gastrostomy, to enable the patient to be properly nourished after the removal of the tumor. Ten days later the surgeon removed the whole of the tumor, together with part of the thyroid gland and the left recurrent laryngeal nerve, which were already involved, drawing up the distal end of the œsophagus as far as possible and severing unhealthy tissue. The wound was stuffed with gauze and healed without reaction. A pharyngeal fistula remained, through which saliva was discharged. The patient returned to his work as a farmer, and was rapidly gaining in weight.

A Case of Tetanus Successfully Treated with Intracerebral Injections of Antitoxin is reported by Gibb (*British Medical Journal*, April 15, 1899, p. 895). The patient was a lad, aged thirteen years, four fingers of whose right hand up to the metacarpophalangeal joints were severely crushed and burned by passing between the heated rollers of a steam mangle. The fingers were amputated, but the wound exhibited signs of infection, and symptoms of tetanus appeared in the course of two weeks. Chloral in ten-grain doses was employed at first, and an injection of antitetanic serum was given hypodermically; but the symptoms progressing, five injections of the serum into one or both frontal lobes were made, at intervals of three or four days. At the end of a month all tetanic symptoms had subsided.

Effect of Subcutaneous Injection of Cinnamate of Sodium in Tuberculosis.—Dr. Lowzki (*Wratch*, 1, 1899), as a result of experiments with a two-and-one-half-per-cent. solution, draws the following conclusions: (1) The night sweats diminished gradually under the influence of treatment and finally disappeared entirely, a fact which is attributable to the tonic effect of the drug upon the circulatory and nervous apparatus. (2) Practically all the patients gained in weight. (3) The tubercle bacilli in the sputum were diminished in number; in one instance they disappeared entirely for a time, only to appear again at a later period, though in fewer numbers. (4) The purulent expectoration became mucous. (5) The cough was very much lessened. (6) In cases with a limited affection of the lungs and moderate fever, both a subjective and objective improvement appeared relatively soon. (7) In patients with more advanced changes, improvement was naturally less rapid. (8) The drug had absolutely no effect upon galloping consumption.

The Resistance of Rats to Diphtheria Toxin.—As the result of an experimental study, Cobbett (*British Medical Journal*, April 15, 1899, p. 902) has shown that the white or the white and black rat of 100 grams weight is only relatively insusceptible to the action of the products of the diphtheria bacillus, and succumbs to the subcutaneous injection of filtered cultures in quantities that are, weight for weight, from fifteen hundred to eighteen hundred times as great as those that suffice to kill guinea-pigs weighing 250 grams. The tissues of such rats are but little affected locally by the injection of large quantities of filtrate, and have not been observed to suffer necrosis. The serum of these refractory animals, in doses of 1 c.c., does not protect guinea-pigs against quantities of filtrate that are little greater than the minimal fatal dose.

The Diagnosis of Sub-Diaphragmatic Abscesses in Children.—Sub-diaphragmatic abscesses are of infrequent occurrence in children. In a collection of one hundred and seventy-six cases of this affection by Lang, twelve were in children. Perityphlitis was the etiological factor in three of these cases, perforation of typhoidal ulcers in two, traumatic intestinal rupture in two, rupture of the transverse colon from unknown cause in one, a blow on the abdomen in three, and simple gastro-enteritis in one case. Dr. W. Gold (*Medicinskoje Obosrenje*, Feb., 1899) says that the diagnostic features of abscess in children are similar to those of the adult: (1) Previous history of disease of the intestinal tract. (2) Severe pain in the region of the lower ribs and epigastrium, and radiating toward the shoulder, with hyperæsthesia of the skin in the former location. (3) The dome-shaped area of dulness, exactly the reverse of the dulness observed in pleurisy with effusion; the dulness begins anteriorly opposite the third or fourth rib, in the axillary line usually reaches the sixth rib, and then gradually descends posteriorly toward the spine. (4) The existence of healthy, compressed lung above the dull area. (5) A clear tone in the triangular space between the area of heart dulness and the suspected abscess. (6) The result of experimental puncture, in association with the well-known Fürbringer symptom (the needle oscillates with the respiratory movement in opposite direction from the diaphragm). (7) The Leyden-Senator symptom—the disproportion between the height of the exudate, the depression of the liver, and the absence of displacement of the heart. Nevertheless, notwithstanding all these diagnostic signs, it is possible to be in error, as the author observed in the case of an eleven-year-old boy that he diagnosed as subphrenic pyopneumothorax. The ninth rib was resected, and a large echinococcic cyst, lying parallel with the liver, was disclosed, but lying above, not below, the diaphragm.

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ENTEROTOMY AND PERITONITIS.

THE surgical treatment of general peritonitis, or the surgical relief of any of the conditions brought about by that disease, has long been an interesting field of surgical work. Perhaps the symptoms which have been most troublesome and apparently most dependent upon purely mechanical conditions have been those caused by the intestinal paresis with the consequent distention. The gravity of any case of peritonitis is greatly increased when there is much of this, and the medicinal means of relieving the condition are exceedingly uncertain and unsatisfactory. Many surgeons have thought of and suggested the procedure of opening a coil of intestine through a short incision or puncture, and thus evacuating more or less of the contents, but there have been differences in the technique and rationale of the operation. The distention of acute obstruction has also been treated by opening the distended coils, though in this condition the underlying cause is not quite the same as in peritonitis. Greig Smith, in his "Abdominal Surgery," advises opening the intestine distended by obstruction, and waiting, if necessary, by the bedside, with the wound open, and by manipulation and massage gradually emptying the coils, even in cases in which it is impossible to locate the obstruction. Recently much the same procedure has been spoken of in several of the current journals as being useful in cases in which distention becomes marked during an acute general peritonitis. The cases reported, in which this has been undertaken, do not specially fill us with encouragement, even when we remember that we are treating a desperate condition. In the first place, as a rule, when a patient with peritonitis reaches a stage of the disease late enough and well-marked enough to have much tympanites, he is in a bad way. His heart and lungs are laboring to overcome the upward pressure of the diaphragm, and the former organ is further handicapped by the septic intoxication of its ganglia. The intestine is loaded with decomposing matter and is distended with the gases of putrefaction. We may by operation relieve the intestine of much of its contents and thus prevent, to some extent, further septic absorption, but it is certain that unless we make several incisions into that organ we shall be unable to get rid of more than a moderate fraction of the contents, and unless we are able to remove a large fraction quickly and without much operative work, it seems clear that we are not going to do much good. It has been the experience of most who have attempted it that a single incision into the distended intestine really relieves only a small section of the organ of its contents. When the intestine is distended and paretic, the force which causes its contents to flow out of an incision is gravity combined with some *vis a tergo* from the accumulated gases and the elastic recoil of the stretched abdominal walls, and we do not have the assistance of the peristalsis which acts continuously in the normal viscus. This explains the inefficiency of one incision, and we can say that, as a rule, the length of paretic and distended intestine which can be thus emptied is a matter of inches rather than feet. The introduction of rubber tubes in both directions into the intestine enlarges to some extent the field of usefulness of the single incision. It is fair to say that there may be cases of general peritonitis with marked distention in which peristalsis has not entirely ceased, but it is also probable that in such cases other than operative means of treatment would be successful, and it is in such cases that the use of saline cathartics has given good results. When a patient has general peritonitis and reaches the stage of marked distention, he is almost invariably beyond the beneficent reach of any surgery so simple as merely evacuating the first coil of distended gut which presents itself, even when such treatment is accompanied by every adjuvant that has ever been suggested, and, as for any extensive surgery, we all know what a slim chance that affords. In acute obstruction, in which the location of the trouble is doubtful or in which the general condition is bad, Greig Smith's suggestion of opening the intestine and evacuating it through tubes with the wound kept open a number of hours is certainly rational, and the operation can be done with cocaine anæsthesia, but in such cases there is no well-marked general peritonitis, and we are relieving a mechanical condition and preventing, not trying to relieve, sepsis. In peritonitis we are not only trying to relieve mechanical pressure, but we are trying to establish a condition favorable for throwing off sepsis, when septic intoxication is an underlying cause of the paresis of the intestinal wall, and a high degree of the condition must exist in order that the paresis may be established. The idea of enterotomy and drainage in the class of cases under consideration is undoubtedly attractive, but the more we think of it, and probably the more experience we have with it, the more the operation will be relegated to the "perhaps useful but not often employed." We must remember that the intestinal contents putrefy and become septic because intestinal digestion and peristalsis have ceased, and that, in order that this may occur, there must already have developed a high degree of septic intoxication of the whole body from causes outside the viscus under consideration.

Public Baths in Baltimore.—Mr. Henry Walters, of Baltimore, has given $45,000 to that city to provide two public bathhouses.

PAROXYSMAL RESPIRATORY NEUROSES.

MODERN histological investigation has, with the aid of recently devised methods and technique, thrown considerable light upon the group of disorders commonly designated functional. Derangement of function implies alteration in structure, and each of these factors exerts, no doubt, a reciprocal influence upon the other. As the integrity of the cell depends upon its nutritive state, which is in turn related to the supply of pabulum, its metabolism, and the elimination of the products thereof, the primary and essential change in disease processes of the so-called functional type may be considered a nutritional one, to which disturbance of function naturally succeeds. To this type of disorder belong the affections designated neuroses, among the general characteristics exhibited by which is a tendency to recurrence and to hereditary transmission or to familial distribution.

A special group of these neuroses involve the respiratory apparatus and comprise the several types known variously as hay-fever, hay-asthma, rose-cold, June cold, ragweed fever, autumnal catarrh, idiosyncratic coryza, vasomotor coryza, vasomotor rhinitis, etc. All of these are dependent essentially upon the existence of an irritable nervous system (local or general), and the presence of an irritant (special or general, intrinsic or extrinsic). The susceptibility or predisposition may be inherited or acquired, and it may be dependent upon general depravity of health, the neurotic state, or local disease. The exciting influences may be introduced from without or they may be generated within the body. They may be comprised in a single substance or agency, or they may be represented by any one of a number. To this group of affections Ball (*Lancet*, February 11, 1899, p. 359) adds another type, which he designates paroxysmal sneezing, and of which, in addition to the sternutation, running at the nose is a characteristic symptom. There may be, besides, in individual cases, nasal obstruction, smarting, burning, or itching in the nares or conjunctiva, running at the eyes, and asthmatic symptoms.

The attacks of sneezing and running at the nose may recur almost daily, particularly when the patient rises in the morning, or even several times daily, and last from a few moments to half an hour or more; or they may be repeated at intervals of from a few days to a week or more and last from hours to days. In some cases there is a distinct seasonal variation. The sneezing is generally preceded by a tickling or irritation of the nose, which is not always relieved by the explosive expiration, and the act may be repeated with distressing and even exhausting frequency. The nasal discharge exhibits a tendency to periodicity of recurrence. It may be copious and troublesome, and it may occur independently of the sneezing. It is sometimes preceded by frontal or supraorbital pain or nasal irritation, and it may be excited by extfaneous influences, such as dust, cold, etc.

Often the attacks come on without obvious cause; women are sometimes worse at the menstrual periods; some patients sneeze more after meals; in some the condition is worse in the city, in others in the country, in some in winter, in others in summer. Atmospheric conditions, particularly with regard to the presence of dust, constitute the most important exciting factor. Both sexes suffer almost equally, and all ages are susceptible, although the onset is most common before twenty-five. Hereditary and familial predisposition is present in a considerable proportion of cases. A large number exhibit pathological conditions of the nasal passages, such as septal deflections, crests, spurs, hypertrophy, and neoplasms, sufficiently pronounced to cause respiratory obstruction or to bring some part of the septum into close proximity or firm apposition with the turbinated bodies, and thorough and effective treatment of which is the most important factor in effecting a cure. The most useful medicinal agents are quinine, belladonna, arsenic, and iodides—a combination in pill-form of quinine sulphate, one grain; arsenic iodide, one-sixteenth grain; extract of belladonna, one-twelfth grain, affording marked amelioration of distressing symptoms. Cocaine in four-per-cent. solution and menthol in one-per-cent. solution or menthol-camphor in one- or two-per-cent. solution, applied topically by spray or swab, often yield marked relief.

In this connection it may be pointed out that Macgregor (*Lancet*, February 11, 1899, p. 363) calls renewed attention to the usefulness of paraldehyde in drachm doses in the relief of asthmatic paroxysms. The disagreeable taste of the drug may be masked by cinnamon-water or tincture of orange-peel.

THE DIFFERENTIATION OF INSULAR (CEREBRO-SPINAL) SCLEROSIS AND HYSTERIA.

THERE are few conditions that hysteria may not counterfeit. Sometimes the discrimination of the true from the false may be made most readily, at other times it may be most difficult, if not impossible, even on the part of a skilled observer. The explanation for this similarity in functional manifestation must be looked for in nutritive disturbance in hysteria of the same structures as are attacked by the organic disease. In a word, derangement of function may arise from a number of causes, of which the factors that underlie hysteria constitute one. Though we do not yet quite comprehend its nature, we have come to look upon hysteria as a real and definite disease, and not as simulation, malingering, or feigning.

The difficulty in the distinction between hysteria and the conditions it may simulate is enhanced by the fact that both may be present together, and this is more especially true of diseases of the nervous system. Thus, in a given case it may, for reasons to be developed, be exceedingly difficult to decide whether the symptoms present are dependent upon multiple, insular cerebro-spinal sclerosis, or are of hysterical origin. This is more particularly so when the patient is a woman and the disease is seen at an early stage. Some of the means of differentiation are discussed by Buzzard (*British Medical Journal*, May 6, 1899, p. 1077) in a recent communication. As he points out, insular sclerosis is most commonly ushered in by weakness in

one of the lower extremities, often of sudden onset, perhaps accompanied or preceded by a feeling of numbness or tingling, and possibly in the sequence of emotional disturbance. Hysterical loss of power is likely to be more pronounced than that which attends the beginning of insular sclerosis, and to be attended with more marked sensory derangement, especially anæsthesia. Buzzard has observed that temporary recovery under these conditions is more usual in cases of insular sclerosis than in those of hysteria. Transitory convergent strabismus also is indicative of sclerosis rather than of hysteria; so also is amblyopia, especially if associated with pallor of the optic disc.

The knee jerks may be increased in hysteria, but they are never lost, and there is never persistent or well-marked ankle clonus. Intention tremor, nystagmus, and scanning speech form no part of hysteria. Difficulty in the expulsion of urine attends both hysteria and insular sclerosis, though usually it is more marked in the former, while in the latter there may be increased frequency of micturition and finally incontinence. Anæsthesia of the lower extremities is a symptom of hysterical paraplegia rather than of insular sclerosis. Hysterical contracture of the lower extremity differs from the contracture of insular sclerosis by being associated with well-marked and persisting ankle clonus. Besides, the former is usually of sudden, the latter of gradual, onset. Contracture of the upper extremity is more commonly a manifestation of hysteria than of insular sclerosis. The plantar reflex is, as a rule, lost in hysterical paraplegia; it may be absent in insular sclerosis also, but the associated symptoms will aid in the diagnosis. Tickling of the sole of the foot will almost invariably cause extension of the toes, and especially of the great toe, upon the metatarsus when the pyramidal tract is invaded by insular sclerosis, but not in the presence of hysteria alone.

From the foregoing it will be seen that however difficult at times the differentiation between hysteria and cerebro-spinal sclerosis may be, it can usually be made upon searching inquiry and critical investigation of all of the symptoms, with regard to both their presence and their absence. We have here another illustration of the fact that most mistakes in diagnosis are dependent upon sins of omission rather than of commission.

TYPHOID FEVER WITHOUT INTESTINAL LESIONS.

It is generally recognized that typhoid fever is a constitutional disorder, and that while the infiltration and breaking down of the lymphatic structures of the intestine, with secondary ulceration, constitute one of the most characteristic features of the disease, they form by no means the sole lesion. The typhoid bacillus finds localizations, and is responsible for morbid processes, that must be considered as primary manifestations and not as complications or intercurrent disorders. Among these may be mentioned pneumonia, pleurisy, endocarditis, endarteritis, endophlebitis, meningitis, cholecystitis, orchitis, epididymitis, osteitis, nephritis—in fact, scarcely any bodily system escapes. While in the vast preponderance of cases intestinal lesions are present, there has not been wanting clinical and pathologic evidence of their occasional absence, and it may be that in some cases in which a cause for death has not been discovered, more searching investigation might have succeeded in placing the responsibility upon the typhoid bacillus. This fact may, among other things, explain the apparent rarity of typhoid fever in children. An important help in this connection is afforded by the precipitating and agglutinating influence of the blood serum upon typhoid bacilli; but this must be considered finally as suggestive and corroborative, rather than absolutely conclusive, as it is, while trustworthy, not infallible, so far as is at present known. The decisive test consists in the detection of typhoid bacilli in the blood or the secretions or the tissues.

A number of cases of typhoid fever have been reported in which intestinal lesions have not been present, but in few has the demonstration been so unequivocal as in one recorded recently by Bryant (*British Medical Journal*, April 1, 1899, p. 776), in which the serum reaction was present during life and the typhoid bacillus was obtained in almost pure culture from the enlarged mesenteric glands after death. There was also an area of broncho-pneumonia in one lung. The patient was a child twenty months old, and a sister of seven years and a brother of five years also were under observation at the same time, with similar symptoms, including the serum reaction. The likeness in the clinical picture, in the cases of typhoid fever without intestinal lesions, and particularly the presence of diarrhœa in many of them, would indicate conclusively that the symptoms are of constitutional rather than intestinal origin.

News of the Week.

Dr. Hemmeter's Composition in Honor of His Father.—About two hundred of the United Singers of Baltimore, with an orchestra of thirty-five instruments, assembled May 29th at the grave of Mr. John Hemmeter, in Loudon Park Cemetery, Baltimore, and performed a new composition of Dr. John C. Hemmeter, son of the deceased, which was originally composed as the music to the Twenty-third Psalm.

Making Work for the Heart Specialist.—A foolish woman in Brooklyn recently took a three-hundred-mile bicycle ride in twenty-nine hours. She is a member of the Century Road Club, and has ridden in many century runs, but her last performance is a record for a woman. She has announced her intention to ride four hundred miles in forty-eight hours.

Another Suit over X-Ray Injuries. — A young man of Newport, Vt., a student of the University of Vermont, has brought suit against the professor of mathematics in the university, for damages in the sum of $10,000. He says that he sustained an injury of the leg as the result of the taking of ten *x*-ray photo-

graphs of his leg soon after the bone had been fractured and while it was healing. As a result of the experiments, the plaintiff contends, "the flesh was discolored and the sinews wasted away, compelling an expenditure of $400 to recover from the effects of the injury and causing a loss of time and consequent trouble and discomfort."

The "Index Medicus" must again, it is announced, cease publication owing to the lack of support. Writers and students will miss greatly this unequalled guide to contemporary medical literature.

The Antivaccination Congress, which was to have been held in Berlin on June 18th and subsequent days, has for some reason been postponed. Some of the antis from this country are said to have sailed before the announcement of the postponement was made, and now they are more opposed to everything than ever.

The Southern California Medical Society.—At the twenty-third semi-annual meeting of this society, held at San Diego, May 3d and 4th, Dr. H. Bert Ellis, of Los Angeles, was elected president, Dr. F. R. Burnham, of San Diego, vice-president, and Dr. Frank D. Bullard, of Los Angeles, secretary. The next meeting of the society will be held at Pasadena in December, 1899.

Sickness among Immigrants.—During May about forty-five thousand immigrants were landed at this port and two hundred and eighty-five of this number were treated for disease before getting out of the jurisdiction of the medical officers at the Barge Office. The percentage of sick has varied little during the past ten years, being about two-thirds of one per cent.

Death from a Blow on the Chest.—A man died recently in Mount Vernon from hæmoptysis caused by a blow on the chest. He was running over the railroad tracks and had just crossed one track when he caught his right foot in the signal wires between the tracks, which are used to operate the block signals, and fell on his face. The outer rail struck his chest with such force that it ruptured a blood-vessel. He managed to reach his home, where he became unconscious and died in a few hours.

The Woman's Medical College of the New York Infirmary, after an honorable existence of thirty-five years, will cease to be with the close of the current college year. The trustees have issued a statement to the effect that the college has fulfilled its mission to impart a medical education to women, and now that the medical department of Cornell University is open to women upon the same terms as to men and offers equal advantages to the two sexes, there is no longer a valid reason for its existence. The infirmary will not only continue but will be enlarged and greatly improved in consequence of a more ample income assured by the closing of the teaching department.

The Fifth French Medical Congress will be held at Lille on July 28th under the presidency of Professor Grasset, of Montpellier. The following are the questions proposed for discussion: (1) "The Forms of Myocarditis," by Drs. Renant, of Lyons, and Huchard, of Paris; (2) "Adenitis and Leukæmia," by Drs. Denys, of Louvain, and Sabrazès, of Bordeaux; (3) "The Establishment of Tolerance in regard to Drugs," by Drs. Simon, of Nancy, and Heymans, of Ghent.

A New Quarantine Commissioner. — Governor Roosevelt has appointed Mr. Hugh McRoberts, of Tompkinsville, quarantine commissioner to fill the vacancy caused by the death of Judge Patterson.

The Croonian Lecturer.—It is announced that Dr. J. Buckley Bradbury, the Downing professor of medicine in the University of Cambridge, will deliver the Croonian lectures in June, the subject being "Some Points in Connection with Sleep, Sleeplessness, and Hypnotics."

Sterilized-Milk Booths in the Parks.—The board of estimate and apportionment has appropriated $4,000 to build booths in Central Park and Tompkins Square for the sale of sterilized milk during the summer. As well might the Park board erect structures for the sale of ice, or beef, or straw hats.

Dr. G. A. Lung Honored.—Secretary Long has taken action upon the recommendation of Admiral Kautz and the commanding officer of the *Philadelphia* for official recognition of the gallant services of Passed Assistant Surgeon G. A. Lung of the *Philadelphia* during the troubles with the Samoans at Apia last April. The secretary has written an official letter to Dr. Lung commending his conduct as reflecting the greatest honor upon himself and upon the service.

Smallpox is still prevailing in many places. In Boston, which was recently declared free from the disease, it has again appeared in several widely separated districts. Beginning in Charlestown, the disease was next reported at the south end of the city, in Roxbury, and after that it was heard of again to the extreme east, in South Boston. New cases are also reported from Swampscott, Lynn, and Chelsea. In Fall River also the smallpox scare, which had just died out, has been renewed. Only about ten days ago the last of the patients were removed to the pesthouse and the quarantine on the infected region was removed, and two or three days later new cases were discovered in the same district. Cases have since been found in Flint Village, the thickly populated eastern district. In Ravena, near Albany in this State, alarm has been occasioned by the appearance of smallpox among a colony of Southern negroes at work in the brickyards. The disease began three weeks ago and spread rapidly in consequence of inefficient measures of isolation. Finally, several cases of virulent smallpox have recently been discovered in Brooklyn and removed to North Brother Island.

Influence of the Heat upon the Death Rate.—The report of the bureau of vital statistics for the week ending June 10th shows an increase in the death rate of the boroughs of Manhattan and the Bronx and the borough of Brooklyn. The death rate in Manhattan and the Bronx was 21.44 per thousand, against

16.83 for the corresponding week last year. The death rate in Brooklyn was 21.79, while the rate for the corresponding week last year was 15.17. There were 159 deaths by violence, and 57 cases of sunstroke. The total number of deaths in the three boroughs was 1,384. Of these, 925 were of children under five years of age.

Scarlet Fever in Guttenburg.—The public schools in Guttenburg, N. J., have been closed owing to the prevalence of scarlet fever among children in the town. Twenty-five cases have been reported. The county board of health has been called upon to fumigate all houses in which cases of the disease have occurred.

A Fall of Sixty Feet.—A carriage containing a four-year-old child fell over a precipice at Wappinger's Falls the other day, a distance of sixty feet. The baby carriage was smashed to bits, but the child escaped with a few bruises and no broken bones.

The Parkes Museum of the Sanitary Institute.—At the annual dinner of the Sanitary Institute of Great Britain a speaker referred to the excellent work which it had done in promoting sanitary knowledge. The public had made such use of the Parkes Museum maintained by the Institute that the council had decided to start a building-fund to provide a large building to give the accommodation required.

The Sanitation of New Orleans.—A special tax election was held in New Orleans to decide whether the property holders of the city would tax themselves over and above the State and city taxes, for forty-two years, to raise the necessary funds to drain and sewer the city and to provide municipal water-works. New Orleans is the only large city in the Union unsewered, and the prevalence of malarial and other disease there is attributed to that fact. The city is also without any complete drainage system, and is therefore subject to rain overflows. There was a very large majority in favor of undertaking the work.

Microbes in Telephones.—Dr. H. W. Hill, of the bacteriological laboratory of the Boston health department, recently made an examination of thirteen public telephones in that city. In several of the transmitters harmless microbes were found, but inoculations of guinea-pigs failed to reveal the presence of any pathogenic micro-organism. The report states, however, that this examination has demonstrated the possibility of infectious diseases, particularly diphtheria and tuberculosis, being conveyed from one user of the telephone to a subsequent user. Dr. Hill recommends the use of a liquid disinfectant. He also suggests that the receiver be cleaned and disinfected.

Yellow Fever is epidemic at Vera Cruz, Mexico, and its presence has created a veritable panic, as it is unusually virulent this year. During May there were one hundred and forty-four deaths out of three hundred and three cases, and the mortality for the first week in June was more than sixty per cent. The fever has followed the line of railway to Cordova, where there have been several deaths. The authorities of that city are taking measures for a thorough disinfection. In Texas the senseless scare over the single case of yellow fever in New Orleans has subsided, and the sapient health officials of that State have finally consented to raise the quarantine. The health boards of Mississippi and Alabama took the case calmly and imposed no quarantine.

Dr. H. Hoyle Butts has been appointed surgeon to the throat department of the Manhattan Eye and Ear Infirmary.

A Statue of Helmholtz, in front of the building of the University of Berlin, was unveiled on June 6th in the presence of the Empress Augusta Victoria and the Crown Prince.

The American Proctological Society was organized at Columbus last week during the meeting of the American Medical Association. Dr. Joseph M. Mathews, of Louisville, Ky., the retiring president of the American Medical Association, was elected president, and Dr. James P. Tuttle, of New York City, vice-president.

The Plague is spreading at Alexandria. Up to June 9th there had been twenty-three cases and seven deaths. The disease is also increasing in China, especially in Canton, San Ning, and Fat Shan. In the latter, which a Hong Kong paper calls "a city of death," the plague is raging with special virulence and carrying off its victims in large numbers. Shops and dwelling-houses are closed and their inhabitants have fled, carrying the infection with them.

The American Electro-Therapeutic Association.—The ninth annual meeting of the association will be held in Washington, D. C., on September 19, 20, and 21, 1899, under the presidency of Dr. F. B. Bishop, of Washington. Quite a number of papers have been promised, and the committee of arrangements will give the members a very entertaining and pleasurable meeting. Aside from the sessions of the association, the committee has completed arrangements for a trip to Mt. Vernon, one to Arlington, and several other social features. The headquarters of the association will be at Willard's Hotel.

Hospital Abuse in London.—*The Times* says that recently the City of London Chest Hospital, situated in the heart of the East End, the poorest district of the great city, adopted measures to prevent persons who were able to pay for medical aid from availing themselves of the free tickets. An inquiry officer was appointed, and the holder of the ticket was required to answer certain interrogations which were printed on the back. This engendered a good deal of irritation which found expression at the annual meeting of that hospital in March last, when the representatives of the workingmen's societies protested against the inquiry system and strongly urged its abolition. The result of the inquiry in respect of five hundred applicants for relief had shown that the number of undeserving cases among them had not been more than two per cent. After discussing the matter the hospital committee announced that they would omit the questions

if the representatives of the societies would undertake to issue tickets only for such cases as they deemed to be deserving of free medical aid.

Christ Hospital in Jersey City.—The new south wing of Christ Hospital, on Palisade Avenue, Jersey City, was dedicated recently by Bishop Starkey of the Protestant Episcopal diocese of Newark. "Dickinson Hall," named in honor of Dr. Gordon K. Dickinson, president of the medical board; "Stevens Hall," named in memory of the late Martha B. Stevens, of Hoboken, one of the benefactors of the hospital, and "Duncannon Hall" were dedicated in turn.

Looking after the Christian Scientists.—A report recommending the prosecution of the parents of certain children who died recently in Chicago from diphtheria, after treatment by Christian-science methods, has been submitted to Commissioner of Health Reynolds by Registrar Heckard of the health department. The report was delayed owing to a search for a Christian-science woman who attended one of the children and who was frightened into hiding by the censure of the coroner's jury.

A New Cancer Home.—The Calvary, a hospital for women suffering from inoperable cancer, was consecrated by Archbishop Corrigan on June 12th. The hospital has accommodation for eight patients. Dr. James McInerny is the attending physician, and Drs. William B. Coley and Henry D. Coe are the consultants.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 9, 1899. June 3d.—Assistant Surgeon C. A. Crawford detached from the *Peoria*, when put out of commission, and ordered to the *Wabash*. June 5th.—Surgeon H. B. Fitts detached from the naval hospital, Portsmouth, N. H., and ordered to the marine barracks, Sitka, Alaska. Passed Assistant Surgeon C. M. De Valin ordered to the naval hospital, Portsmouth, N. H. June 6th.—Surgeon C. J. Decker promoted to surgeon from December 12, 1898.

A Bankrupt's Doctors.—A ex-broker of this city filed a petition in bankruptcy recently with liabilities $29,357 and no assets except clothing worth $75. Among his debts were $1,460 owed to twenty-eight doctors and $350 to three dentists.

Obituary Notes.—Dr. Ezra R. Pulling died recently at his home in this city. He was born in Saratoga County in February, 1828, and was the son of Dr. Josiah Pulling, of Galway. He was graduated from the College of Physicians and Surgeons in 1853, and served in the civil war as a surgeon.—First Lieutenant Richard B. Westnedge, surgeon United States army, died at Manila on June 10th, of typhoid fever.—Dr. Martin L. Brooks, a retired physician of Cleveland, Ohio, died in that city on June 10th at the age of eighty-six years.—Dr. Lawrence Swan Woodhull died on June 8th at his home in Brooklyn. He was born in Huntington, L. I., twenty-five years ago, and was graduated in medicine from the Long Island College Hospital in 1896.—Dr. Simeon Lafayette Close, a well-known dentist, died on June 9th at his home in Mount Vernon. Dr. Close was born in Genoa, Cayuga County, N. Y., in 1824, and early in life went to Richfield, Ohio, where he lived for five years with a physician, earning enough money to enter the Ohio Medical College, from which he obtained a degree of M.D. He soon abandoned the practice of medicine and became a dentist, rapidly rising to the front ranks of his profession. He practised in New York about forty years.

Obituary.

ROBERT LAWSON TAIT, F.R.C.S.,

BIRMINGHAM, ENGLAND.

Mr. Lawson Tait died suddenly on June 13th, at his country residence, Llandudno, Wales. He was born in Edinburgh, May 1, 1845, and studied at the university of his native town, being made a licentiate of the Royal Colleges of Physicians and of Surgeons, Edinburgh, in 1866. In 1870 he was elected a fellow of the Royal College of Surgeons, Edinburgh, and in 1871 a fellow of the Royal College of Surgeons, England. He was also LL.D. (Albany) and Hon. M.D. (New York). From 1867 to 1870 he was house surgeon to Wakefield Hospital, and in the year following was appointed surgeon to the Birmingham Hospital for Women. Birmingham had ever since been his home. From 1875 to 1885 he was a member of the Birmingham Town Council and co-operated actively in carrying through the municipal and sanitary improvements inaugurated in that city by Joseph Chamberlain. He was professor of gynæcology in the Queen's faculty of medicine in Mason College, and at one time president of the college.

Mr. Tait was a bold surgeon and one of the pioneers in abdominal surgery in England, his success as an operator being, however, generally attributed more to his manual dexterity than to his scientific knowledge. He was a strong personality and exceedingly combative, being always engaged in controversies on a great variety of subjects. He was a voluminous writer and his pen was as caustic as his tongue. His fame among his fellows rested upon his work in abdominal surgery, but among a certain aggressive section of the British laity he was exalted as a medical champion of the antivivisectionists. Whether honestly convinced of the inutility of animal experiments or led by the irresistible inclination of the naturally combative to champion the unpopular side, he antagonized almost the entire profession in Great Britain by his public advocacy of the follies and fallacies of the antivivisection fanatics, and at the same time did great harm to English medicine by encouraging these people in their opposition to scientific study. Only a few weeks ago, indeed, Mr. Tait gave out the following as the epitaph which he wished placed over his tomb: "He labored to divest his profession of the blundering which resulted from the performance of experiments on the subhuman groups of animal life, in the hope that they would shed light on the aberrant physiology of the human groups." With time, however, the memory of Mr. Tait's vagaries in this direction will fade, and he will be remembered justly as one of those who did most to advance abdominal surgery in England, and as an apostle of surgical cleanliness, though not of chemical antisepsis.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

Fiftieth Annual Meeting, Held at Columbus, Ohio, June, 6, 7, 8, 9 and 10, 1899.

(*Concluded.*)

GENERAL SESSION.

Fourth Day—June 9th.

Printing Lists of Members.—Dr. I. N. Love, of St. Louis, moved to eliminate from the report of the executive committee that part providing for the publication, in pamphlet form, of the names of the members. He stated that he did this on behalf of the trustees, who thought it would not be for the best interests of the association. This motion elicited considerable discussion, and finally the motion was tabled, the president having called attention to the fact that there was a standing resolution providing for the publication triennially in the *Journal* of the list of members.

Delegation to the Congress for the Prevention of Syphilis and Venereal Diseases.—At the suggestion of the executive committee, the association voted to take action toward securing from the United States government an appropriation to cover the necessary expenses of its delegates to this congress, which is to be held in Brussels next September.

Abstracts of Papers Must in Future be Submitted.—It was resolved that no paper should be placed on record for the consideration of any section unless an abstract of not less than fifty or more than three hundred words accompanied the title, and was placed in the hands of the chairman or secretary of the section at least thirty days before the time of meeting of the section.

Titles and Authors' Names Must Appear.—A resolution was also adopted requiring that in future no author's name should be placed on the programme unless accompanied by the title of his paper.

Vote of Thanks to Retiring Secretary.—On motion of Dr. C. E. Ruth, of Iowa, a vote of thanks was extended to Dr. Atkinson, the retiring secretary, for his long, faithful, and efficient services.

No Prize Essay.—Dr. George M. Gould, for the committee on prize competition for meritorious scientific work, reported that the committee had received no essay which it deemed worthy of the prize. The committee was continued.

Consultation Fees.—Dr. Q. C. Smith, of Austin, Texas, gave notice that he would next year move the adoption of the following amendment to paragraph 9, article iv., of the code of ethics:

"*Resolved*, That attending physicians are entitled to charge a consultation fee for each consultation in addition to visit fee, equal in amount to that ordinarily charged in similar cases by consulting physicians residing in the same city, locality, or community where the service may be rendered."

The secretary announced the names of delegates to the British Medical Association and to the International Medical Congress, and after some further routine business the association adjourned until June, 1900.

SECTION ON GYNÆCOLOGY.

Third Day—Thursday, June 8th.

Surgical Significance of Certain Physiological, Anatomical, and Pathological Peculiarities of the Peritoneum.—Dr. H. D. Niles, of Salt Lake City, Utah, said that the ability of the peritoneum to take care of inflammatory products depended on the integrity of the epithelium and the mobility of its parts. The physiological and anatomical structure of the peritoneum was taken up in detail. He showed that the functions of the peritoneum in getting rid of inflammatory products were (1) exudative, (2) eliminative, (3) phagocytic. The exudative possibilities were so enormous that two gallons of fluid might be poured out in an hour. The adhesions that formed as a result of exudation should be regarded as only second in importance to sepsis, on account of the frequency with which they contained morbid products that often broke down at a later period. The phagocytic and eliminative functions were often wonderfully effective in getting rid of infectious material that under ordinary circumstances would seem to be an impossibility without surgical interference. The conditions influencing these conservative functions of the peritoneum are: (1) Lessened blood pressure. This encourages absorption and consequent phagocytosis. (2) A normal heart and excretory organs. (3) The smaller the quantity of infective material, the less virulent it was and the more general its distribution. (4) Any locus minoris resistentiæ, as an abraded surface. (5) Presence of a foreign body. (6) All peritoneal adhesions retarded absorption: (*a*) by concealing morbid products; (*b*) by interfering with normal mobility. (8) Any interference with normal peristalsis. The complete extirpation of diseased structures in the abdomen was advised in all cases. Adhesions should be broken up and removed when possible. In the post-operative treatment of peritoneal infection every means should be employed to lower the blood pressure, such as restricted diet, active catharsis, diuresis, etc. Every effort should be made to dilute the poison and to diffuse the diluted poison over the whole peritoneal surface by extensive and thorough flushing of the entire cavity with saline solution. A small incision should be made, as the adhesions were more abundant when a large incision was made.

Dr. Dorset, of St. Louis, said that inasmuch as the lymphatics were more abundant in the pelvis it was a grave mistake to scatter the infection throughout the whole cavity by flushing with the salt solution. Nature strove to localize all such collections.

Dr. E. S. Ricketts, of Cincinnati, insisted that adhesions as a rule were of slight consequence, and generally did not cause much pain.

Dr. F. H. Wiggin, of New York, advised that in all cases in which the pus had contaminated the peritoneum, the peroxide of hydrogen should be applied to the places so contaminated, and the whole cavity should be thoroughly flushed with decinormal salt solution. Several years ago, after noticing that in cases of peritonitis and pleuritis when there was considerable fluid poured out, the adhesions did not form, he began the practice of allowing a quart or more of the saline solution to remain in the abdomen after closure of the section. This acted in a mechanical way, separating the bowels until the danger of agglutination was passed. Since then he had never had any cases of intestinal obstruction due to adhesion.

The Management of Pregnancy Complicated with Abdominal Tumor.—Dr. Rufus B. Hall, of Cincinnati, read this paper. He pointed out that abdominal tumors grew far more rapidly during pregnancy than at any other time. While the frequency of abortion following operation on the generative tract at this time was not so great as was generally supposed, still when it did occur under such circumstances the danger of death to the mother was very much increased. In such cases sepsis or hemorrhage generally occurred, and usually with fatal result. Unless the tumor was causing severe and alarming symptoms delay was to be preferred. If the fibroid was large

and was situated in the lower part of the uterus a total hysterectomy afforded the best results. The author cited a large number of personal cases in which serious results followed removal of tumors during pregnancy.

Dr. Rosenwasser, of Cleveland, stated that women having fibroids were very apt to abort under any circumstances. They were very prone to have severe hemorrhage and sepsis even when the child was delivered at term.

Dr. Humiston, of Cleveland, said that ovarian tumors had better be left alone at this period, as the danger of their presence was not to be compared to that of abortion that often followed. The only safe procedure in the presence of myomata was to remove them at once.

Dr. Noble said that in his experience these operations were seldom followed by abortion. He advised the removal of ovarian tumors in all cases. It was especially demanded in case of adherent tumors in the pelvis. The pressure of the child's head in delivery caused gangrene very often in such cases, and they generally terminated fatally. If the tumor was not recognized until after delivery it should be removed at once, as in all cases the bruising was apt to cause trouble.

Dr. Carstens, of Detroit, spoke in the same strain. He advocated the free use of morphine for several days after the operation to quiet the nervous system.

Dr. Dorset, of St. Louis, pointed out that in some of these cases of abdominal tumor delivery might be accomplished at term by keeping the patient in the knee-chest position during labor.

Dr. Massey, of Philadelphia, expressed the opinion that it was an impossibility for a severe hemorrhage to occur in any case with or without a fibroid in the uterus, provided a powerful faradic current was used. He suggested that if a battery was not at hand sufficient shock could be obtained from the two wires of an ordinary incandescent-lamp fixture.

Early Ovariotomy; Its Practical Necessity.—Dr. Marcus Rosenwasser, of Cleveland, Ohio, read a paper with this title. He said he wished to bring more prominently before the profession the many accidents and complications that happened with small growths of this kind as well as with recent ones. Neither the size nor the age of the tumor was a criterion of the possible immediate or remote danger from its presence. In order to emphasize the special points to which attention was called, the author gave a brief synopsis of a few typical cases selected to exemplify the various complications that might arise in the early stage of ovarian cystoma, or that might result from delay. His conclusions were as follows: (1) Uncomplicated ovariotomy, in proper hands, was a simple operation with scarcely any risk. (2) Malignancy, trauma, torsion of pedicle, infection, suppuration, adhesions to viscera, and pregnancy materially increased the difficulties and risks of the operation. (3) To avoid complications liable to occur at any time, the removal of ovarian growths should follow the diagnosis without unnecessary delay.

Drs. C. R. Reed, Noble, and Henry emphasized the necessity for early removal of all ovarian tumors.

Dr. F. H. Wiggin, of New York, believed that a tumor in any part of the body should be removed.

Study and Teaching of Obstetrics in Our Medical Schools.—Dr. Eliza H. Root, of Chicago, read a paper in which she said the best results were obtained by dividing the instruction into two courses, the one covering a year's work in normal obstetrics, and the second or senior course devoted to pathological obstetrics. Every student should be called upon to do all the operations on the manikin that were likely to be required in practice. In the second year the text-book should be dispensed with. Topics should be assigned to each student, and in this way original research would be stimulated. The students also would take more interest in the work. The teacher should devote himself entirely to teaching and practice in this specialty.

Dr. Carstens spoke upon the necessity of teaching students the value of tractions from side to side in high forceps operations.

Drs. Palmer and Newman, of Chicago, further indorsed the views of Dr. Root.

Dr. Root insisted on the necessity of a thorough theoretical training, and suggested that where large classes were to be taught, the younger members of the profession should be employed as assistants.

Prophylaxis of Uterine Cancer.—Dr. W. W. Grant, of Denver, read this paper. He said that prophylaxis was just as important in surgery as in medicine. The commonest seat of uterine cancer was an old laceration of the cervix. It was of the rarest occurrence to find a cancer of the uterus in a woman who had not had a laceration of the cervix. The granulation tissue present in those cases, having a low vitality, offered a convenient nidus for infection.

Prevention and Treatment of Cancer of the Uterus.—Dr. A. Lapthorn Smith, of Montreal, expressed the opinion that cancer of the uterus was not hereditary. In more than one-half of the author's cases there could not be found any history of cancer in the family for three generations. It was eminently contagious. He had met with three nurses who contracted the disease through attending cancer patients. Lacerations of the cervix were the most common predisposing cause. In the countries where slight attention is paid to lacerations of the cervix, cancer of this organ was very common, and vice versa. If the one hundred thousand doctors on this continent would each inform one hundred and fifty mothers under their care that irregular hemorrhage at or after the climacteric was often the earliest symptom of cancer, the number of lives saved would be enormous. In the treatment it was his practice, if the uterus was movable, to do a hysterectomy by using the ligature. If the uterus was adherent he preferred the clamp method. When the case was too far advanced for extirpation he curetted and cauterized. In many such cases Schroeder's amputation of the cervix was performed. The tissues were lightly touched with the cautery, and the flaps were then brought together. By these means life was often prolonged for from two to five years, and the patient was rendered quite comfortable.

Does Removal of the Ovaries Exert a Beneficial Influence on the Subsequent Progress of Malignant Diseases?—Dr. E. E. Montgomery, of Philadelphia, read a paper with this title. The cases reported by Beatson and others, of cancer of the breast that were benefited by oöphorectomy, were analyzed by the author. The favorable results reported were proved to be more apparent than real. The only case in which the disease seemed to have been cured had at the last report had a recurrence. The fanciful theory advanced by Beatson as to the causation of cancer was not tenable, on account of the lessened blood supply in the pelvis consequent upon the removal of the ovaries. There was less activity displayed in growths in these regions, but this was only temporary. Many cases of cancer ran an erratic course. They often remained quiescent for a number of years after they seemed hopeless, and this accounted for some of the occasional temporary successes of oöphorectomy. He had never seen any good results in his own cases following oöphorectomy for malignant disease, nor had he seen any cases in which it prevented recurrence. He expressed himself as being entirely opposed to the procedure, and said that the only possible chance of palliation of the disease by this means existed during

the reproduction period, when the ovary exerted an influence on the vasomotor system.

Dr. F. H. Wiggin, of New York, said that heredity played an important part in predisposition to carcinoma. Although the disease was primarily an infectious one, carcinoma frequently occurred in early life. All menstrual irregularities at the menopause demanded a careful examination.

Dr. Goldspohn, of Chicago, did not believe that the Emmet operation for laceration was of any service in preventing cancer of the uterus. He pointed out that the disease began at the bottom of the encysted tubular glands of the cervix, and not in the scar tissue. The induration of the cervix was due to infection. An amputation of the cervix was the preferable operation in these cases. He had known of pregnancy in patients in whom the cervix had been amputated.

Dr. E. Ries, of Chicago, rejected entirely the proposition that repair of all lacerations of the cervix would materially lower the number of cases of cancer of the uterus.

Dr. C. S. Bonnifield, of Cincinnati, thought that the laceration was constantly acting as an irritant, and this kept up the congestion. This congestion favored the development of carcinoma. He advised the Emmet operation in such cases.

Dr. O. D. Gilliam, of Columbus, said that the traumatism that favored the development of cancer was due to pressure exerted on the cervix by the child's head and the bony pelvis.

Dr. H. Kelly, of Baltimore, said that we knew nothing of the etiology of cancer. Every woman that had had a child should be examined once a year till well past the menopause. Every atypical hemorrhage should be investigated. Formerly in cancer of the uterus, reasoning from analogy of cancer of the breast, he did a very extensive operation. He removed the broad ligaments and the pelvic glands. Out of a large number of such cases he found the glands involved in but three instances. He had now discarded this operation because the glands were involved only very late in the disease. He did anterior colpotomy, cutting wide of the affected tissue, and removed considerable of the vaginal tissue. It was here that recurrences were most frequent.

Dr. Montgomery thought that cancer of the body of the uterus occurred in ten per cent. of all cases. He advocated dilatation and manual exploration of the uterus in doubtful cases. He laid great stress on the danger of infecting the wound with the cancer material. This was a very common cause of recurrence.

Dr. Grant, in closing, insisted upon the improved innervation, circulation, and nutrition of the uterus following repair of lacerations of the cervix.

Total Extirpation of the Uterus, Its Appendages, Tumors, etc., Without Ligatures or Retention Clamps.—Dr. H. P. Newman, of Chicago, read this paper. After pointing out the disadvantages of the ligature in these cases described, the angiotribe was demonstrated. This instrument was similar to a very heavy pair of pedicle clamps, with a powerful screw-and-lever attachment. The advantages claimed for it were: (1) immediate hæmostasis; (2) the tissues were not bunched up as was ordinarily the case when the ligature was applied; (3) the stump was free from foreign bodies; (4) the rapidity and facility with which the operation could be done. It required about two minutes to cause complete hæmostasis. There were less shock and hemorrhage in these cases, and the patients did not complain of any pain. It left a very thin ribbon of tissue, which (as the author had demonstrated in dogs) was completely revivified. Sixteen successful cases were reported.

Drs. Goldspohn, Wiggin, and Kelly discussed the paper, the consensus of opinion being that the instrument was not a great improvement over the ligature.

Necessary Abortion.—Dr. W. C. Bowers, of Decatur, Ill., said that induced abortion was justifiable in most cases of tuberculosis, aneurism, and valvular disease of the heart, especially so if they were increasing rapidly. Chronic renal disease, when the amount of albumin was increasing, was also an indication. Several cases of goitre that were growing rapidly, and one of persistent nasal hemorrhage, were entirely relieved after an abortion. Diabetes and progressive pernicious anæmia also often demanded this procedure. Hyperemesis gravidarum, placenta prævia, tumors of the pelvis, small pelves, and eclampsia were also mentioned as often demanding interference of this kind.

Treatment of Patients after Abdominal Section.—Dr. C. S. Bonnifield, of Cincinnati, read a paper with this title. The indications were: (1) to secure reaction from shock; (2) to prevent secondary hemorrhage; (3) to combat sepsis; (4) to administer proper nourishment and to make the patient comfortable. To relieve shock when severe nothing could be compared with the decinormal salt solution either by the intravenous route, hypodermoclysis, or the rectum. Sparteine sulphate and strychnine in large doses were the most valuable drugs at our command. The chemical resemblance that alcohol bore to the anæsthetic was a sufficient reason why we should not employ it, as thereby we were adding fuel to the fire. There should always be a competent surgeon within easy reach for at least twelve hours after an operation on account of secondary hemorrhage. Purgation was the best way to combat sepsis. The salines did not cause sufficient peristalsis, and for that reason calomel was better. Five grains of calomel should be given dry upon the tongue. If this failed repeated injections might succeed. Often stimulants started up peristalsis when all of the more powerful drugs had failed. If in spite of all these means there was no movement the speaker suggested the use of physostigmine hypodermatically. In animals such injections produced bowel movements through the influence upon the muscular coat of the bowel. The rectal tube was useless for relieving distention due to gas. For the pain codeine phosphate, gr. iii., with chloral, gr. xxx., per rectum, repeated in four hours if necessary, gave excellent results. If much thirst was complained of, an enema of salt solution should be given.

Dr. F. H. Wiggin, of New York, outlined the advantage to be obtained by thoroughly preparing the patient before the operation. Liquid nourishment might be given on the morning of the operation; as soon after operating as the patient's stomach will retain anything, eight ounces of hot, recently peptonized milk should be given. In three hours this should be repeated. If in eighteen hours the patient had no desire for nourishment, or was still vomiting, a Seidlitz powder should be given. Instead of dissolving the tartaric acid it should be thrown into the second solution and then rapidly swallowed, the intention being that the gas be liberated in the stomach, thereby stimulating peristalsis. If this was vomited a second dose should be given at once and the patient instructed to try to retain it. By diverting the patient's attention from herself this was generally successful.

Dr. Bovée, of Washington, D. C., called attention to the value of small doses (gr. $\frac{1}{16}$) of morphine in quieting the pain.

Shock—Its Nature, Cause, and Treatment.—Dr. Daniel T. Nelson, of Chicago, reviewed the physiology and pathology of this condition. He thought it was due to reflex disturbance of the vasomotor sys-

tem. Every sympathetic disturbance, such as sneezing, crying, etc., was of the same nature as shock, but there were fewer nerve cells involved in such cases. As regards treatment, the author advised that the head should be lowered and moist heat applied to the body, and that large doses of strychnine should be given together with an injection of decinormal salt solution.

Operative Wounds of the Bladder in the Female, and Their Treatment.—Dr. F. H. Wiggin, of New York, in a paper on this subject, said that this accident happened less often than one would suppose from the proximity of the bladder to operative fields in the genital tract. The regions most commonly involved were: (1) the anterior inferior; here it occurred sometimes in opening into the peritoneum through the vaginal wall. (2) Superior and posterior. In these cases it was very prone to happen during the separation of adhesions. Usually, the tear did not extend deep into the structures, and a few Lembert sutures sufficed. The most dangerous region, and that least often involved, was the vicinity of the trigone. A thorough knowledge of anatomy and technique was necessary to repair lesions in this place. Illustrative cases were reported. In one case in which a portion of the bladder was removed on account of its intimate relation with a large tumor, a row of catgut sutures was introduced through the mucosa and the knots were tied within the cavity. A second row of mattress sutures was used for the muscular layer, with Lembert sutures for the peritoneum. The knots within the bladder began to come away within three days. In such cases an artificial vesico-vaginal fistulæ should be made; such fistulæ healed kindly because there was no such loss of tissue as occurred in cases following labor. In other cases a self-retaining catheter should be employed. When such an accident occurred in the course of an operation it should be repaired at once. The Trendelenburg posture was often of great aid in this procedure. Immediate suture without drainage should be practised in such cases. There was very little danger of peritonitis, extravasation, or hemorrhage. The bladder should always be tested with saline solution, as nearly all bad results were due to insufficient suturing. As a means of prophylaxis the surgeon should always empty the bladder himself when the patient was on the operating table.

Dr. Goldspohn, of Chicago, said he had always drained such cases on account of fear of extravasation.

Dr. C. S. Bonnifield, of Cincinnati, said he had frequently met with this accident, and heartily indorsed the views expressed in the paper.

Fourth Day—Friday, June 9th.

What Shall We Do with the Uterine Fibroid?—Dr. D. Tod Gilliam, of Columbus, emphatically condemned the indiscriminate removal of fibroids. Small fibroids causing no trouble should be left alone. Even with large-sized growths, if the systemic disturbance was not too great, it was better to wait until the menopause, when most fibroids became shrunk. Only those cases in which there was great disturbance should be operated upon. Kolb's statistics of post-mortem examination show that forty per cent. of all women over fifty years old had fibroids in the uterus. There was no inherent danger in the fibroid itself. He had never seen a case in which death was due directly or indirectly to the fibroid. Alarming hemorrhage sometimes did occur, but he believed, with Emmet, that it was very seldom fatal. The kidney complications and obstruction of the bowels had never, in his experience, been sufficient to cause alarm. With the exception of those cases in which they were weakened by recurrent hemorrhages, these patients appeared generally to be in a splendid physical condition. They seemed all to possess an immunity against the ordinary life-destroying diseases.

Dr. Dorset, of St. Louis, said that the indications for the removal of these tumors were: (1) Excessive hemorrhage; (2) if the increase was rapid; (3) if the general discomfort was great. The tumors treated by electricity were generally surrounded by adhesions, and their nutrition was derived from the vessels of the intestines. On account of this disturbance in the blood supply of the bowel digestive disorders were very prone to occur. Fibroids were generally intramural at first; later on they frequently migrated toward the peritoneum or toward the mucosa. This migration was due to contraction of the uterus during the menstrual period.

Dr. C. R. Reed, of Middletown, Ohio, thought that the patient should not be informed of the presence of a fibroid accidentally discovered during an examination, because of the anxiety that such a knowledge caused most women.

Dr. Porter, of Fort Wayne, Ind., said that no general rule could be laid down that would be applicable in a majority of the cases.

Dr. Tichenor, of Chicago, did not advocate myomectomy. The small, hard, subperitoneal tumor that was suitable for myomectomy seldom increased greatly in size and should not be disturbed. The interstitial form grew rapidly, and in these cases, if the tumor was troublesome, a total hysterectomy should be done. He was not convinced of the value of electricity in the treatment of fibroids.

SECTION ON SURGERY AND ANATOMY.

Third Day—Thursday, June 8th.

Surgical Treatment of Acute Peritonitis.—Dr. A. F. House, of Cleveland, read this paper. He stated that any uniform classification was impossible. Different portions of the peritoneum might vary in their vulnerability to sepsis. The parietal peritoneum was less susceptible to infection than that over the small intestines. Infection from the latter region was particularly virulent. Septic and suppurative peritonitis were practically identical, though not always producing the same clinical phenomena. Suppurative peritonitis more frequently localized and circumscribed itself as pelvic or subdiaphragmatic peritonitis. The offending organism might be the colon bacillus, streptococcus, or other milder pyogenic germs. The symptoms which indicated operation were: (1) Local pain becoming general or general pain localizing itself; often the pain was in the umbilical region, though the primary condition was remote. (2) Tenderness localized or general. (3) Early rigidity, which was often a great aid in diagnosis. (4) Vomiting of a green ropy substance. (5) Shock of varying degree even before paresis had occurred. Distention should not be waited for, for then it might be too late. Rise of temperature and pulse might be absent. The temperature ranged from 99° to 105° F., or higher; the pulse from 110 to 160, thready. The indications for interference were more difficult than the methods. Free incision or incisions with thorough drainage had been followed by recovery. There could be no question as to the justification of the operation. In many cases a fatal issue was due to delay. If we operated at the beginning the result would be better. A median incision should be made unless the primary condition indicated otherwise. Perfect drainage was impossible, especially if the intestines were distended; gauze was preferable. Irrigation was not dangerous except in localized peritonitis; here adhesions might be broken down and infection disseminated. Sterilized water, salt solution, boric-acid solution,

Thiersch's solution, etc., might be used. The speaker used saline solution with 1:2,000 or 1:3,000 formalin. He used ℥ viii. of formalin to 3 xx. of salt solution. The temperature of the solution ought to be 105° to 115° F. For irrigation Kelly's tube should be used. Death was more frequently due to intoxication than to inflammation. The results had been so good that in the early stages an operation was not only justifiable but demanded. An exploratory incision should be made. With gonorrhœal or tubal infection we might wait until the acute stage had passed. Acute peritonitis must be treated surgically. From two to four gallons of saline solution should be used for flushing the peritoneum, followed by one to two gallons of the formalized saline fluid. In non-suppurative peritonitis drainage was not required.

Dr. Ochsner, of Chicago, considered the most frequent cause of death in these cases to be absorption of septic material from the intestines. As soon as pressure was relieved absorption took place more quickly. He was opposed to operation, and preferred treating the patients by irrigation of the stomach, rectal feeding, and the stopping of all feeding per os. The latter prevented an increase of septic absorption.

Dr. Murphy, of Chicago, thought that the most important points were the diagnosis and the type of infection. In cases with a large quantity of pus the patients recovered, and some with a small quantity died. Cases with blistering of the peritoneum were invariably fatal. He feared infection from the upper bowel most. He thought that disturbance of the endothelial cells favored septic absorption. All cases of generalized peritonitis ought to be diagnosed in the early stage. Distention was not an early symptom. Collapse and shock should not be waited for.

Dr. Ochsner remarked that if his treatment was followed in the early stages there would be no late cases.

Dr. Branham, of Baltimore, believed that the future treatment would be operative, with flushing of the peritoneum and cleansing of the stomach and bowel. He was opposed to such treatment as the previous speaker advocated.

Dr. McRae, of Atlanta, disagreed with Dr. Ochsner. He thought that intestinal infection was secondary to peritoneal infection, followed by paresis of the bowel. Early operation was advocated. Surgical results offered better hopes than medical measures. The earlier the operation, the better were the results. He mentioned three cases of beginning generalized peritonitis in which recovery followed operation.

Dr. Porter, of Fort Wayne, considered the nature of the infection most important. In streptococcus poisoning death resulted even if a small area was involved. We could not tell before operation which were the streptococcus cases. In cases with great distention of the bowel, opening of the gut was as important as opening of the abdomen. We could not always get rid of the cause at the first operation; therefore absorption should be stopped, distention relieved, and the operation again performed later.

Dr. Brown, of Illinois, said that the treatment depended on the individual case.

Dr. J. E. Moore, of Minneapolis, stated that peritonitis was always a secondary affair, and, therefore, treatment must in general be surgical. In extreme cases, those seen at the last minute, nothing operative should be done.

Dr. House said that he would not treat these cases surgically without preparatory medication. Each and every case was a law unto itself. All beginning cases should be operated upon at once.

Temporary Ligation of the Common Carotid Artery during Removal of Large Tumors about the Face, with Report of a Case.—Dr. Joseph J. Branham, of Baltimore, reported the above case in detail. He said that temporary ligation was less likely to interfere with the brain than permanent ligation. In old people, or those with prematurely sclerotic arteries, this procedure was advised against. It was good in young people with healthy arteries. The ligature should not be made too tight. The dangers of the operation were slight. The speaker used a large catgut ligature in sterile water. The operation prevented excessive hemorrhage and permitted a more thorough examination and manipulation of the parts. There was also less danger of leaving infected points.

Goitre: Anatomy, Pathology, and Treatment.—F. C. Schaefer, of Chicago, alluded briefly to the histological origin and pathology of the thyroid gland. In the medical treatment two agents were referred to as most important: (1) the product of the thyroid gland; (2) iodine. The experimental studies upon the subject were touched upon. In three-fifths of his cases iodine was used, in two-fifths thyroid. With iodine the patients improved more rapidly. Lugol's solution was used. Three months of medical treatment was sufficient before proceeding to surgical intervention. The operations which might be used were: (1) Interstitial injections; (2) aspiration and injection; (3) ligation of the large blood-vessels; (4) removal of the cervical sympathetic; (5) extirpation and enucleation. The latter was the most important and was adopted by Kocher, Schede, and Keen. Local anæsthesia by cocaine was best; with this breathing was easy, there was less hemorrhage, little pain, and phonation was present.

Dr. Warner, of Iowa, used five cataphoric applications of iodide of potassium in a right-sided goitre with complete cure. He asked an explanation.

Dr. Levings, of Milwaukee, thought that iodine and thyroid were applicable only to parenchymatous goitre. In vascular goitre they were contraindicated. Ligation was more difficult than removal; it was unsatisfactory and not advised.

Dr. Schaefer thought that the tumor in the first speaker's case disappeared by absorption. He was not opposed to ligature. Removal of the cervical sympathetic was still in its infancy.

Emergency Surgery, with Especial Reference to Work in the Homes of the Poor.—Dr. R. C. Dugan, of Eyota, Minn., read this paper. He said that if one could find fire and water one could do clean work anywhere. He arranged his operative case before starting, with everthing placed ready for use. Sterilized towels and dressings were taken along. The dressings were in separate packages. At the bottom of his operative case was an apparatus for boiling. The kitchen table was sufficient for ordinary work. For Trendelenburg's position blocks of wood were placed under the edge of the table. The environment ought to be no excuse for non-interference. Accidental wounds should be treated with moist dressings; balsam of Peru and castor oil (Van Arsdale) prevented suppuration.

Dr. Brown, of Illinois, said that surgical cleanliness could be obtained under almost any circumstances. The ordinary farm-house was the equal in certain respects of the average city hospital.

Dr. Sherman, of San Francisco, suggested that the instruments should be previously sterilized.

Dr. Lawless, of Ohio, said that one could operate anywhere if attention was given to the hands, the instruments, and the dressings; these were the sources of infection. Everything should be sterilized at the time of operation.

Dr. Dugan preferred to sterilize his instruments at the time of operation.

Intestinal Fistula.—Dr. J. B. Murphy, of Chicago, said that this condition was most important and

annoying to the surgeon, and that the most distressing feature of it all was that as a rule it was the result of his own work. He divided fistulæ into those of the large intestine and those of the small intestine. The latter were far easier to treat, because of the ease with which the parts might be moved. Those of the colon were very difficult. Fistulæ of the jejunum and ileum were easier of manipulation. The duodenum being fixed offered difficulties. The location of the fistulæ varied. They might run directly from skin to bowel, or reach the surface indirectly through the gall bladder, vagina, tubes, diaphragm, etc. Fistulæ might be near the abdominal surface or far below it. As to etiology Dr. Murphy spoke of congenital fistulæ (umbilical, vesico- and uretho-intestinal). In later life intestinal disease, foreign bodies, mural strangulation, intra-peritoneal infection, and traumatism were mentioned as factors producing fistulæ. Duodenal ulcers following extensive burns were also referred to. The most frequent foreign body causing fistulæ was a piece of bone. Tuberculosis, typhoid fever, actinomycosis, and malignant neoplasms might cause fistulæ. Under the head of mural strangulation, hernia, strangulation bands, and suppurative peritonitis were enumerated. Operative fistulæ occurred in the greatest number, and were due to surgical operation. They might be divided into: (1) Intentional (artificial anus, whether for temporary or permanent relief); (2) accidental, as in laceration of the intestines, separation of adhesions, neoplasms, and the like. Among operative intestinal fistulæ were mentioned those due to division with scissors or scalpel, compression with forceps, injuries in parturition, perforation of the uterus through curettage, criminal abortion, vaginal intestinal perforation, and failure of union after enterectomy or enterorrhaphy. The treatment might be divided into: (*a*) Spontaneous cure. Small fistulæ often get well without treatment, *e.g.*, after appendicitis. He had seen fifteen such instances. (*b*) Operative. External suture was a failure in the treatment of fistulæ. Plastic operations were useless. Removal of the central septum was not only a failure but extremely dangerous. In vaginal fistulæ the anterior or posterior wall should be opened, the opening enlarged, the intestine drawn out and resected through the vagina, and restored to the abdomen. In fistulæ high up in the rectum the operator should make the same incision as in vaginal hysterectomy, dissecting off the peritoneum, drawing the rectum down, and securing the fistulæ by a double row of sutures. The treatment of all other intestinal fistulæ was: (1) Exclusion of the portion of the intestine involved in the fistulæ; (2) exposure of the adherent portion of the intestines, separation of adhesions, drawing the gut into the field, resection, and an end-to-end anastomosis. Charts showing various forms of fistulæ operated upon by this method were shown.

Dr. Crele, of Cleveland, asked what disposition was made of fistulæ due to tuberculosis of the bowel.

Dr. Murphy answered that resection gave some cures in such instances.

Surgical Treatment of Abscess of Lung.—Dr. D. L. Fairchild, of Clinton, Iowa, stated that in some cases it was very difficult to distinguish between pulmonary abscess and encysted empyema. The most frequent causes of abscess of the lung were pneumonia and tuberculosis. All of the reader's cases followed pneumonia. The operation for abscess was more serious than that for empyema on account of the difficulty in drainage. In some cases one abscess existed; it discharged and the patient was cured; in others there were numerous abscesses discharging at various times. The complications of pneumonia—hydro- and pyothorax abscess—were detailed and the difficulty of diagnosis was shown. The speaker then reported his cases, giving the operative technique and results. An offensive odor of expectoration pointed to pulmonary abscess. Irrigation after operation was not advocated, because it often caused irritation of the lung. Medicines only stimulated and supported the patient, but could not cure. If pus was due to the pneumococcus absorption might occur; if due to the streptococcus or a mixed infection it could not. Occasionally discharge took place through the bronchus and a spontaneous cure resulted.

Dr. Levings, of Milwaukee, considered it of the first importance to make the diagnosis and locate the abscess before treating it. An abscess gave signs of a cavity. Wintrich's sign was considered pathognomonic, and Gerhard's sign very valuable. He had noticed that after a severe paroxysm of coughing and expectoration, an area previously dull would become tympanitic, and in twenty-four hours, after the cavity had filled once more, it would be dull again. Exploratory puncture was justifiable and often necessary. He would advise the use of a short needle. In cases of doubt the operator should excise the ribs and palpate the lung.

Dr. J. B. Murphy, of Chicago, said that in abscess of the lung without pleural adhesions the operation was not difficult. The scalpel was by far the best for cutting the lung. He mentioned a fatal case which he thought could have been saved by a previous injection of air into the pleura to detect the adhesions, and emptying the abscess if there were none.

Dr. Fairchild believed in using the shortest needle consistent with the necessity of the case. He used forceps for fear of doing damage.

Typical Operation for Radical Cure of Inguinal Hernia, and Atypical Ones.—Dr. A. H. Ferguson, of Chicago, read this paper. He considered his operation for hernia the ideal one, because it placed all structures in the same relation to one another as they existed in normal persons. He noticed that relapses usually occurred about the cord above the ring near Poupart's ligament. As a result of anatomical study, he noticed that in some instances there was a deficiency in the origin of the transversalis and internal oblique at Poupart's ligament. This he considered the cause of relapse. In January, 1898, he began to use the semilunar incision. This was made one and one-half inches below the anterior superior spine, went inward, turned in a semilunar manner, and terminated near the pubic bone. This incision fully exposed all the structures. If relapse occurred there was good sound skin for a truss. If skin infection took place the danger was less. The flap was turned down, the external ring being split, and the deeper structures were exposed and inspected; the sac was examined for adhesions; the origin of the internal oblique, transversalis, and conjoined tendon was also inspected. The sac should always be opened up. Then the hernia should be built up from within outward, making a new internal ring, and using the transversalis fascia. The needles should not be passed too deeply. The cord was left alone. The internal oblique should be sutured to Poupart's ligament, *i.e.*, putting it where it belonged. The conjoined tendon was short, the muscle long. The fibres of the external oblique were then sutured, then the skin, and the operation was done. When it was completed, all the tissues were placed as they existed under normal conditions. For that reason it was called the typical operation. Weak points were protected by normal tissue. In old people the typical operation did not need to be relied upon exclusively. The various steps of the operation were demonstrated with the aid of charts.

Some of the Rare Forms of Hernia and Their Radical Treatment.—Dr. R. Harvey Reed, of Rock

Springs, Wyo., reported some rare forms of hernia in the following order: (1) Gastric hernia. This was more amenable to surgical treatment than the diaphragmatic variety, and was also more important and more worthy of notice in the text-books. It was usually due to violence exercised over the large curvature of the stomach. It was rarely congenital, but was usually, as before said, due to direct violence. He reported two cases operated upon with complete cure. (2) Umbilical hernia. This was not rare, but the case reported was interesting on account of the enormous size of the hernia. In this case the omentum, large and small intestines were found in the sac, and in the sitting position it fell to the level of the knees. Abscess had been diagnosed. It was operated upon, with cure. (3) Ventral hernia. This was not infrequent in regions other than the linea alba. A case with periodic obstruction was reported. Ventral hernia was seen most frequently after abdominal section. (4) Labial hernia. This was rarely mentioned in the books. In the case reported the bowel had passed through the ring and canal of Nuck into the labium. An operation was performed, with cure, and a child was delivered at full term at a later date. In operating all cicatricial tissue must be removed; perfect apposition of the separated parts must be accomplished, and soft, flexible, sterilized animal sutures used for deep tissues. He obtained the best results from pyoktanin catgut.

Bassini Operation without Buried Suture, for Radical Cure of Inguinal Hernia.—Dr. E. H. Lee, of Chicago, said that it was his opinion that most, if not all, surgeons met with more or less suppuration in operations for hernia. He believed that this was excusable to a certain extent, because the skin in that region was difficult to disinfect. The penis and scrotum should be covered during the operation. Unnecessary mutilation was also a contributing factor. Infection was of two kinds—early and late. Early infection occurred in two or three days and was due to infection at the time of operation. Late infection, so called, occurred two to three weeks after the operation. Contrary to Ochsner, he did not think that pulling the sutures too tight was the cause of it. His theory was that the outer layers became absorbed, and the middle layers gave rise to a subacute infection. Animal material was better than silk, silkworm gut, or silver wire. Two to two and a half weeks was the limit in which a suture was of any value whatsoever. In the operative technique the external oblique was first exposed and slit up to the internal ring; it was then to be divided toward the median line, when the sac should be separated from the cord. He said that he amputated the sac and ligated with fine catgut. The U-suture was used. The external oblique should be closed by a longitudinal quilled suture. Therefore it was necessary to use two sutures, one long for the internal oblique, and one for the external oblique. In this method there were but four small perforations, and therefore the danger of infection was less. The same method was used in abdominal operations, Alexander's operation, and in the operation for strangulated hernia.

Hernia of the Diaphragm, with Report of Cases.—Dr. Floyd M. McRae, of Atlanta, Ga., reported two cases. In the first hernia of the diaphragm followed the wound of the chest and diaphragm. The symptoms were those of intestinal obstruction with great distention. The transverse colon, part of the stomach, and the small intestines were found in the left thorax. The lung was compressed. The second case was that of a woman who suffered from constipation for several years. She had absolute obstruction for five days prior to the operation. On opening the abdominal cavity he found a knuckle of colon passed into the opening of the diaphragm, which was apparently a congenital defect. He stitched the opening in the diaphragm with continuous catgut sutures without any trouble from the circulatory or respiratory apparatus. The patient died, however, from regurgitation of the stomach contents.

Dr. Marcy, of Boston, showed that he first described the operation for restoring the natural obliquity of the inguinal canal. He thought America should be given credit for her work in this line, and claimed priority over Bassini. Suppuration after the operation was rare if the technique was good and the asepsis thorough. The wound should be covered with collodion. Kangaroo tendon was advised for suturing.

Dr. Freeman, of Denver, reported a case of diaphragmatic hernia in which he sewed the tear in the diaphragm without any disagreeable symptoms. The patient died in thirty-six hours.

Dr. Kelly, of Baltimore, said that Halsted's publication antedated that of Bassini. He indorsed Dr. Marcy's opinion as to giving Americans credit. In bad cases a non-absorbable suture was the best. Transplantation of the muscle (Bloodgood) gave the best results.

Dr. Graham, of Chicago, said that he claimed priority for transplantation of the sartorius muscle. He believed this method to be applicable in but few cases, and not so difficult as was generally supposed.

Dr. Lord, of Omaha, cited a case of multiple ventral hernia.

Dr. Bullett, of Louisville, failed to see that Ferguson's operation accomplished what was intended. The cord was depressed downward by bringing the internal oblique to Poupart's ligament, and therefore the normal relation was not restored. In fact, the ring was placed in the position where we found it in direct inguinal hernia. He thought that infection might be due to the formation of a blood clot which broke down. He did not believe in buried sutures. In Louisville they were taking out sutures put in at Baltimore.

Dr. Warner, of Columbus, emphasized the advantages of early operation before the hernia had become too large, distorted, and weakened.

Dr. Manley, of New York, thought that the key to all operations for inguinal hernia was that the operation of choice should be the simplest, the one with the least hemorrhage and least mutilation of tissue.

Dr. Milliken, of Dallas, had removed kangaroo tendon three months after operation. Silver wire seemed to solve the question. Dr. Ferguson's incision seemed favorable if a recurrence was expected. He thought that Dr. Ferguson failed to restore the obliquity of the canal.

Dr. Moore, of Minneapolis, said that multiple ventral hernia sometimes occurred above the umbilicus, and was often treated for dyspepsia. Frequently patients did not know they had it. A multiplicity of methods was advisable to suit different cases. Buried sutures were to be condemned.

Dr. Ochsner, of Chicago, had seen the semilunar incision performed by Adams, of Glasgow, in 1894, and suturing of the internal oblique to Poupart's ligament by Bull. Halsted's operation was too extensive and was often followed by a splitting of the internal oblique.

Dr. Ruth, of Keokuk, thought that the same principle underlay all incisions and sutures. The operator could not follow any one method; he should take that giving the best results. He had had infection in both early and late stages.

Dr. McRae, of Atlanta, advised the use of thin kangaroo tendon for sutures.

Dr. J. B. Murphy, of Chicago told of a case in

which he closed a diaphragmatic opening through the chest wall. He used Marcy's kangaroo tendon.

Dr. Harris, of Chicago, said that early infection was due to the entrance of germs at the time of operation. All methods which transplanted the cord were bad, as they caused atrophy of the testicle.

Dr. Ferguson, in closing, said that no one operated on hernia with the idea of its returning. Transplantation of the cord was bad. He had known atrophy of the testicle to follow this method. Splitting the rectus and bringing it over was advisable in certain cases. The typical operation left all structures where they belonged. The obliquity of the canal was restored. Leaving the cord in its bed minimized the danger of subsequent neuralgia.

Dr. Reed, of Rock Springs, said that the parts should be approximated perfectly, no matter what sutures were used.

Dr. Lee, of Chicago, was pleased to see that so many admitted that they had met with suppuration after their operations.

Some Observations on the Bottini Operation for Prostatic Hypertrophy.—Dr. Ramon Guitéras, of New York, read this paper. He began by saying that one of the curses of old age was an enlarged prostate. Why this occurred in one person and not in another was hard to say. Hypertrophy was divided into: (1) myomatous; (2) adenomatous; (3) mixed—*i.e.*, when stroma and gland tissue were involved. Clinically it may be divided into: (*a*) uniform enlargement in all directions; (*b*) irregular enlargement; (*c*) all the gland was normal except in one area (very rare). An operation should never be performed until all palliative means had failed. All other operations—castrations, suprapubic cystotomy, resection of the vas, etc.—had had their day. Bottini's operation with the galvano-caustic incisor was the best. The operations and results of other surgeons—Meyer, Semon, Friedenberg, Morton, Hank, Clark—were reported. The speaker had performed the operation twenty times with two deaths, one due to chronic Bright's disease, the other to sepsis. He concluded by saying that (1) castration, iliac ligation, and resection were of little benefit; (2) the choice lay between prostatectomy and Bottini's operation, with preference for the latter; the former was a most difficult and dangerous procedure, with a mortality double that of the latter; (3) certain cases (gland hypertrophy) were suitable for enucleation; (4) cases calling for Bottini's operation were those without marked hypertrophy, in which there was induration rather than middle-lobed impairment. He had noticed less improvement in Italians than in others.

Dr. Freeman, of Denver, thought the galvano-caustic incisor the best instrument for operating on enlarged prostates. The operation was not without dangers. Much benefit was derived from it in large prostates. In small prostates the operation caused a cure. In one case he had a relapse. He had used general anæsthesia but once. Two patients complained of great pain. He had seen no hemorrhage of any account. He believed three incisions a better operation. Urination was easy after operation, as a rule. In two cases there was abscess of the prostate. There was incontinence of urine for weeks in one case. Epididymitis occurred in four cases. Recovery after the operation was not rapid; it took a number of weeks. He had operated when cystitis was present, with good results, but of course it was best to have a healthy bladder. This operation probably would be generally adopted.

Dr. Robbins, of Michigan, believed it to be a dangerous operation. The great danger was burning of tissue outside of the prostate. He knew of an instance in which the membranous urethra was burned, with subsequent uræmia and death.

Dr. Bonffleur, of Chicago, thought the operation required great skill. He mentioned the first case operated upon by Czerny, in which the entire urethra was split. He asked, Why not do a suprapubic cystotomy and burn the prostate from above? Why operate in the dark?

Dr. Guitéras, of New York, said that every patient had pain when local anæsthesia was used. Local anæsthesia did not prevent spasm. The best general anæsthetic for this operation was laughing-gas. Irritable bladder was the most persistent post-operative symptom. The speaker made three incisions. Hemorrhage often occurred. There never had been incontinence or epididymitis after operation. The great feature of the operation was that the amount of residual urine was diminished, showing removal of the obstruction. The hand should be kept on the same relation with the prostate. Bending of the blade occurred when the amount of electric force fell off during the operation. Before every Bottini operation the battery should be recharged.

Some Complications Resulting from Rectal Operations.—Dr. W. M. Beach, of Pittsburg, presented a diagram, as he called it, rather than a thorough discussion of the subject. The complications were: (1) incontinence; (2) stricture; (3) elongation of the anal rectum; (4) ulceration and hemorrhage; (5) destruction of the rectal sense organ; (6) suppuration and phlebitis; (7) skin tabs. These might follow major or minor operations. He mentioned Whitehead's operation only to condemn it. Stricture might be due to unskilful use of the clamp and cautery.

Dr. Pennington, of Chicago, thought a great many evil results were due to inefficiency of the after-treatment, as seen in the operation for hemorrhoids.

Dr. Martin, of Cleveland, thought that the title of the paper should have been, "Some Bad Results of Bad Rectal Surgery."

Dr. Beach closed by saying that the paper was simply offered as a diagram to provoke discussion.

Fourth Day—Friday, June 9th.

Detail in Cleft-Palate Operations.—Dr. S. L. McCurdy, of Pittsburg, said that in all operations about the mouth the Murphy position, with the operator at the head of the patient, was the best. With this position the blood passed out through the anterior nares, which acted as a drain. The Brown hoe instrument, for use in the first step, was shown and recommended. Other operations were briefly described. The needle to be used must be very small. A cervix needle answered well, but he preferred and demonstrated his own needle to complete the introduction of the suture. The needle had a hook to remove the suture. The technique of the operation was described with the aid of diagrams. The suture should be passed on the same sides, not one on the inside and the other outside. Finally, the speaker demonstrated his self-retaining mouth-gag with a tongue depressor and a head support. This did away with at least two assistants.

Dr. Vance, of Louisville, indorsed the use of Dr. McCurdy's needle. He questioned whether in severe cases it was right to interfere. Here the dentist could often do more good.

Dr. Ochsner, of Chicago, thought that operation gave better results than treatment with an obturator. He performed the Julius Wolff operation. The position described by Dr. McCurdy as Murphy's was advised by Rose in 1850. An important point was to teach these children how to speak.

Dr. Bullett, of Louisville, did not think that Dr. McCurdy's combination instrument was necessary, since in operating depression of the tongue could be

overlooked. He passed a silk ligature through the tongue. Depression of the tongue was a disadvantage, for, after all, this organ was below the field of operation.

Dr. Ricketts, of Cincinnati, spoke of advancing the jaw as an operative procedure which had served him well in one case. He thought that the dentist could do better work in severe cases.

Dr. McCurdy, in closing, said that in the position described the tongue was above and not below the field of operation.

A Study of Traumatic Shock.—Dr. Liston H. Montgomery, of Chicago, read this paper. The object of the paper was to provoke discussion rather than to set forth new theories. Among the salient points to be studied were the etiology, pathology, symptoms, diagnosis, prophylaxis, and treatment. The causes of traumatic shock depended on the constitutional disturbance produced by a solution of continuity whatever the cause; whether it be a blow, fall, kick, railroad accident, etc. Shock was the inhibitive action of the nervous system plus a paralysis preventing the equal distribution of the circulation throughout the body. Injuries to the brain, liver, or abdominal viscera, extensive burns or shattered limbs were usually followed by shock. An injury to the brain or cord was almost invariably followed by shock. Undue exposure to cold might cause shock. He doubted whether grief and trouble were the causes of typical shock. Shock might be functional; it might follow cerebral and spinal injuries (concussion), or an undue amount of excitement. The symptoms were familiar to all. In the diagnosis attention should be paid to subnormal temperature, which was a very significant sign; to pallor and tremor; to the ashen appearance of the surface; to the profound mental depression at times. Pallor of the surface was a guide to concealed internal hemorrhage. A significant symptom was dimness of vision. Yawning and restlessness were of aid in diagnosis. Regarding prophylaxis our aim was to limit the degree and duration of shock. It should be anticipated by giving morphine, chloral, and, if necessary, whiskey, coffee, ammonia, digitalis, and strychnine. Dry warmth should be applied to the body. In favorable cases reaction was progressive and gradual. With the return of consciousness there were an increase in the strength and a diminution in the frequency of the pulse. The sequelæ were important from a medico-legal aspect. The treatment was not touched upon other than by saying that in one case erythrol tetranitrate in doses of gr. ss.–i. had given good results.

Dr. Warner, of Columbus, said that loss of blood was important in the consideration of shock, especially in children. Fright and grief in his opinion did cause shock. In women we were too apt to call everything hysteria. Hysteria and shock ought to be differentiated. In some severe cases of shock, patients conversed until death. No injury to the head was too slight for consideration, as had been pointed out. In cases of severe shock operation should not be done; in mild cases it was not contraindicated. The administration of strychnine, use of hot-water bottles, and protection of the patient from loss of body heat were important.

Dr. Fairchild, of Iowa, had observed severe injuries without shock, and very slight ones with profound shock. In purely nervous shock complete collapse was found without discoverable lesions. Operation in shock was to be governed by the individual case.

Dr. Jelks, of Memphis, stated that extreme pallor and shock might be ameliorated by lowering the head to relieve the anæmia of the brain. The extremities might also be bandaged. Atropine and strychnine were very valuable remedies.

Dr. Nelson, of Chicago, said that to him pain, shock, and fear were practically the same. He could not distinguish their effect on the central nervous system. As to treatment, he said that anything which interfered with the proper action of the nervous system was to be condemned. The only indication for morphine, as he saw it, was pain. It should be given if pain aggravated shock. Cocaine should be given to prevent sensitive impulses from going to the brain, nerve centres, and medulla. Depression of nerve centres should be avoided. Whatever improved the circulation and nerve centres was indicated, and for this purpose no drug equalled strychnine. The want of tone in the vascular system was at fault; therefore decinormal salt solution should be used either hypodermatically, per rectum, or by intravenous infusion.

Dr. Bishop, of Pennsylvania, thought that the first indication in the treatment of shock was to relieve the doctor of his shock. Shock and hysteria must be separated: one was a wearing out, the other a wreck. He had observed that a patient who talked full and strong either broke down or completely recovered.

Dr. Jonas, of Omaha, said that in shock the veins were overfilled with blood and the arteries were empty. Therefore salt infusion should not be given; this overfilled the vascular system and the heart could not work. Shock and hemorrhage must be distinguished. In hemorrhage it was the duty of the surgeon to ligate the bleeding point and then introduce salt solution. In shock pure and simple, salt solution should be avoided.

Dr. Earle, of Maryland, said that the vasomotor system was at fault. Atropine was one of the best drugs to paralyze the afferent impulses.

Dr. Means, of Columbus, stated that any routine practice in the treatment of shock would result disastrously. He believed that salt solution had produced death. In hemorrhage salt solution was indicated, for in these cases exsanguination and collapse were at fault. Nitroglycerin had been used too much in shock; it was a depressant and, therefore, of no value. Atropine and strychnine were excellent drugs. The use of whiskey was most pernicious.

Dr. Montgomery closed by saying that many of the points criticised in the discussion would be clearly brought out when his paper was published.

Automatic Drainage.—Dr. William Jepson, of Sioux City, Iowa, mentioned the disadvantages of the various forms of drainage as applied to different parts of the body. His device siphoned automatically the cavity operated upon. His apparatus consisted of a glass chamber filled with some antiseptic solution; to one end of this was attached a rubber bag to receive the discharge, to the other a rubber tube connected with the cavity to be drained. The pressure of the tissues made the cavity air-tight. If the patient was in bed the apparatus was suspended beside it; if ambulatory, it was attached to his side. In the pleural cavity it was very useful, preventing ingress of air. It was also useful in the gall and urinary bladders. In the peritoneal cavity a glass drainage tube was used, inside of which was a glass tube passing to the bottom of the other, and covered with rubber and cotton. In large cavities this apparatus was combined with gauze. In operations on the pleural and peritoneal cavities, when a competent nurse could not be procured, this method had certain advantages.

Dr. Bullett, of Louisville, did not think that the apparatus would work or accomplish what was intended.

Dr. Warner, of Columbus, considered it an ingenious affair, but thought that in the pleural cavity iodoform gauze was better.

Dr. Fairchild, of Iowa, disagreed with the previous speaker as to iodoform gauze.

Dr. Dugan, of Eyota, thought iodoform gauze in the pleura plugged rather than drained.

DR. JEPSON, in closing, said that he had drained for eighteen successive days in tuberculous peritonitis. The only thing which would prevent the apparatus from working was the ingress of air.

Phantom, Semilunar, and Annular Strictures of the Rectum; Their Diagnosis and Radical Treatment under Direct Inspection.—DR. THOMAS C. MARTIN, of Cleveland, said that his paper was based upon the assumption that the rectal valve existed. Some authorities doubted this. He showed two specimens to bear out his views, one from a three-months-old child, the other from an embryo in the third month. The prominence of the rectal valve was increased with the degree of rectal distention. This organ was the typical anatomical valve. The accidental discovery of the valve by means of the finger was ground for the diagnosis of phantom stricture. There were three forms of valvular obstruction: (1) Anatomical coarctation; (2) congenital hyperplasia of the rectal valve, the classical semilunar stricture; (3) hypertrophy of the rectal valve, constituting the classical annular stricture of the rectum. The symptoms were those of chronic obstipation. They soon produced the physic habit. Straining at stool was ineffectual. At first alternating constipation and diarrhœa occurred, later diarrhœa with increasing frequency, and finally flatulence, intestinal intoxication, and neurasthenia. Intestinal obstruction became more and more pronounced and might terminate fatally. Inflammation of the normal rectal valve contracted and fixed the valve in position, and constituted non-malignant stricture. The diagnosis should be made by ocular inspection through a proctoscope of large size. The degree of obstruction was judged by asking the patient to bear down. In operating divulsion was to be condemned. Massage by a coarctor often cured. The best operation was section of the valve—valvotomy. The valve was raised by a hook; then steadying it the fibrous band was transfixed and the margin cut through.

DR. EARLE, of Maryland, said that the valves could be easily demonstrated by placing a patient in the knee-chest position. They were seen in almost every case and left no room for doubt. The number varied from one to four.

DR. BRANHAM, of Baltimore, said that if an adult rectum was taken post mortem and stretched, no valves were seen. The folding of the mucous membrane exaggerated the valve. The valves were not quite so distinct as had been described. He mentioned a condition in which the upper part of the rectum became detached and invaginated into the lower part, giving rise to the suspicion of stricture. If the patient was placed in the knee-chest position the invagination disappeared.

DR. BEACH, of Pittsburg, said that proctoscopy had proved conclusively that the valves existed and that the treatment as indicated by the reader of the paper cured.

DR. PENNINGTON, of Chicago, mentioned spasmodic stricture, and said he believed in its existence.

DR. MARTIN said that it was quite true that post mortem valves could not be found. We were dealing with the rectum in the confines of the pelvis, however. All that was needed to demonstrate the valve was a patient, and an index finger on each hand. The operation might be performed painlessly, safely, and without hemorrhage.

Acute Gonorrhœa: Its Prevention and Cure.—DR. THOMAS GRANT YOUMANS, of Columbus, said that the successful treatment of gonorrhœa was little known. There was no field where more good could be done. Prevention depended on the medical advisers. The disastrous effects of the disease upon the various organs were mentioned, with statistics from various countries and authorities. The sanitary regulation of prostitutes had failed on account of the irregular methods employed. Towels, sponges, sheets, instruments, etc., might carry infection. The advice of the physician was most important. The reader had used a modification of Janet's method with very excellent results. A solution of potassium permanganate, 1:4,000, was used. A stronger solution than this irritated. Irrigation was performed twice daily at first, later once a day. The temperature of the water must be high. Heat helped to destroy the gonococcus. The Valentine instrument was used. The penis was irrigated inch by inch, the patient having urinated previously. If the posterior urethra was involved this was also washed out. Force must not be used here, but the operator should gently steal the way into the bladder. After each irrigation a ten-per-cent. solution of argonin or two-per-cent. protargol should be injected and kept in the urethra for ten minutes before urinating. Alcoholics must be avoided, but all kinds of food could be eaten. Balsam and alkalies should not be given. The bowels should be kept open. The disease was not cured when there was a stoppage of the discharges. Infection may last for a long time after that. When by every bacteriological test known the gonococcus could not be discovered, then the patient was cured. This might be in from one week to a year. The best results were obtained if the case was seen early, *i.e.*, in thirty-six hours after infection. The proper technique was very important.

DR. DALY, of Pittsburg, said that the method advocated was the correct one up to the present time. Every case of gonorrhœa, however, could not be cured by Janet's method. The parts were kept clean, and once in a while cases were cured in one or two weeks. In other cases there was no cure. Then if Janet's method did not work, some other method would have to be used. He had made injections at a temperature of 140° F. without killing the gonococci. All patients could not stand deep urethral injections. Argonin and protargol were no better than nitrate of silver.

DR. CAMPBELL, of Chicago, said that no one had ever cured gonorrhœa in a week. The stoppage of the discharge did not indicate a cure; it was only the first step. He did not believe in a stock solution of permanganate, because decomposition took place too readily—as a rule, in eighteen hours. The solution should be made fresh each time. He used a three-per-cent. solution of argonin with good results. Protargol had not proven very satisfactory in his hands.

DR. PATTERSON, of Philadelphia, thought that the only known method of preventing gonorrhœa was to be virtuous. Irrigations with permanganate (1:400 to 1:2,000) gave the best results. The presence of streptococci made no difference, because virulent streptococci were found in the normal healthy urethra. Gonorrhœa usually lasted from six to eight weeks. It could not be cured in less time than that.

DR. VALENTINE, of New York, said that, contrary to Spencer Wells, he thought that only ninety-eight per cent. of men had gonorrhœa. As long as clap was made the subject of witticism, as long as doctors paid little attention to the subject, so long would the liability to infection continue. He spoke of the effect of gonorrhœa on the eyes, pelvic organs, joints, heart, brain, lungs, etc. He advised a fresh solution of permanganate, though a twenty-five-per-cent. solution kept for twenty-four hours. Tablets were used for making the solutions.

DR. OCHSNER, of Chicago, had noticed that after gynæcological operations patients returned in a few months with an acute infection. Following the German idea, he advised the use of a copious hot douche after intercourse in order to dilute the gonococcus and modify the infection.

Dr. Jelks, of Memphis, mentioned that few negroes go to the physician for treatment of gonorrhœa. He doubted whether the longevity of the disease was lessened by any of the methods, for in some cases gonorrhœa was a self-limited disease. In some cases, after everything had failed, the cutting of a narrow meatus effected a cure.

Dr. Youmans, of Columbus, said that a certain percentage of persons got well in six weeks without any treatment. He had, however, seen cases cured in a week. He had never observed a case which was not cured by his method.

Urethroscopy in Chronic Urethritis, with Demonstration of a New Urethroscope.—Dr. F. C. Valentine, of New York, showed the importance of direct inspection of the urethral mucous membrane, and described how this method had been applied to the eye, throat, stomach, etc. Many, however, considered the urethra the stepchild of the organism. The chief essential in chronic gonorrhœa was to discover the cause, to find the location and character of the disease. For this purpose a urethroscope was necessary. Any instrument to accomplish its purpose must be reliable, simple, cheap, and easy of manipulation. The instrument as devised was demonstrated. There were five urethroscopic tubes, in size from 24 to 32 French. Wooden applicators were used to remove excessive secretion. A lamp was inserted into the tube, the current was turned on, and direct inspection was made. The urethroscope could be inserted in any position. The dorsal was preferred by the reader. Formerly he used cocaine; with increased experience and dexterity he saw no need of it. He did not pain his patients, so why should cocaine be used? Again, after the effect of the cocaine wore off the patients complained of painful urination. In posterior urethroscopy the patient should be placed in the lithotomy position. After urethroscopy intravesicular irrigation should be performed. This was very easy with practice. He never had had a case of urethral fever. Urethral disease could not be diagnosed without knowing the healthy urethra. Urethroscopy in healthy subjects was unjustifiable. How then should we proceed? Urethroscopy greatly benefited neurasthenics, so it should be used in these cases, and the patient would not only be cured but the appearance of the healthy urethra would be learned. By urethroscopy the diagnosis of the cause was made. A urethroscope should never be inserted into the acutely inflamed urethra. In conclusion: (1) No chronic disease of the urethra could be diagnosed properly or treated satisfactorily without the urethroscope. (2) The technique was not difficult. (3) The urethroscope should be easily manageable and cheap.

Dr. Tuckerman, of Cleveland, showed his instrument, with a modified obturator which rendered it easy to slide into the bladder.

Dr. Campbell, of Chicago, asked how long the battery would last.

Dr. Valentine thought that Dr. Tuckerman's instrument solved many points for future urethroscopy. The battery had run for eighty-five hours. With the four cells he had performed four hundred urethroscopies of fifteen minutes' duration.

Case of Pancreatic Cyst: Operation; Recovery.—Dr. J. B. Eagleson, of Seattle, reported this case as a matter of record. Several diagnoses had been made in the case, namely, pleurisy, ovaritis, uterine trouble, and stone in the kidney. He found a large movable tumor in the upper left lumbar region which dropped toward the umbilicus when the patient sat up. It was hard, and tender on pressure. A large floating kidney was diagnosed, and an operation was undertaken with that end in view. A lumbar incision showed a normal kidney. The parts were sutured, and laparotomy was performed, when the diagnosis of pancreatic cyst was made. The left end of the transverse colon passed over its centre. The cyst was incised and drained. The patient recovered, and her health was good six months afterward.

The Schleich Solution.—Dr. R. M. Stone, of Omaha, said he had given this anæsthetic in two hundred and fifty cases, and the longer he used it the better he liked it. The rapidity of corneal and surgical anæsthesia was remarkable. He had used it in all kinds of operations, major and minor. The small amount of anæsthetic used was another great advantage. Two drachms were sufficient for an eight-minute operation. On the average $2\frac{5}{7}$ ounces were used for each hour of anæsthesia. In a lymphatic diathesis, where chloroform was so dangerous, he had used it with the most excellent results. It never caused albuminuria. He had given it in a case of trephining for tuberculous meningitis, and the patient was on the road to recovery. The excitement was very slight. The vomiting after the operation was not severe or prolonged. There was cyanosis in only thirteen out of two hundred and fifty cases. Rigidity of the body in the early stage was the only unfavorable symptom. The respiration was normal throughout the entire period. He believed that this solution would replace chloroform and ether. Two masks, one for the dorsal and one for the Sims position, were shown.

Dr. Jepson, of Sioux City, took exception to the statement that Schleich anæsthesia was less dangerous than chloroform or ether. Not enough patients had been thus far anæsthetized to justify the drawing of conclusions. He considered the solution a mixture, and no better than A. C. E.

Dr. Murphy, of Chicago, was much pleased with the results in the two cases anæsthetized for him by Dr. Stone. The time was short, the condition good, the patients rallied easily, and there was no vomiting. He believed, however, that there was enough chloroform in the solution to cause the doctor to be on his guard.

Dr. Stone said he considered it a solution and not a mixture. The diminution of the quantity of the anæsthetic was important. He attributed his good results to the mask. There was practically no excitement. With this anæsthetic the safety of the patient was great.

SECTION ON PRACTICE OF MEDICINE.

Third Day—Thursday, June 8th.

Notes on Two Epidemics of Typhoid Fever in the Iowa Hospital for the Insane.—Dr. George Boody, of Independence, Iowa, read this paper. The conclusions drawn were as follows: (1) Cases of inverted typhoid fever were comparatively quite rare, and the subject was deserving of thorough investigation as often and wherever an epidemic occurred, with the object in view of determining the relative frequency of the disease; and in doing this all the methods for confirming the diagnosis should be rigidly applied in each suspected case. In the two epidemics reported it occurred but once in forty-three cases. (2) Of the patients who recovered twenty-five per cent. showed marked improvement in nutrition and muscular strength, while the remaining seventy-five per cent. only reached their former condition in these respects. Compared with previous observations it would seem that insane patients with typhoid fever did not show such a degree of improved nutrition after recovery as did those without the mental complications. The patients who improved mentally showed a corresponding favorable change in nutrition, and those whose mental status returned to normal made the most startling and striking changes in this direction. This might not be

true except for those two epidemics, but in them was beautifully illustrated the profound influence that the mind exercised over the processes of nutrition and assimilation. (3) Of this number 16⅔ per cent., all dementias, seemed brighter mentally, but relapsed as soon as convalescence was completed, except one patient who continued on some little time longer; 2⅞ per cent., all melancholias, made a partial recovery, and one patient was fairly able to resume the ordinary duties of life; 5⅝ per cent., one a case of katatonia and one of acute mania, regained their former mental status. The behavior of the cases of dementia would lead one to think the fever had some slight influence upon the mental condition, but it was of no value since the relapse occurred so soon. Such cases were always beyond the possibility of recovery. The prognosis in melancholia was favorable for some improvement, and it was only fair to assume that the fever played no important rôle in the case of partial recovery, since the change was no more than was predicted previous to the fever. The prognosis for recovery in acute mania was generally favorable; and this case was regarded as a specially hopeful one some time before the attack of typhoid. The recovery was rapid and complete, and took place at about that period in the course of the mental disturbances at which a change might be expected had the patient not had the fever; hence one would not be justified in giving to the fever any prominence as a curative factor in connection with the insanity.

A Quarter of a Century's Experience with Typhoid Fever, with Special Reference to Some Unsolved Problems.—Dr. J. L. Taylor, of Wheelersburg, Ohio, stated that for twenty-five years he had practised in a region in the Ohio valley which had formerly been intensely malarial, but where more recently typhoid fever had become endemic. Dr. Taylor raised the question as to whether the plasmodium had yielded to a bacillus of superior power. The typhoid came in the form of violent epidemics, which gradually grew less malignant, and which had now assumed an endemic form characterized each year by varying types. It arose independently of the water supply and its course of development was opposite to that of surface drainage. No recognizable sources of infection could be traced. The same treatment was not appropriate to the varying types which appeared at different periods. Influenza seemed to be attended with an abatement or profound modification of typhoid. The speaker referred to intimations of a new "constitution" in disease. A sickness in which all the forces, temperature, pulse, digestion, excretion, and all muscular and nervous energy were below par, prevailed in the speaker's territory; this he believed to be a form of typhoid. He asked if the semi-expectant plan of treatment would apply in all cases of this proteiform disease.

A New Bath Facilitating Hydrotherapy in Private Practice.—Dr. Alfred C. Haven, of Lake Forest, Ill., read a paper on this subject. The bath he described consisted of a canvas strap encircling the head-board of the bed; the ends of the canvas belt were fastened by a simple catch, so that the belt might be drawn taut. There was another canvas belt of similar design for the foot-board; two rings, twenty-six inches apart, were set in each canvas strap; a rubber sheet was hemmed at both sides, in which were two slip ropes, on the ends of which were snaps. The patient was rolled on the sheet, the four snaps were caught in the four rings, and the tub was ready for the water. It was emptied by lowering one corner for the water to run off, and finishing with a small piece of rubber hose used as a siphon. When not in use it was folded and put into a small cotton bag. In his judgment there was no excuse for the busy practitioner to neglect a remedy that would do for his patient what no drug would do. This common, everyday, despised, neglected, yet potent remedy, water, should be more often used, and could be used by every physician who had the good of his patient at heart.

Therapeutic Principles Established in Typhoid Fever.—Dr. L. F. Roush, of New Haven, W. Va., read a paper with this title, in which he took the ground that certain agents, when properly used, had a specific influence not only in mitigating the severity of the fever but also in abridging its duration; a lessened mortality, therefore, he considered to be the natural consequence. The principle of action was to keep up a moderately free catharsis, with calomel especially; but other cathartics could be used, which would change the action in the bowels which almost always took place sooner or later in the disease in the form of a free diarrhœa, to that action which was characteristic of the medicine given. In so doing the toxin poisoning which always occurred was in a measure prevented, and, as a consequence, the symptoms were greatly mitigated. This treatment by catharsis was especially insisted upon during the first six or eight days. During the further progress of the disease, if the characteristic diarrhœa appeared again, the same action of medicines should be sought. The salicylate of ammonium was given in solution in five-grain doses every two hours day and night, from the beginning to the end of the fever, except when the temperature fell below 102° F. in the evening, and then it was given only during the day. Sponging the patient frequently with cold or warm water, whichever was most agreeable, was also insisted upon. A great deal of stress was laid upon depriving the patient of food during the first week or ten days, but he favored the free administration of water, as well as coffee or tea should the patient desire it; he also favored the giving of fruit-juices from the beginning. Milk was preferred above all other kinds of food when it agreed with the patient. The author also made a point against the use of the bed-pan, believing it was detrimental to the patient. If the patient was properly treated he would have plenty of strength to get up, and there would be no danger from perforation of the bowel or from heart failure. The speaker also asserted that no patient who had much tympanites was properly treated, and he considered this as the symptom having the most evil omen of all others. It was the evidence of the continued multiplication of the typhoid bacillus and the poisoning which resulted, and every effort ought to be made by free catharsis and strychnine internally and turpentine stupes externally to get rid of it. The speaker claimed that he could and did diminish all the symptoms and greatly abridge the duration of the disease, and pointed, as the result of his work in a series of one hundred and forty-three cases, to a mortality of 3.5 per cent.; and he saw no use in any man's decrying the medicinal treatment of this disease, whether he be of high or low standing in the profession.

The Use of Acetanilid in Typhoid Fever, with a Report of Six Cases.—Dr. E. C. Brush, of Zanesville, Ohio, read a paper with this title. The cases reported were those of soldiers sent home last August and September from Camp George H. Thomas, Chickamauga, Ga. They were treated in the Zanesville hospital. The only antipyretic used was acetanilid, which was efficient and effective. The directions to the nurses were to give three grains of acetanilid every three hours whenever the temperature was over 101° F. until it fell to that point or lower. If, after giving a dose, the temperature showed a decided tendency not to fall, a second dose was given in two hours. Nearly all the patients broke out into a good perspiration after the first dose. The shortest run of the

fever was twenty-four days, the longest thirty-five, an average of thirty days. All the patients but one recovered; one died during the fourth week of hemorrhage from the bowels.

Dr. Witherspoon, of Nashville, believed that in Tennessee the fever was of a different type. Even after the tenth day he never found the bacillus typhosus in the stools. The temperature came on suddenly without any period of incubation; there was fever with great prostration; it was a fever with a leaky instead of a dry skin; it was a fever with general abdominal tenderness and the scaphoid belly; it was a fever with rather constipated bowels and not the mushy stools; it was a fever that ran rather a low and favorable course. There was no enlargement of the spleen or liver. The nervous symptoms were of the mild maniacal form. In answer to the gentleman who spoke of purging in these cases he could not imagine any worse treatment than giving three to eight grains of calomel every three to six hours for three to six days. In typhoid there was irritation in the intestines, with irritation of the solitary follicles, inflammation of Peyer's patches, maybe ulceration; and fuel should not be added to the fire, running the risk of getting a quicker slough, which would happen when the purge was given. The danger in this disease was from the toxæmia which overwhelmed the nervous system and especially the nervous centres. The danger was not so much the fever. The Brand method of treatment was not alone to lower the temperature but to act upon the nervous system. Acetanilid lowered the resisting-power of the patient, and he did not consider any of the coal-tar derivatives safe.

Dr. Mills, of Illinois, said he had been treating typhoid fever since 1856 according to the plan of Dr. G. B. Woods, of Philadelphia, with the rest, feeding with toast water and some milk, and administering every three or four hours some turpentine emulsion containing about six drops. Typhoid malaria he considered a combination of two distinct diseases. The best way was to get rid of the malaria with large doses of quinine, and then to treat the typhoid.

Dr. Crook, of Tennessee, said that his treatment of this disease was the same in kind as he employed in treating a septic suppurating wound, *i.e.*, drainage and antisepsis.

Dr. Bishop, of New York, believed that the success in the cold-bath treatment was in the elimination of the toxins. He did not believe that the time was more than one or two years distant when an antitoxin would be available which would be efficacious.

Primary Testicular Mumps. — Dr. Landon B. Edwards, of Richmond, Va., read a paper on this subject. So constant, he stated, was the primary seat of mumps in the parotid or other salivary glands, that the disease was remarkably free from other synonyms than parotitis or parotiditis; hence he thought it desirable to note several cases of primary testicular mumps which had occurred in his practice. An epidemic of parotitis prevailed in Richmond during the early months of this year. During that time four cases of primary testicular mumps came under his care—three of them in medical students and the fourth case in a young man who boarded in the house with one of the students. In none of the cases could the most rigid inquiry elicit a history of impure intercourse, of a recent venereal disease, or of injury about the generative organs. In short, there was no recognizable cause beyond the prevailing epidemic of mumps. None of the patients had had a previous attack of parotitis. While the neck glands became secondarily involved in three of the cases, in only one were the signs of parotitis at all prominent, nor did the parotid involvement modify the testicular signs and symptoms. Recovery was gradual without apparent impairment of testicular function in any of the cases. Such cases were rare and occurred in some epidemics of parotitis and not in others. They did not find sufficient recognition in the books. The "Twentieth Century Practice of Medicine," vol. xiii., page 582, contained about the only readily accessible authority with reference to such cases.

A Fallacy of the Rest-Cure Treatment.—Dr. George M. Gould, of Philadelphia, read a paper with this title. He said that thousands of patients were being systematically treated for functional diseases which were due to diseases of the eyes, and thousands were being treated for organic diseases which originally were caused by ocular diseases. In no class of cases was there such great reason to look after the eyes as in the hysterical and neurasthenic, whom, by a morbid philology, we allowed to be called "nervous." Dr. Gould did not contend that in the majority of cases requiring the rest cure the origin or chief factor of the disease was eye strain, or that the rest cure was unnecessary even in cases of reflex ocular neuroses, but he emphasized that: (1) It was positively criminal negligence to ignore eye strain in any case requiring the rest-cure treatment. (2) It was not enough to know that one oculist had examined the eyes, especially if it had been done without a mydriatic. (3) To mydriaticize a pair of eyes for a month or two would often do more good, would certainly be more logical, would be an infinitely better means of differential diagnosis in obscure nerve trouble and functional nutritional diseases, than to put the patient's body to bed for the same time.

The Cataphoric Treatment of Cancer; a Further Report.—Dr. G. Betton Massey, of Philadelphia, gave a summary of cases. Since the paper previously read before the section, 26 cases of carcinoma and sarcoma had been subjected to this method of treatment in some manner, many of them extremely bad cases—some forlorn hopes. Of these cases 10 were operable cases and these resulted as follows: Cured, 8; probably cured, 1; failed to be cured, 1. Of the inoperable cases there were cured, 2; probably cured, 1; failed to be cured, 13. He concluded as follows:

"(1) The massive diffusion of nascent mercuric salts within a growth of the body by an electric current constitutes a novel therapeutic procedure of great value in the destruction of foci of malignant or non-malignant germ growths when said growths are so situated as to permit of penetration and drainage.

"(2) This cataphoric destruction of the germs of a primary cancerous growth *in situ*, including outlying colonies and so-called roots of prolongation, permits the preservation of the unaffected portions of the organ in which it is situated, and offers greater security against a recurrence of the growth than efforts to remove the living malignant organisms by cutting operations.

"(3) While the cataphoric method may be employed as a palliative in non-operable malignant growths and may at times cure them, its chief value is in the total destruction of the malignant germs in the early stages of primary growths and in the same stages of purely local recurrences."

Rheumatism, Its Etiology, Pathology, and Treatment.—Dr. A. A. Young, of Newark, N. J., read this paper. As to etiology, the conclusion had nearly, if not quite, been reached, he said, that there was a rheumatoid bacillus. A clear conception of the etiology of rheumatism could be obtained only from a correct knowledge of the biology of this specific bacillus. It was safe to assert that the disease was a constitutional one, never local; the local manifestation probably marked the nidus of a fully developed bacillus, where it deposited its germinal vesicle which entered the system and completed another biological cycle, ending

in a fully developed bacillus again. We were forced to the conclusion that rheumatism was an acute, specific, febrile affection induced by the presence and growth of the theoretical rheumatoid bacillus. This theory was strengthened by the fact that the disease progressed most rapidly in cool climates, subject to sudden, frequent, marked changes, moist atmosphere and soil, by its seasons of activity and quiescence, by its epidemiology, by its varying severity; in all of which points it resembled other known infections. Heredity also had its bearing. If this hypothesis of the biology of bacteria was true, then the conclusion must be reached that the germinal vesicle of the bacillus was directly transmissible from the mother to the unborn child, through the blood.

Pathology: The pathological changes which followed in the wake of developing rheumatoid bacilli were numerous and confined primarily to the blood; secondarily to the joints, tendons, and tendinous sheaths, which became infiltrated in a greater or less degree with the products of inflammatory action. That the blood stream was the medium which carried this morbific agent to the various parts of the body there could be no doubt. It was equally certain that this morbific agent, a micro-organism, led its developing life within some constituent of the blood, for at the earliest manifestation of the disease blood changes were found; first among which was the increase of the fibrin-producing agent. There was a loss of alkalinity shown by the increased tendency of the blood to coagulate. Though the blood might not reach the point of acidity, it approached it, and in this same ratio was increased the tendency of the fibrin element to unite and form clots, which might be "Nature's protective policy." Another important change in the blood was a decrease in the number of red blood corpuscles. Though the blood, in a large majority of cases, appeared to be alkaline, yet the amounts of urea and uric acid were considerably above the normal. The tendency to formation of fibrinous clots was the primary result of the uric-acid diathesis. This infected condition of the blood produced changes in the vascular system, especially the capillaries, sometimes permitting transudation of the red corpuscles, when ecchymotic spots, indicative of hemorrhagic diathesis, appeared. The urine became highly colored, scanty, of high specific gravity; was markedly acid on cooling, and deposited the amorphous urates and uric acid, while there was little if any increase in the amount of urea formed. This change was produced by abnormal tissue change dependent upon the development of the rheumatoid bacillus. The joint involvement was likely to be produced from the primary blood infection. All the tissues surrounding the joint were attacked and the synovial fluid was poured forth very abundantly, and was acid, which indicated a blood change. This abundant synovial fluid was doubtless a remedial agent serving to cover up the fully developed bacillus. The membranes and tissues in and about the invaded joints assumed greater vascularity and thickening. The articular surfaces became somewhat roughened from an increase of the cartilage cells. Inflammation was Nature's way of eliminating foreign material. When elimination was impossible she covered up and imprisoned within their nidus the fully developed rheumatoid bacilli, which, if not destroyed, were prevented from undergoing further reproductive processes.

Treatment: Three elements must be recognized. The first was the deposition of the specific rheumatoid bacillus into some suitable culture medium in the body, presumably the blood; second, the bacillus must assume an active stage of development, must pass through its biological changes from the germinal vesicle to the perfect bacillus; third, the conditions or so-called sequelæ existing after the active inflammatory action had subsided. The first condition could be met only by prophylaxis; better hygienic, sanitary, and dietetic conditions must be sought for and insisted upon. The second condition required more careful attention. There was a relation existing between the biology of the bacillus and uric-acid formation. It remained to be demonstrated whether uric acid was the product of the development of bacilli or whether their development depended upon the amount of uric acid present at the time and subsequent to the date of infection. The speaker inclined to the assumption of pre-existing uric acid and on it based the treatment. Uric acid as found consisted of minute amorphous spherules which could be changed by salts of sodium, especially salicylates, into needle-like crystals, accompanying which change there was an improvement in the rheumatic condition. And to the lessening of uric-acid irritation in a mechanical way, and not to elimination, the improvement was due; hence the disposition to relapse. Immunization might become the treatment of the future. Medicinal agents must come in direct contact with the germs and be their immediate destroyers, or they must eliminate from the system those elements on which germ life and growth depend. The eliminative method of treatment appeared preferable. A modification of uric acid must modify the disease in a like ratio. Pilocarpine, which produced perspiration, marked salivation, and increased all excretory functions of the body, and after the use of which uric acid and urates might be found in the excreta, was a very effective remedy. To the statement that pilocarpine exerted a deleterious effect upon the heart the author made a positive denial, founded on fifteen years' experience. To promote uniformity and efficiency, the hypodermic method was far the best; the size and frequency of the dose must be left to the physician. As to those conditions known as sequelæ, the object of treatment was to approach immunization and prevent as far as possible active bacillary development. The idea of the treatment was not to eliminate the bacilli, but to cause their destruction by the removal of uric acid, upon which their life and growth depended and which supported other germs as well, notably the pneumococci.

The Quantitative Estimation of Albumin in the Urine.—Dr. W. C. Purdy sent a communication which was read by Dr. Arthur R. Elliott, of Chicago. He considered the gravimetric method; Tanret's titration method with the double salt of iodide of mercury and potassium, with mercuric chloride as the indicator; the time reaction of Brandberg; the differential density method of Lang, Hoebler, and Bernhardt; Esbach's volumetric method; and his own centrifugal method, giving both volumetric and gravimetric percentages, with error not exceeding 0.02 of 1 per cent. The clinician demanded something more available and accurate than the method now used. The speaker's process consisted of the following steps: Precipitation of the albumin, in carefully graduated percentage tubes, of 10 c.c. of the urine by means of 2 c.c. of fifty-per-cent. acetic acid and 3 c.c. of 1 in 10 aqueous solution of potassium ferrocyanide; after the urine and the reagents were mixed, the tube should stand for ten minutes to insure precipitation of the albumin. At the end of ten minutes the percentage tubes were placed in a centrifugal machine the radius of which, with tubes in position, must be exactly six and three-fourth inches. The tubes were revolved for exactly three minutes at a uniform speed of one thousand five hundred revolutions per minute. The tubes were next removed and the amount of albumin was read off in bulk percentage, which by the aid of an accompanying chart was converted into percentage by weight and grains per fluid ounce.

Accidental or Spurious Albuminuria.—Dr. Charles G. Stockton, of Buffalo, read this paper. This term, he stated, was employed to include those cases of albuminuria in which albumin found its way into the urine from the pelvis of the kidneys, from the ureters, from the bladder, and from the genitalia. He urged that accidental albuminuria was not to be disregarded, and that the source of the albumin should always be most carefully examined into. It should also be reiterated that when albumin was found originating in the bladder, the ureter, or the pelvis of the kidney, the urine should be frequently studied to make sure that infection was not invading the more important structures of the kidney.

Dr. Elliott, of Chicago, referred to cases of nephritis unaccompanied by albumin in the urine, which occurred more frequently than was supposed. He spoke of albuminuria accompanying gastro-intestinal disturbances, probably the result of toxæmia, which caused an irritation of the renal cells and other secreting structures of that organ; such a urine was of high specific gravity and threw down acid elements. He thought Dr. Purdy's method a beautiful one, and he had been using his method—the original one—for a number of years in the approximate determination of albumin.

Dr. H. B. Favill, of Chicago, spoke of the importance of this subject in reference to life-insurance companies. Albumin might be absent in positively nephritic individuals, and certain things should be borne in mind in determining the absence of nephritis in people with no albumin in the urine. Again, when albumin did appear in the urine the microscope should be consulted to determine whether it was renal in origin or not. Again, albumin here might be transitory and not be an evidence of disease. He had seen large amounts of albumin and casts appear and disappear, an apparent nephritis, and this coincident with large amounts of indican, probably the result of blood changes.

Cholecystitis: Its Relations to Angiocholitis and Cholelithiasis.—Dr. Charles G. Stockton, of Buffalo, read this interesting paper. He said there were a series of ascertained facts that were not to be disposed of by the simple statement that gall stones were present and for some unknown reason took upon themselves to migrate from the gall bladder. These facts were: (1) In a large number of post-mortems, gall stones were found present without the history of jaundice, hepatic colic, or other liver troubles. (2) In post-mortems of those dying from biliary obstruction there sometimes had been found no calculi in the biliary ducts, but one or two very large calculi in the gall bladder, quite too large to engage in the cystic duct and therefore not directly guilty of the attack. (3) Obstruction of the biliary passages was not infrequently found to be complete when no gall stone was found present in any of the biliary passages. (4) A calculus was sometimes found in the common duct without jaundice, colic, or other symptoms of obstruction. (5) When gall stones were found post mortem, or in operations *in vivo*, and there had been recent symptoms of hepatic colic and jaundice, evidences of cholecystitis or angiocholitis or both had been found whenever they had been searched for. These observations seemed to point to the fact that gall stones might be innocent tenants of the gall bladder; that attacks of colic might occur when the gall stones were too large to engage, or when there were no gall stones at all; that an inflammatory process of the biliary passages seemed in some way related to the attacks of gall-stone colic. Operative procedure had for its object the cure of the cholecystitis. Undoubtedly in a certain proportion of cases the inflammation included the dangerous complications of chronic angiocholitis, hepatic abscess, and peritonitis, which with the assistance of surgery might have been prevented; but even in the cases in which operation was demanded, a carefully considered plan of treatment should be applied, not only to assist in recovery but to prevent recurrences.

Dr. Favill, of Chicago, reported an interesting observation in which the diagnosis of stone in the common duct had been made, and the patient was subjected to an operation and no stone was found, but a small nodule was discovered in the head of the pancreas, which caused an obstruction. He did not believe that the painful symptoms were always the result of obstruction, and as bearing upon this point he related the case of a person who presented all the manifestations of stone in the common duct except that there was no icterus; after many months the patient died and there was no obstructing stone or any palpable evidence of microscopic softening. In that case there was undoubtedly an infection without any obstructing agent. He related the case of a patient who had been in St. Luke's hospital with all the attending symptoms of a suppurative inflammation of the gall bladder; this patient passed from observation, going to St. Louis, where a stone was removed. He came back with exactly the same symptoms. In that case it was clearly not the stone that was responsible for the colic. No icterus was present in that case. One should disassociate the colic and icterus, and the speaker maintained that the latter was mechanical.

Fourth Day—Friday, June 9th.

A Further Report on the Use of "Antiphthisic Serum T. R." in Tuberculosis.—Dr. A. Mansfield Holmes, of Denver, read this paper. In well-advanced cases, he stated, the serum invariably caused an elevation of temperature which occurred in from three to six hours after administration. There was also experienced from the prolonged use of the serum a more or less extensive infiltration of the areas used for injections; also, there was produced a depressing effect, which was relieved by a short period of rest. Sooner or later the lymphatic glands become tender and enlarged; the enlargement usually came on within two or three days. He referred to the tuberculin test as a means of diagnosis. The advantages were twofold: (1) It served as a reliable means of estimating the degree of convalescence, and (2) it served as a safe and positive means of diagnosis when bacilli were not found in the sputum or excreta. He thought the study of the blood count was of greater importance as an aid in diagnosis than the study of the sputum. When the cases were experiencing the good effects of the serum there was invariably an increase in the percentage of young lymphocytes of the blood. On the other hand, in rapidly declining tuberculous cases there was a progressive decline in the percentage.

Our Tuberculous Patients: Whom to Send and Where to Send Them.—Dr. J. Frank McConnell, of Las Cruces, New Mexico, read a paper with this title. In cases of fibrosis or fibroid phthisis he considered it a great error to send patients to high altitudes; they should be sent to moderate altitudes, or to the sea-level. He especially invited the attention of the section to southern New Mexico, where there was an altitude of 3,800 feet, a valley surrounded by mountains and thus sheltered, a country with little rain, averaging less than eight inches; it was a land of perpetual sunshine, three hundred and forty-eight days in the year, with a winter that possessed the necessary qualifications of climatic therapy.

Serum Therapy Combined with Favorable Climatic and Strict Hygienic Supervision of the Patients: Report of One Hundred and Six Cases so Treated during the Year 1898.—Dr. C. P. Ambler, of Asheville, N. C., read this paper. He stated that the use of antistreptococcic serum in conjunction with anti-tubercle serum had proved of little benefit in his hands. The use of the antitubercle serum was indicated in the incipient cases. It was contraindicated in cases of miliary tuberculosis, in cases of extensive softening, high pulse, marked emaciation, or decidedly hereditary history. The injections should not be used when the temperature reached a higher point than 101° F. daily. He summarized 106 cases without regard to classification as follows: Cough and expectoration disappeared in 38, or 36 per cent., and diminished in 83, or 78 per cent.; the bacilli disappeared in 49, or 46 per cent., and decreased in 61, or 64 per cent.; the physicial signs improved in 80, or 84 per cent.; the weight gained in 92, or 87 per cent.; the vital capacity gained in 98, or 92 per cent.; the temperature and pulse became normal in 71, or 67 per cent.; the average time treated was 4.9 months; the average amount of serum used was 77 c.c.; apparently cured (no relapse), 41, or 39 per cent.; great improvement occurred in 31, or 29 per cent.; improved, 14, or 13 per cent.; stationary, 7, or 6.6 per cent.; worse, 11, or 10 per cent.; died, 2, or 1.8 per cent. He concluded that while serum therapy was still in its experimental stage, the results obtained from its use in incipient cases certainly justified one in the continued use of it.

Dr. Carrol F. Edson, of Denver, Colo., spoke of the importance of early diagnosis. One point he drew special attention to, an early sign of tuberculosis, which was the general depression of health without obvious cause, when the patient lost weight, and felt himself below par, and came to the general practitioner: in these cases one should note carefully the temperature, especially for an afternoon rise; many physicians mistook the early stages for malaria. Many patients with this disease coming to Denver gave statements that their physician had treated them for malaria, and for a month or two had given them quinine. He cautioned against treating these cases for malaria. Cases of pronounced pneumonic infiltration should not be sent to high altitudes, for they failed to do well and must soon be sent back.

Dr. Minor, of Asheville, wished to emphasize the statements of Dr. Edson. He greatly believed in prophylaxis. Few people understood the importance of good ventilation and few used the respiratory powers of the chest. A normal amount of vital capacity was seldom found. People in bad hygienic surroundings had bad digestive powers. He was not a fanatic on the use of the serum treatment, but he had confidence in this treatment if it was used only as an adjuvant. One should bear in mind that the basis of treatment of tuberculosis was individualism, and those who forgot to individualize failed in their work.

Dr. Allen, of Missouri, emphasized the importance of the microscope in making an early diagnosis, which he considered the only true way. The phenomena were the results of an inflammation. He used general treatment with creosote, hypophosphites, strychnine, cod-liver oil, and to this he added the serum therapy, all with good results.

Dr. McConnell said that in the early diagnosis of this disease the use of iodide of potassium in very small doses was of service, especially when a stethoscopic examination was made. After the administration of this drug, in auscultation, evidences of inflammation were manifest, which could not be found without its use.

The Value of the Tuberculin Test in the Diagnosis of Tuberculosis.—Dr. Edward O. Otis, of Boston, in a paper with this title, summarized his conclusions as follows: 1. The tuberculin test indicated early tuberculosis by a general reaction before it could be detected by other methods, except the *x*-ray, in the large majority of cases, with a dose of from 5 to 10 mgm. of Koch's original tuberculin. 2. No injurious results occurred from the use of tuberculin in these doses. 3. Proved tuberculosis in a more or less advanced stage might fail to give a general reaction from doses of from 10 to 12 mgm. 4. Syphilis gave a reaction in an undetermined proportion of cases. 5. There was a dose, undetermined, at which a non-tuberculous person might react or simulate a reaction. 6. The reaction might be deferred from six to twenty-four hours.

The rules to be observed in making the test, he formulated as follows: 1. The same tuberculin and of a standard strength should always be used. 2. Aseptic precautions in giving the injection should be used. 3. The injections should be made deep into the muscles of the back, arm, or leg. 4. A two, three, or four hourly chart of the temperature should be kept if possible, beginning twenty-four hours before the injection. 5. Several days should be allowed to elapse before the test was repeated. 6. In early cases the general reaction should be depended upon; in late cases, if the general reaction failed, the local reaction should be carefully looked for.

Philosophy of Sickness.—Dr. Thomas F. Harrington, of Lowell, Mass., read a paper with this title, in which he said that medical science and art had made wonderful advances tending to the alleviation of human suffering and to the prolongation of life, but that many diseases were yet beyond the reach of human skill. There was, however, in every sickness a quality of body or mind, or both, which was capable of recognition and influence from without, which fact seemed to have escaped observation. Ancient and modern philosophers and scientists had ever struggled with the one factor which concerned us in the consideration of this subject, namely, personality. One truth shone forth, that man possessed an identity, which was neither wholly physical nor wholly psychical, but which was both, often existing through the ethical life and often independent of it. That this individuality had not been capable of exact localization and description was no argument that it did not exist; often truth itself was not possible of demonstration. When of two cases, having the same conditions and types of disease, the one perished and the other survived, we must recognize some influence other than mere physical traits. Stamina, vital force, faith, idiosyncrasy have all been offered to explain the results, and while it might be impossible to fit a term which will meet all objectors, the fact remained that there was something present. The marked progress in the general educational standard of society was conclusive that the time was not far distant when more would be demanded of the physician than that he be a part and not the whole, that he combine those traditional qualities of the old physician reinforced by modern discoveries, with a systematic knowledge of all those sciences necessary to complete the whole, the physician of the whole body and mind, who from his knowledge of nature and man and soul was the only one entitled to that name—physician.

Diagnosis and Treatment of Thoracic Effusion.—Dr. Louis Faugères Bishop, of New York, read this paper, which was a brief outline of an elaborate study of the subject of thoracic effusion undertaken with a view to crystallize the opinion on the importance of more careful search for fluid in pulmonary conditions and the necessity of early mechanical intervention. Effusions into serous cavities offered some of the most interesting phenomena of disease.

These might be due to increase of exudation or a deficiency of drainage. The importance of fluid depended upon its amount, whether or not it was of mechanical importance; depended also upon toleration by the patient and upon its quality. Pus might rarely be spontaneously removed, but should always be treated surgically. The diagnosis of fluid was considered by the speaker at some length on account of its importance and difficulty, and the importance of the exploratory puncture was particularly emphasized. The classical signs, he said, were not to be relied upon. The importance of cultivating a knowledge of the natural relations, so that fluid may always at least be suspected when present, was emphasized. He dwelt upon the technique of exploratory puncture, with special reference to the antiseptic details. He recommended that physicians should carry a sterilized needle in a small vial of alcohol, and reserve it for the particular use of exploratory puncture. The treatment by drugs was discussed, but particular stress was laid upon the free use of paracentesis. The Dieulafoy aspirator was particularly recommended, especially the old-fashioned, large, and powerful model, which was devised at a time when aspiration of the chest excited more interest and attention than it now did, and many inferior instruments were thoughtlessly accepted by the profession. The danger of allowing even a moderate amount of fluid to remain in the chest was illustrated by the recital of several fatal cases.

The Germ Theory and Serum Therapy Applied to the Practice of Medicine.—Dr. A. T. Cuzner, of Gilmore, Fla., read a paper with this title, opening it with a brief consideration of physiology, especially of the cerebro-spinal and sympathetic nervous systems, emphasizing the great importance of the latter. He next considered in detail cellular pathology and placed great importance on the following facts: (1) That each cell was a morphological unit, having an individual life history, and was the result of the life of previous cells, and that at their death they were resolved into effete matter very deleterious to living cells if retained in the tissues. (2) That during their life they were favored or injured by their environments and circumstances over which they had but slight control. (3) That they were repellent to deleterious influences in proportion as their force or vitality was greater or less. (4) That they had a very limited power of choice with respect to absorption or rejection of material brought to them by the circulation. In consequence, much good was effected by the presentation of certain drugs in certain morbid conditions of the tissues. The functional activity of cells might thus be either increased or diminished, as may be required. The speaker then proceeded to show that animal and vegetable organisms appropriated and preyed upon each other's tissues under certain circumstances, and he illustrated this by giving a brief account of nut-galls. The speaker then considered the germ theory as held at the present day, and he showed logically that, if the present theory was correct, germicides would be the only medicines that would be needed in the future unless we could by some means render the body immune to the germs.

From Saddlebags to Pocketbooks.—Dr. B. T. Whitmore read a paper with this title. In olden times, he said, the doctor, whether in gig or on horseback, was never dissociated from his saddlebags. They were not only the outward and visible sign of his profession, but they meant that the doctor was his own dispenser, and was familiar with the raw materials and the processes of the gallipot. Many of his tinctures were made at the back of his own kitchen-stove, and the profession rather prided itself on the ability to make a neat pill. All this had changed with the increase of population and the new order of things. Now the physician might carry with him his pocket case for tablet triturates and for the hypodermic syringe, but he had ceased to be his own dispenser or the preparer of his own remedies. The druggist and the manufacturing pharmacist now bore the responsibility for the quality of the remedial agents for which the doctor called in his written prescriptions. The druggist had become more and more dependent on the manufacturing chemist, whose importance and responsibility had been enormously increased.

La Grippe.—Dr. J. E. Gilcreest, of Gainesville, Texas, read this paper, in which he claimed there was no specific treatment for the disease. To allay the pains and soreness, to restore free elimination from the skin, kidneys, and intestines should be the objects of treatment. He first gave calomel with sodium bicarbonate in doses large enough to act upon the bowels. Acetanilid or phenacetin, alone or combined with Dover's powder, acted well. If muscular pains were pronounced he gave salicylate of sodium in ten-grain doses every two to four hours till the patient was relieved. The complications should be met as they arose. The patients should be kept in bed and the room well ventilated and not overheated. A light diet should be given and stimulants if required. The convalescence should be watched, as relapses were common.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

SHAKESPEARE AND THE MEDICAL SOCIETY—BRUMMAGEM CONSULTANTS—ALKAPTONURIA—SURGERY IN COLITIS—TYPHOID IN HOLLAND—PATHOLOGICAL SOCIETY—PSEUDO-TUBERCULOSIS REPORT—CLUMPING—CHEMICAL COMPOSITION AND GERMICIDAL ACTION—ANTI-TUBERCULOSIS AGITATION—SENSATIONAL DEATH REPORTS—MEDICAL EXHIBITION—MEMORIALS TO HAUGHTON, RICHARDSON, AND SIR T. BROWNE—DEATHS OF JOHN MOIR AND H. B. HEWETSON—SUBSCRIPTION FOR JOSEPH T. COOKE AND K. HUNTER.

London, May 19, 1899.

The conversazione of the Medical Society of London was held on Monday, and a very large number of fellows were present. The oration was delivered by Mr. Alban Doran, who took for his subject, "Shakespeare and the Medical Society." Of course the crowded audience expected something out of the common. In fact, as soon as it was known that Mr. Doran would this year be the orator, all who knew him felt assured that they would have no stereotyped platitudes, and when his subject was announced they anticipated a treat, for he is well versed in his Shakespeare. There was plenty of wit and no lack of satire in his discourse, but "no offence i' the world." As in Shakespeare's plays the doctor is placed favorably before his audience, we could expect nothing less from an enthusiastic admirer of the poet when addressing a medical society. Considering that "the bard's observations on human nature can be fitted to anything human in any age, collectively and individually," Mr. Doran proposed to apply his wisdom and wise sayings to the ways and doings of the society and the profession. To one less saturated with the bard's words this might seem a difficult task, and some of the illustrations might seem rather far-fetched, but others were wonderfully apt and suggestive and were thoroughly appreciated by the delighted audience. The orator closed with an exhortation that, belonging to an active profession, we should do our best actively while we re-

main in our prime, for age, like infancy, is mostly passive, or, as *Edgar* says in "King Lear":

> "Men must endure
> Their going hence, even as their coming hither;
> Ripeness is all."

Birmingham will get her coveted university—the money required, £250,000, being nearly all promised. Of this sum Mr. Carnegie gives £50,000. The time would therefore seem to be very inappropriate for Birmingham to hatch another scheme to exploit the profession. Yet this is proposed to be done by the local Saturday-fund, led on by Mr. Arthur Chamberlain. He wants to start a medical aid association on trade principles, and evidently thinks it would pay. His notion is to establish an institution to provide consultants at reduced fees. This he fancies can be done by engaging a physician and a surgeon, fresh from the schools, and giving them salaries to act as consultants toward patients who can only afford or are only willing to pay half a guinea. In this way he expects his society to make a profit. The profession has suffered much from associations making profits out of general practitioners; now it is to be the turn of consultants. This scheme has been sprung on the doctors of Birmingham, and must be vigorously resisted by them. Dr. Saundby has protested against it and exposed its absurdity both in the Saturday Society and in the local daily papers. It would be idle for me to point out its objections to your readers, but I may say the young gentlemen to be engaged could not possibly discharge the duties of all-round specialists and general consultants. Admirable Crichtons these may be; but they would take up this work, and if they did could only fail.

Birmingham has long had a reputation for producing sham wares. Let her rest content with trade and not try her hand at bringing out Brummagem consultants. I hear that the profession in the midland capital are standing well together against the scheme. This is well so far. The consultants have little to fear, for I believe if carried out this new attack will chiefly, if not entirely, injure the general practitioners, some of whose patients will fancy they can get more value for their money by resorting to the young men "fresh from the schools," at a low price.

Alkaptonuria is so rare and withal so innocuous that many may think it scarcely worth their notice. Nevertheless it is well to have some explanation of the staining produced by urine which when first passed gives no indication of anything unusual, though it soon after acquires a deep brown color. Moreover such urines may lead to mistakes, as they reduce Fehling's solution. It is quite possible such errors may now and then have occurred, though they cannot have been numerous on account of the rarity of alkaptonuria. Dr. A. E. Garrod contributed a paper on the subject to the last meeting of the Medico-Chirurgical Society, to which he appended a complete bibliography. But he had been able to collect only twenty-four adequately recorded cases. To these he added seven unrecorded cases, for five of which he was indebted to Dr. Pavy. He had had the opportunity of examining the urine of five alkaptonuric patients. Of these four contained homogentisinic acid, and the fifth probably contained it, but the bulk was small and most of it unfortunately lost. This was one of three specimens given him by Dr. Pavy, and they were eight years old, but in two it was possible to demonstrate the presence of the homogentisinic acid. The view that this acid is the cause is therefore supported by this paper. One of Dr. Garrod's cases was that of an infant, brought to the hospital on account of the peculiar color of the urine; the staining of its napkins had been noticed from birth. The child is now fifteen months old and in good health. The other case was that of a schoolboy, aged fourteen years. Dr. Pavy said he was glad to hand the specimens to Dr. Garrod, whose paper he spoke of as classical. He remarked on the innocuousness of the condition, which in this was parallel with cystinuria, in which no inconvenience was suffered unless a concretion of crystals formed in the bladder.

Dr. Robert Maguire said he had met with only one similar case, but remarked that there were other instances of urine turning dark when it became alkaline. This was so in carboluria. He mentioned a case in which the kidney was incised and a fistula formed in the loin; carboluria occurred and the urine passing through the fistula was normal, while what passed by the urethra was alkaline and dark. In poisoning by nitrobenzol and antifebrin the urine was also dark.

Dr. Hopkins said that out of three thousand morbid urines he had examined, only one had shown definite signs of alkaptonuria, though in two others there was a vague darkening which remained unexplained.

Dr. Garrod in reply suggested that the pigments were derived from oxidation of the aromatic bodies and were not crystalline. He would not apply the name alkaptonuria to bodies that had not the same reducing power.

Of late years we have almost ceased to wonder at the advance of surgery, and are prepared to give heed to proposals which not long since would have been condemned as more than risky. Not long ago it was proposed to perform colotomy in order to give an inflamed colon rest, and a case was recorded by Mr. Golding-Bird and Dr. H. White. These gentlemen related three more cases at the Clinical Society on Friday; all three successful. Two of the patients were women of thirty-one and thirty-six years of age, the other a man, aged thirty-five years. In the last the cæcum was opened, but this is less advantageous than the colon, for the fæces coming through the artificial anus are fluid and give rise to much more trouble; and some cannot be prevented from passing into the colon, while the sole object of the operation is to give that structure absolute rest. This is why the colotomy must be done on the right side. The cases now recorded prove that the colon is not necessary for the maintenance of good health, and the artificial anus should not be closed too soon. In one of the cases it was open for a year, and Drs. White and Golding-Bird said the time should certainly not be less than six months, while further experience is required on this point. They recommend the operation for severe and otherwise hopeless cases of: (1) Intractable membranous colitis. (2) All forms of chronic ulceration of the colon that have resisted medical treatment and are obviously otherwise incurable. Most cases of very chronic dysentery may be cured without colotomy. (3) Idiopathic dilatation of the colon. In regard to the cases of membranous colitis reported it is curious to notice that the formation of membrane ceased after the bowel was stitched and before it was opened; the operation being done, of course, in two stages, the second, on the fifth or sixth day after the first. It was suggested that the formation of membrane might therefore be reflexly inhibited, a large neurotic element being present.

In reply to questions Dr. Hale White said the intensity, not the variety, of colitis was the indication for surgical interference, and he knew of no cases of acute ulcerative colitis treated by operation. Mr. Golding-Bird replied that he had not had any difficulty in closing the artificial anus. He employed Laurie's method, freeing the bowel for three-fourths of an inch around, and uniting the raw surfaces by Lembert's sutures.

LONDON, May 26, 1899.

There was an interesting meeting of the Epidemiological Society this day week. The subject was typhoid fever, and Dr. Saltet, professor of hygiene in the University of Amsterdam, came over and read a paper on that disease as seen in the Netherlands. His communication was illustrated by maps and statistical tables, numerical and graphic. He described the sanitary authorities and regulations of the country, and reported a considerable decline in the mortality of typhoid. There had also been a decline of fourteen per cent. during 1875–95 in the general mortality, due to improved social and sanitary conditions; but the decline in typhoid was much greater—no less than sixty-three per cent. The general urban rate had fallen twenty per cent., the rural twelve per cent., but typhoid had fallen seventy-two and sixty per cent. respectively. Though crowding favors the spread of infection it was suggested that town residents enjoy many material advantages, including better medical attendance.

The water question in Holland is a perplexing one. The most flourishing parts are below the sea level, with the subsoil permeated by salt water. The inhabitants store rain-water in tanks, but in dry seasons they have recourse to the canals and dykes. Some towns get an unlimited but questionable supply from rivers, and only on higher lands can good well-water be obtained. No great difference in mortality is found in the different areas. The general death rate fell nineteen per cent. in those supplied with ground water, and twenty-three per cent. where filtered river-water was used; the fall in typhoid rates being sixty-three and fifty-four per cent. respectively. The influence of soil is difficult to estimate in the Netherlands. The higher and dryer provinces, Dr. Saltet said, were generally thinly peopled, the rich pastures and flourishing trade centres being for the most part below or but little above the sea level. The latter districts suffered the disadvantages of an absence of running streams, the so-called rivers being shut up in locks, while the peaty soil prevented the erection of substantial buildings and the disposal of sewage and factory waste was beset with difficulties.

The annual meeting of the Pathological Society was held on the 16th inst. The report mentioned that an index to the last thirteen volumes of the Transactions is being prepared by Mr. Shattock. Votes of thanks were accorded to the retiring officers, and the election for the coming year was carried out. Mr. Watson Cheyne succeeds Dr. Payne in the presidency. The report of the committee appointed to consider the nomenclature of the several conditions that have been spoken of as "pseudo-tuberculosis" was presented. As was expected from the previous discussion this report is against the use of the term. It opens with a summary statement of the various conditions that have been designated pseudo-tuberculosis, and with references to the records of the cases. It then goes on to say that confusion has arisen from the use of the word tubercle in two senses: (1) As a general anatomical term for a small nodule; (2) in a specific sense for the nodular lesions of the disease produced by Koch's bacillus. The reporters think therefore that the word should no longer be used as a general anatomical term, but, if used at all, it should be only as a designation of the nodular lesions produced by Koch's bacillus. They suggest, however, that tubercles should be called nodules with a prefix to indicate their cause, thus tuberculous nodules, glanders nodules, aspergillar nodules. When the cause is unknown they recommend a designation not involving any reference to the word tubercle to be employed. They further suggest that the diseases themselves (as distinguished from the lesions produced) should when possible be distinguished by such terms as "blastomycosis," "streptotrychosis," "aspergillosis." In this way the term "pseudo-tuberculosis" would become superfluous, and ought in the committee's opinion to be discarded altogether.

The phenomenon of "clumping" came up in another aspect on a communication by Dr. H. E. Durham, who stated that he had been investigating two outbreaks of infection from unsound meat, and found that serum from the patients gave a definite clumping in high dilutions with culture of bacterium enteritidis. He further experimented with cultures of typhoid and other bacilli and found no reaction except with low dilutions (1 in 10), and these give clumping with serum from many cases besides typhoid. He therefore considers sero-diagnosis as ordinarily employed unreliable, much higher dilutions being necessary. Cases of meat poisoning he regarded as due to infection by organisms, and, in the outbreaks he had investigated, the organism was bacillus enteritidis. These statements were illustrated by lantern slides and micro-photographs.

Dr. Washbourn admitted that in the majority of cases the disease was due to an infection, not absorption. The old plan of removing ptomains many hours after death was open to objections, and probably these ptomains did not produce the symptoms during life. He was interested to hear what was said about sero-diagnosis as usually applied, but in the wards he thought accurate information was obtained.

Mr. Foulerton did not think all meat-poisoning due to infections. In one outbreak he investigated the symptoms came on very early, and their severity was in proportion to the amount eaten—a fact pointing to toxins rather than organisms. Further, there is no evidence that the bacillus enteritidis has been found in the blood of the patients during life.

Dr. James Ritchie read a paper on "Chemical Composition in Relation to Germicidal Action." Dealing with the killing rather than the inhibiting power, he found metals with the highest atomic weights most germicidal. With halogens a similar relation was observed, and also with alcohols. But acids were more powerful than their salts and were germicidal in proportion to their "chemical avidity."

The campaign against tuberculosis is being actively carried on by the National Association, and branches are being formed in various towns. These branches are to possess perfect autonomy, and only contribute one shilling out of the five of the subscription toward the Central Association. It is intended in the course of a year to hold a conference to determine how the branches can be represented, and a journal is also talked of as a medium of communication. It is said by some of its critics that the association has created panic in the public mind, and I have heard some strange tales of the terrors inspired in nervous individuals, but I do not think the mass of the population has been reached by the agitation, and it is possible that the distribution of literature on the subject may tend rather to prevent than to cause panic.

Strange paragraphs are often found in the newspapers. Here are the headings of two sensational announcements just made: "Poisoned by Tea," "Death from Tight Boots." In the former case a man was said to have drunk eight cups of tea before leaving home in the morning, but how that should lead to an inquest the reporter does not say. In the other tetanus seems to have been the cause of death, and the poison to have entered a sore on the foot.

An exhibition of medical, surgical, and hygienic articles has been on view this week.

The memorial building to the late Rev. Professor Haughton, M.D., was opened in the Dublin Zoölogical

Gardens on the 19th. Though he never practised the profession, we were all proud of him as one of us.

A large brass tablet with a likeness and inscription has been placed in the Temperance Hospital as a memorial to the late Sir B. W. Richardson.

About £400 has been raised out of £1,000 or £12,000 for the statue of Sir Thomas Browne, author of "Religio Medici," etc., to be erected at Norwich, where he spent most of his life.

The venerable John Moir, of Edinburgh, died on the 14th inst. at the great age of ninety-one. He was the "Father" of the Royal College of Physicians of Edinburgh, the fellowship of which he held from 1837. He took his M.D. in 1828. He was the last survivor of the original founders of the Edinburgh Medical Missionary Association, which has maintained for a long time the front place in medical missionary work.

Mr. H. B. Hewetson, ophthalmic surgeon to Leeds Infirmary, died on the 15th inst., in his fiftieth year. He made valuable contributions to his specialty, but his tastes and acquirements extended far beyond professional subjects. He was an accomplished naturalist, had travelled in various countries and collected quite a museum. He wrote on various subjects and made communications to the learned societies on various branches of natural science. He will be greatly missed, both within and without his profession.

Joseph Thomas Cooke died at Buxton after a long struggle against phthisis. Cut off at the age of thirty-five years, he has left a widow and three young children entirely unprovided for. A subscription is being raised on their behalf.

Another subscription is for the widow of the late H. Kingsley Hunter, the gentleman who was prosecuted by the Medical Council, and whose case I mentioned at the time.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 10, 1899:

	Cases.	Deaths.
Tuberculosis	134	137
Typhoid fever	12	3
Scarlet fever	188	19
Measles	422	30
Diphtheria	227	37
Laryngeal diphtheria (croup)	10	7
Cerebro-spinal meningitis	0	12
Chicken-pox	52	0
Smallpox	6	3

The Medical Laws of New York.—A number of new laws and amendments of interest to the medical profession were enacted by the recent legislature. The public health law was amended as follows: Section 190, providing that the expenses of the State board of pharmacy shall be paid out of the penalties collected for the violation of the law; sections 70 and 71, providing for a more strict enforcement of the provisions against contamination of water supply; and section 23, providing that the town clerk shall be one of the town board to grant permits for burials. These amendments to the law failed: Providing that doctors of dental surgery shall not use the title of "M.D.S."; giving the regents of the university greater power to license physicians; allowing the sale of domestic remedies in villages of the fourth class; forbidding the conduct of medical institutions by others than licensed physicians; extending the time in which veterinarians may register; requiring preparations of glucose to be labelled "adulterated food"; reconstructing the State board of pharmacy.

A number of bills "for the protection of public health" did not reach the governor. Among them were these: Prohibiting bone-burning; forbidding the dumping of garbage, etc., within the limits of any city; requiring the presence of a practising physician and surgeon at all places of amusement; requiring the sterilization of all milk sold in New York City; requiring pure ingredients in the manufacture of ale, beer, and porter; forbidding the sale of any remedy in which cocaine is used; exempting patent medicines from the provision of the law to prevent mistakes in the handling of poisons; amending the same law so that bottles and packages must be more plainly marked; requiring the sterilization of enunciators on telephones; establishing (with an appropriation of $25,000) a State school of public health at the New York University, in New York City.

The governor refused to sign what was known as the "Drug-clerks bill." This made shorter hours for the clerks, and forbade them to sleep in the pharmacy or drug store. The governor filed this memorandum with the bill: "After carefully investigating the matter and getting reports from a large number of disinterested outsiders who have sought to find out on the ground not only the equity of the case, but the feelings of the clerks interested, I have come to the conclusion that on the whole less injustice will result from waiting another year for the proper method of relief than would result from signing the bill in its present shape. The drug clerks are hopelessly divided on this bill, and a very large number of them feel that if signed it would probably work a serious hardship to them in the way of interfering with their days off, and even with their vacations."

The governor also refused to sign what was known as the "Pure-beer bill," which prohibited the use of any substitute for hops, or pure extract of hops. With this bill the governor filed the following memorandum: "This bill seemingly does nothing more than repeat the public-health law, and there is therefore no warrant for putting the present bill on the statute books. The final section of the present bill provides that in addition to the fine of $100 for violating the provision of the public-health law against adulterations it shall be permissible to add imprisonment in the county jail for three months. This would make it possible to inflict a far severer penalty upon a man who should adulterate beer than upon the man who, for instance, should violate the public-health law by selling food composed of diseased or decomposed or putrid or rotten animal or vegetable substance."

A very important amendment to the labor law was made. This related to the altering, repairing, or finishing of articles in tenement houses, requiring licenses to do such work and placing the same under the control of boards of health.

The State charities law was amended by adding two new sections defining dispensaries and requiring that they be licensed by the State board of charities. This new law will do away with the use of dispensaries by persons who can afford to pay for what they have had from the same. The free use of dispensaries has grown into an abuse. Here are the numbers on the books of some of the counties: New York, 1,178,474; Kings, 283,156; Albany, 20,497; Erie, 15,720; Onondaga, 8,796; Monroe, 3,276.

An attempt was made, but without success, to authorize any person who had acted as surgeon in the late war with Spain to practise surgery in this State if he had al-

ready held a diploma from a medical college for two years. An unsuccessful attempt was also made to limit the exemption of medical societies from taxation to $100,000 in the counties of New York and Kings, and to $50,000 in all other counties. The bill to repeal the law of 1894, relative to teaching physiology, hygiene, and narcotics in the public schools, failed to pass.

Cities of the first class are now allowed to maintain, outside of their corporate limits, and with the approval of the State board of health, hospitals for the treatment of pulmonary tuberculosis; but a bill failed, providing for the treatment of this disease at the Loomis Sanitarium in Sullivan County, and at its hospital in New York City. An appropriation of $200,000 to establish a hospital in the Adirondacks for the treatment of incipient tuberculosis failed; as also an appropriation of $35,000 for a commission "to investigate the nature and value of vaccination, antitoxin, seropathy, and other alleged prophylactics."

A charter was granted to the "Trained Nurses' United Aid Society of America," with W. Watts-Sherman, Clement Cleveland, Lorillard Spencer, Edward P. Fowler, Theodore K. Gibbs, John E. Parsons, James J. Higginson, and Julien T. Davies as the incorporators. An attempt to restrict to twelve hours in a day the labor in hospitals and training-schools for nurses did not succeed. A bill to prevent premature burial did not pass. Coroners' juries were practically abolished.

Several unsuccessful efforts were made to improve the purity of water supplies, and giving the State board of health additional powers over the same. These bills also failed: Appropriating $10,000 to allow the commissioner of agriculture to investigate adulterated foods; prohibiting the use of glucose in the manufacture of candy; regulating the sale of horseflesh as food.

The Loomis Laboratory was authorized to convey its property to any college or university. The name of the New York Cancer Hospital was changed to the General Memorial Hospital for the Treatment of Cancer and Allied Diseases. The Italian Hospital was consolidated with the Columbus Hospital, both of New York City.

With the exception of the three bills named above, all the bills relating to the city of New York failed. They were as follows: Limiting to $100,000 the exemption of the German Polyclinic from taxation; exempting the Polyclinic Medical School and Hospital from taxation; requiring the disinfection of school books; allowing an annual payment of $6,000 to the Brooklyn Home for Consumptives. These amendments to the charter of the city also failed: Allowing not to exceed $20,000 per annum to St. Vincent's Hospital; allowing the same to the German Hospital and Dispensary; relative to the appointment of a president of the board of health; allowing not to exceed $3,500 per annum to the Manhattan Hospital and Dispensary; providing for more strict examinations by the board of pharmacy.

How to Dissect a Mosquito.—A needle held in the left hand is passed through the thorax, the legs and wings are pulled off, and if necessary the scales of the body are brushed off with a camel's-hair brush. The tail is then lowered into a drop of water, salt solution, or weak formalin placed on a glass slide, and with another needle, held in the right hand, the last two segments of the tail are partially separated and held down upon the slide. The left hand is then moved in such a manner as to draw away the insect.

Venereal Disease in the British Army in India.—Out of an actual strength of 16,600 British troops proceeding on service in the recent campaign on the Northwest frontier, 492, or three per cent., were incapacitated during the campaign on account of venereal disease. The 16,600 troops were drawn for service from a force of 21,439 men. Of this number 989 were rejected as unfit for service on account of venereal trouble. Hence 1,481, or nearly seven per cent. of the total strength of the army, was disqualified for service.

Recoloration of Hair.—The French supplement to *La Grèce Médicale* contains a curious account by Dr. Koveos, of Amorgos, of a relative of his who died recently, aged ninety years. He had never been ill in his life, but the hair of his head and face had become prematurely white. Six months before his death, however, his beard and moustache suddenly became dark, the color continually deepening "to the curiosity and stupefaction of all." Dr. Foustanos, the editor, adds a story of an old priest, whose white hair fell off as the result of erysipelas and was replaced by a thick growth of raven locks. Perhaps some cases of this kind may have given rise to the ancient Greek myths of rejuvenescence, as when

> "Medea's spells dispersed
> The weight of years
> And Orson stood a youth
> 'Mid youthful peers."
>
> —*Medical Magazine.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the surgeon-general of the United States Marine-Hospital service during the week ending June 10, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
Alabama, Mobile	May 31st to June 3d	2	1
California, Los Angeles	May 27th	1	
Dist. of Columbia, Washington	June 3d to 4th	3	
Florida, Jacksonville	May 27th	1	
Georgia, Savannah	May 29th to June 6th	10	
Indiana, Evansville	June 3d	5	
Kentucky, Louisville	June 1st	9	
Louisiana, Jalnerette	June 3d	1	
Shreveport	June 3d	2	
Maryland, Baltimore	June 3d	2	
Massachusetts, Boston	June 7th	2	
Fall River	From outbreak to June 3d	18	
Swampscott	May 31st to June d	2	2
Minnesota, Minneapolis	June 3d	2	
Missouri, St. Louis	May 29th to June 5th	8	
Nebraska, Omaha	May 29th	1	
New York, New York	May 29th to June 3d	..	15
North Carolina, Charlotte	May 31st	..	1*
Ohio, Columbus	June 3d	13	
Massillon	June 3d	1	
Oklahoma, Oklahoma City	June 1st	1	
Porto Rico, Ponce	May 17th	1	
Rhode Island, Providence	June 3d	1	
Virginia, Newport News	May 31st to June 8th	2	
Norfolk	May 31st to June 8th	6	1
Portsmouth	May 31st to June 8th	3	

* Reported.

SMALLPOX—FOREIGN.

Belgium, Antwerp	May 5th to 28th	11	6
Brazil, Rio de Janeiro	April 1st to 7th	..	5
England, Liverpool	May 6th to 13th	1	
London	May 6th to 20th	1	2
Greece, Athens	May 13th to 20th	23	9
India, Bombay	April 25th to May 2d	..	3
Calcutta	April 22d to 29th	..	1
Madras	April 29th to May 5th	..	1
Mexico, Chihuahua	May 13th to 27th	..	3
Mexico City	May 21st to 28th	14	8
Nicaragua, Bluefields	May 8th to 27th	2	
Russia, Odessa	May 13th to 20th	11	2
Turkey, Beirut	April 29th to May 6th	1	
Constantinople	May 1st to 15th	..	4

CHOLERA.

India, Bombay	April 25th to May 2d	..	3
Calcutta	April 22d to 29th	..	23
Madras	April 29th to May 5th	..	2

YELLOW FEVER.

Brazil, Rio de Janeiro	April 1st to 7th	35	22
Cuba, Puerto Principe	June 5th	1*	
Mexico, Cordaba	May 29th	Present.	
Vera Cruz	May 13th to 20th	68	26

* Reported among United States troops.

PLAGUE.

Arabia, Muscat	April 12th	2	
Egypt, Alexandria	May 22d	2	
India, Bombay	April 25th to May 2d	..	323
Calcutta	April 22d to 29th	..	107
Japan, Formosa, Taichu prefecture. Tainan. Taipeh	From outbreak to date.	1,484	1,076
Tamsui	April 12th to 26th	..	289

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Original Articles.

SUBACUTE ATAXIC PARALYSIS AND COMBINED SCLEROSIS—A FORM OF SPINAL DISEASE ASSOCIATED WITH LETHAL ANÆMIA AND TOXÆMIA.[1]

BY CHARLES L. DANA, M.D.,

NEW YORK.

Introductory.—There is a form of disease which is not very well known to general clinicians, but is sufficiently common and serious to deserve their attention. Its clinical symptoms have been studied closely only in recent years, mostly by American observers, and first by Dr. J. J. Putnam, of Boston. Its pathology has awakened more attention abroad, where it has been discussed under the head of "combined sclerosis of the cord" and "the spinal-cord changes in pernicious anæmia." On two occasions I have reported cases, with autopsies—one in 1891, *Journal of Nervous and Mental Disease*, April, 1891; and again in the same journal in January, 1899. Both these reports have had only the select audience of the neurological journal. Having recently had an opportunity to observe a third case, with autopsy, and having seen in the past winter at least half a dozen other cases, some of them in association with members of this society, I have thought it would be of interest to present the results of this last observation.

General Symptomatology.—I would say in the beginning that these cases have the general features of ataxia with a rather rapidly developing paralysis, combined with paræsthesias of the extremities, and, later, with some pain; and that they run a relatively rapid course of from six months to two years. They are often associated either with typical pernicious anæmia or with the secondary anæmia of a profound kind (lethal anæmia); but this is by no means universally the case. They resemble somewhat cases of multiple neuritis of mild type, such as are seen in diabetes and chronic arsenical poisoning. At times they suggest acute forms of the so-called ataxic paraplegia of Gowers. A full description of the symptoms and causes is given in my article in the *Journal of Nervous and Mental Disease* for January, 1899, and so I shall not enter upon it here.

The history of my case, which is quite a typical one, is as follows:

History of Case.—Oscar F——, aged forty-seven, German; painter by occupation since 1886. It is learned that the father died of pneumonia; nothing is known of the mother. Three brothers and one sister are alive and well; three brothers died very young, of convulsions. The patient had the usual diseases of childhood, and since that time has not been sick at all, except as the result of injuries. He at one time broke his leg, at another three ribs, and at another time his hand got crushed. There is no history of syphilis or alcoholism, but he was a moderate drinker of beer. During his work as a painter he never suffered from lead colic or lead palsy; this, at least, was his personal statement. Whether he could have fully remembered all the incidents of thirteen years' work is doubtful.

His present trouble began about one year ago; that is to say, in the winter of 1897 and 1898. He noticed at that time a numbness in his legs and, to a less extent, in his fingers. He had along with this numbness at times some pains, which were of a shooting character. He was treated for rheumatism. He continued his work, in spite of the numbness and occasional pains, for eight months; but in the latter part of this period he found that he could not control the action of his legs, and at times he had cramps in them. He had, during this time, some trouble with the eyes, the character of which is unknown. He had control over the bladder and bowels. About two months before admission, his ataxia and weakness in the legs were so great that he was unable to walk very much, and was obliged to give up his work. His hands were also somewhat weak, ataxic, and numb. He had a little trouble with his bladder in this later period. He was admitted to the Bellevue Hospital, January 27, 1899, in the service of Dr. W. Gilman Thompson, to whom I am indebted for opportunity to observe the case. At that time he was almost completely paraplegic, and had incontinence of urine and fæces.

General physiognomy: Examination showed a man of somewhat emaciated appearance, not particularly anæmic, and with no blue line upon the gums. His temperature was normal; his pulse, 105; respirations, rather slow and deep. There was no lesion or trouble of importance with the heart, lungs, or kidneys.

Mental condition: His mind was not very clear at all times; he easily became confused, his memory was not certain, and occasionally he had delusions and hallucinations of sight and hearing. He slept fairly well, and retained nourishment. His mental condition was at the last much like that seen with the wet brain of alcoholism.

Motorial: Examination of his motor and muscular system showed an almost complete paraplegia. He could, however, move the legs slightly, raising them up and pushing them down, and moving the feet a little. The paralysis involved, however, the thigh and the leg, as well as the foot, not being in the nature of a foot-drop alone. The arms were not actually paralyzed, but were quite weak, and the grip was feeble, but movements could be made with the fingers, hands, and arms in all directions; there was, nevertheless, in the movements a great deal of ataxia and jerky tremor. Both the arms and legs showed much emaciation, rather than great muscular atrophy. Fibrillary contractions could be seen in the muscles of the leg and thigh. The knee jerks and the Achilles jerks were both absent. The plantar reflex was present; the cremasteric and abdominal reflexes were absent. There was no facial palsy or involvement of any cranial nerves. The pupils reacted to light and accommodation, and the motility of the eyeball was normal.

Sensory: He had some anæsthesia to touch and pain in both the upper and lower extremities. This was not complete, and was more marked in the legs than

[1] Read at a meeting of the Practitioners' Society, April 7, 1899.

in the arms. There was some tenderness on pressing the muscles of the legs. There was more analgesia than thermic or touch anæsthesia. The most marked sensory disturbance, however, was that of ataxia, shown in his inability to know the position of the limbs, his inability to touch a fixed point with the eyes closed, or to carry the finger to the nose. The examination for anæsthesias was not so perfect as could be wished, owing to his disturbed mental condition, though the facts stated may be considered as essentially correct. There was no disturbance of his vision.

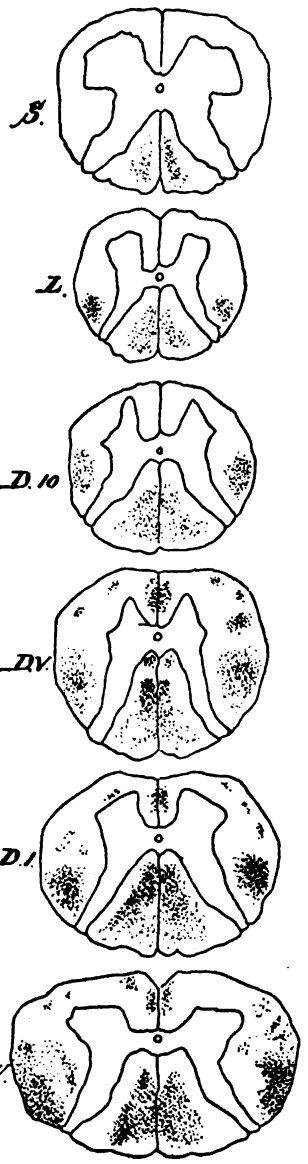

FIG. 1.—Showing the Distribution of Degeneration.

He had little control of bladder or rectal sphincters.

Progress of the Case.—The subsequent notes of the case show a progressive increase in all the symptoms. The paraplegia became more marked, and was associated with fibrillary contractions and increased muscular irritability, shown by the easy production of myoid tumors. The pupils became small, reacting sluggishly, but this perhaps was due to medication. The mental condition grew worse; he passed into a muttering delirium, with auditory and visual hallucinations, and he died on February 10th, of exhaustion, over a year from the beginning of the disease. During the latter days of his illness, he developed a temperature ranging from 100° to 102° F., and the day previous to his death it dropped to 96.5° F.; then rose, on the day of his death, to normal. The urine, during his illness, had a specific gravity of 1.010, was acid in reaction, and contained no albumin or sugar.

The Autopsy was made within the next twenty-four hours, but it was possible to remove and examine only the spinal cord. When the spinal canal was opened, the meninges were found to be normal, and the spinal cord seemed to be simply very small, and in the cervical region flattened. Section at the time showed to the naked eye degeneration in the posterior and lateral columns (Fig. 1), but especially in the upper portion. Parts of the cord were placed in Mueller's fluid, parts in formalin, and in alcohol.[1]

[1] I am indebted for careful clinical notes to my assistant, Dr. L. J. J. Muskins, and my house physician, Dr. Mandel. Very beautiful preparations of the specimens were made by Dr. M. Schlapp, in the Loomis Laboratory.

Microscopical Examinations.—Sections of the cord were stained by Nissl, Weigert, and nigrosin methods.

The mid-cervical region (Fig. 2): The cord was very small, being about one-fourth smaller than the average size, and was flattened antero-posteriorly in the cervical region. The pia mater was not thickened or inflamed. The anterior median columns showed a considerable degree of vacuolar degeneration. The rest of the columns were normal. The lateral columns showed a very marked vacuolar degeneration in the area of the crossed pyramidal tracts, and some further degeneration spread irregularly through the mixed lateral columns (Fig. 9). The cerebellar tracts were not affected. The posterior columns showed most decided and active changes (Fig. 2). The median portion, involving the column of Goll, was markedly degenerated, staining a bright yellow with Weigert, and showing but few nerve fibres. Under a high power there could be seen very active vascular changes, the blood-vessels being thickened and tortuous and increased in number. Some proliferation could be seen also between the internal and external coats, the small arterioles being most affected. There was, however, no exudation or inflammatory proliferation, and there were no hemorrhages. Around the borders of the more seriously damaged tissue was an area of vacuolar degeneration, such as was seen in the lateral columns. The anterior horns were practically normal, although there were some small blood-vessels there with thickened walls. The cells in the posterior horns showed some degeneration. Throughout the whole area of the cord could be seen, here and there, minute arteries with thickened walls. There was, in fact, a general sclerosis of the small arteries of the cord, most marked in the posterior columns.

Dorsal region (Figs. 3 and 4): The degeneration here was of the same type as that in the cervical region, but less severe. The process was oldest and most marked in the posterior columns, but was very decided also in the region of the crossed and direct pyramidal tracts. There was also a curious spot of degeneration in the lateral fundamental columns, about in the area of the ascending lateral tract. The cells of Clarke's columns were, on the whole, fairly normal, though a good many degenerated cells were present.

Lumbar region (Fig. 5): At this level the meninges and anterior roots were normal, but the posterior roots showed loss of nerve fibres, increase in connective tissue, and some dilated blood-vessels. The anterior columns were normal; the lateral columns showed a slight degree of degeneration in the area of the crossed pyramidal tract, evidenced by swollen axis-cylinders and vacuolar spaces where the nerve fibres have dropped out. There was some connective-tissue increase, and throughout the column were minute blood-vessels with thickened walls, the characteristics being the same as those seen higher up, but the process less marked. In the posterior columns there was very marked vacuolar degeneration, involving especially the area of the postero-internal column (Fig. 8). The postero-internal column and the root zone and column of Lissauer were but slightly affected. The anterior horn cells were in fairly good condition, but showed considerable pigment, and one could see some distended blood-vessels and vessels with thickened walls. The central canal was distended and filled.

Sacral region (Fig. 6): Here the involvement of the posterior columns was very marked in the internal part. The lateral columns and anterior columns were normal. The anterior horns showed a good deal of vascularization and the nerve cells were somewhat degenerated, but the lesion was not at all severe.

Review of findings: A study of the sections, at different levels of the cord, showed that the degenera-

tive process involved the direct and crossed pyramidal tracts and columns of Goll throughout their whole length; that the degeneration was much the more intense and severe in the posterior columns, and more severe in the cervical region than in the parts below. In the cervical region, also, the degeneration was more diffuse, and involved the lateral mixed columns to a considerable extent. Here it seemed that the columns of Gowers and the direct cerebellar tracts were slightly affected. Besides this systemic sclerosis, the cord, throughout its extent, showed a sclerosis of the minute blood-vessels, this being due to a thickening of both the intima and adventitia. The gray matter was not very seriously diseased, and apparently only secondarily or late. There were no spots of softening or cavities, and no hemorrhages; neither was there anything that could be called distinctly inflammatory in the process, since the vascular thickening was not accompanied with any proliferation or exudation or migration of cells. Although there was such a severe involvement of the blood-vessels, the process was so strictly a systemic one that I cannot consider it to be secondary to vascular changes alone. It seems more likely that the same process which produced disease of the minute vessels attacked by direct destructive action the nerve fibres of the lateral and posterior columns. The remarkable limitation of the disease to the columns of Goll and to the known course of the fibres from the posterior spinal ganglia, suggests that these were also possibly seriously diseased. But the disease in the cord was so much more severe than that in the posterior roots (Fig. 7), that I do not consider it to have been secondary to a lesion of the posterior spinal ganglia.

Pathology.—On the whole, the anatomical findings support entirely the view that there occur prolonged toxæmic states, which lead to a primary destruction of those parts of the spinal cord which are apparently most sensitive to trophic disturbances. The general facts of pathology lead us to conclude that, when the system is poisoned by certain substances which have a selective action on naturally weak spinal cords, it is the columns of Goll and the pyramidal tracts which are most sensitive to the poison. It is suggested that this is due to the poorer vascular supply of these parts of the cord. Such an explanation, however, is not so plausible as another one: It will be seen in studying these and other specimens, that the parts most affected are the neuraxons of the posterior spinal ganglia and the neuraxons of the cortical motor cells. These are the long terminal filaments of the neuron, and are far removed from the trophic influence of their nutritive cell. For this reason, it may be assumed that they would under bad nutritive conditions give way first, and as a matter of fact this is the case. In fine, the combined sclerosis of the type I am describing is a disease in which the peripheral ends of the motor neuron of the cortex and the sensory neuron of the posterior spinal ganglia are specially affected. When the disease is more severe, other parts become involved, the nutrition of the gray matter is affected, and the cord breaks down still more.

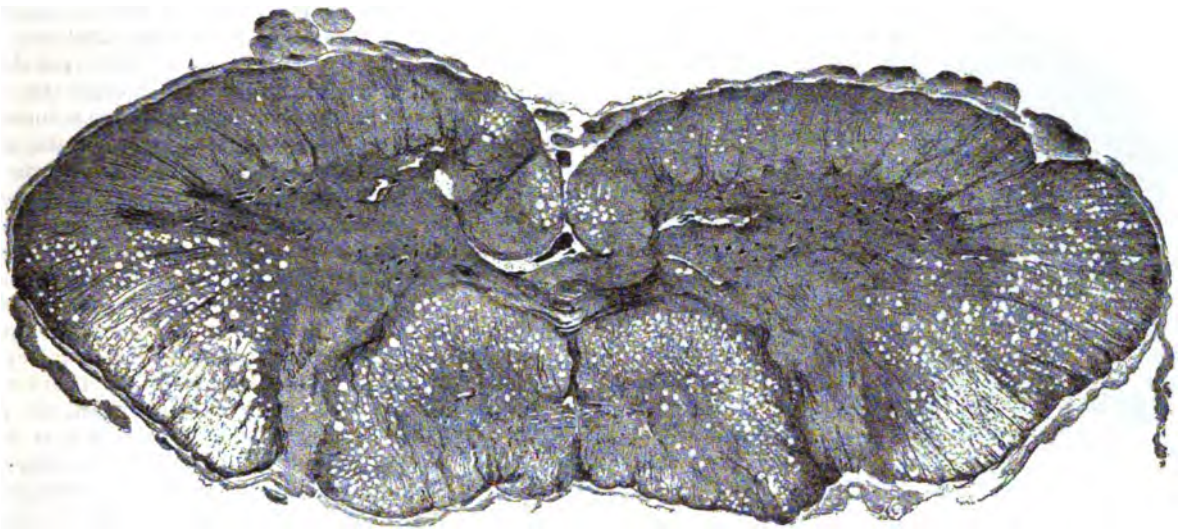

FIG. 2.—Combined Sclerosis, showing areas of degeneration. Mid-cervical region, ⅔ inch.

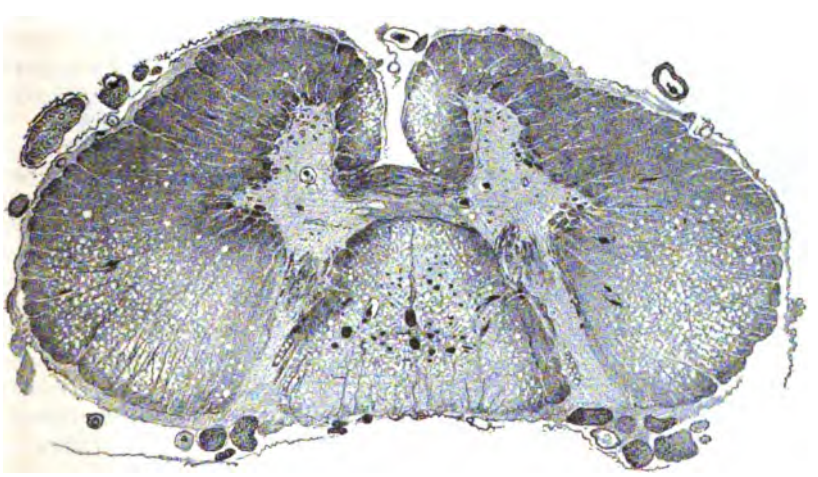

FIG. 3.—Fifth Dorsal. The dark spots are vascular dilatations; the white spots vacuolar spaces.

Clinical Cases.—In order to show more clearly the clinical features of this trouble, I append here the histories of other patients, who present in a typical way the symptoms of this disorder.

CASE I.—Mr. T—— was seen by me in consultation with Drs. O. W. Sherwin and H. Boynton, of Woodstock, Vt. He was sixty years old, and was by occupation a painter, born in the United States, married, and had no children. The family history shows no evidence of nervous disease; his father died of Bright's disease. The patient is a temperate man, denies syphilis, and gives no history of ever having had it. Twenty years ago he had sev-

eal attacks of lead colic, but none since then, and has no signs of plumbism and no palsies. He has been well up to the time of the present illness, except for occasional rheumatism. Two years ago he had an attack of sciatica. He has had no acute diseases, and no accidents or injuries. The year before he was seen by myself, he noticed a numbness in his feet and sense of coldness there, and sometimes had aching pains in the legs and cramps in the calves. The legs got gradually heavier, so that walking was more of an effort for him. In the spring of 1898 he had an attack in which he for two or three days suffered from slowness of speech, not exactly syllabic, but simply a little bit faulty in articulation. At this time he had some nystagmus and paralysis in the arms. In a week or two he recovered from his speech symptoms and nystagmus. He noticed then, however, the uncertainty in his gait; he staggered at times on the street, unless he was careful, and for a few days he was obliged to go to bed because this symptom was so marked. He then got very much better, but was still somewhat weak and uncertain in the legs. His symptoms continued slowly progressing from the spring of 1898 until September of the same year, when he was seen by myself. At my examination I found him to be a well-nourished man, slightly anæmic, but not markedly so. There was no evidence of disease of the abdominal or thoracic viscera. There was no trouble with the bladder or with the sexual functions. The bowels were constipated. His main complaint was of the weakness and uncertainty of speech and the numbness in his legs. His gait was slow and careful, and he spread out the feet as he walked, not coming down on the heels, however, like a tabetic. On shutting the eyes he swayed a good deal, but did not fall. There was a slight, fine tremor in the hands, somewhat increased upon voluntary motion. The eyes showed no nystagmus and no disturbance of the motor nerves or pupils. The voice was normal. The legs were weak, especially in the anterior crural muscles, which were considerably wasted. He found it hard to get up from a chair when he was sitting down; it was harder to go downstairs than to go up. There was, however, no distinct paralysis. The knee jerks were exaggerated. There was no ankle clonus. He complained decidedly of the numbness in the feet and legs, but there was no objective evidence of anæsthesia to touch, pain, or temperature, and no objective coldness or vasomotor disturbance. He had had some severe pains in the right side, to the left of the tenth to twelfth dorsal vertebræ. His predominant symptoms were, therefore, those of ataxia, especially involving the legs, with weakness of the same and subjective feelings of numbness and coldness.

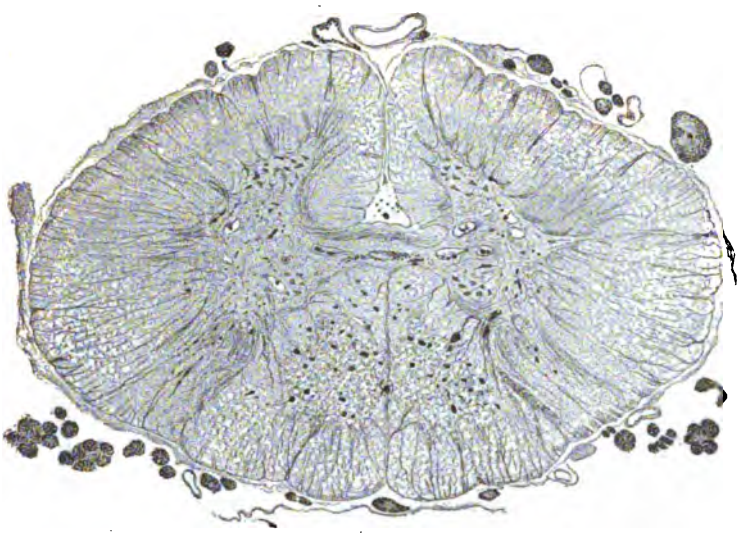

Fig. 4.—Eighth Dorsal.

Case II.—Mr. A. C——, aged forty-two years, born in the United States, married. Parents are both living and healthy, and there is no history of any nervous disease in the family. Patient has been a very active business man, also very active in athletics, and all his life a man of unusual physical vigor. He has been temperate in the use of alcohol, a moderate smoker, and is a moderate eater. He has never had syphilis. He does not know that he ever had any malarial infection. In the fall of 1897 he first began to find that he was slightly unsteady in his gait, and had sometimes attacks of dizziness. This condition of dizziness, however, was rather a state of subjective uncertainty than an actual vertigo. In March, 1898, he began to have some numbness in the feet and legs. They felt as though they were bound up. There were no cold or hot sensations, and he had no pains at all. A little

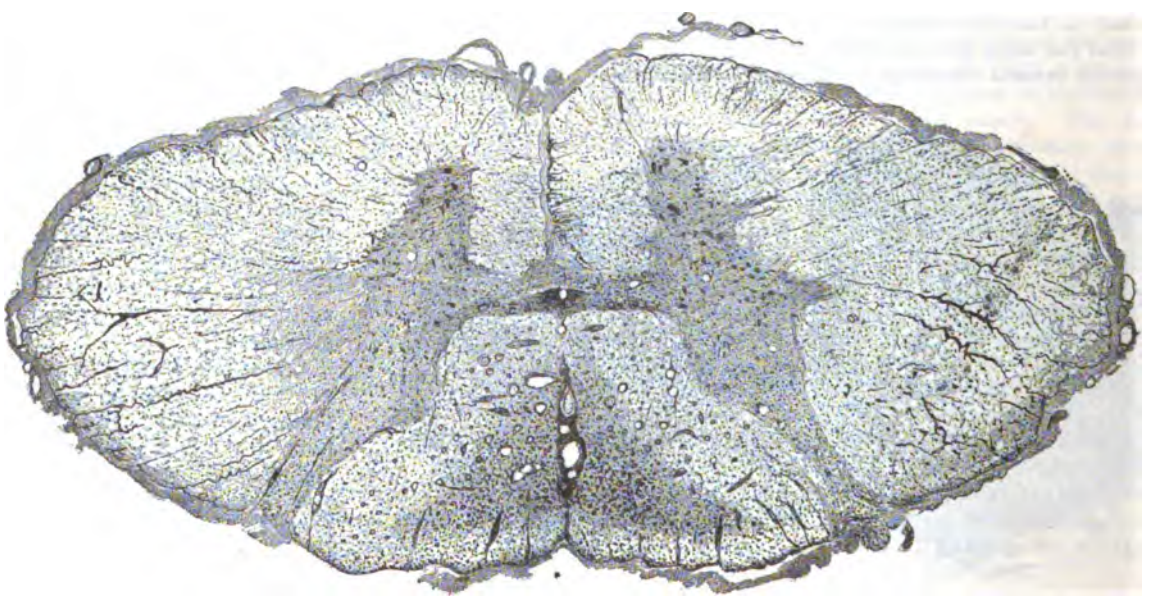

Fig. 5.—Tenth Dorsal.

later he had some slight numbness of the fingers also. There was a little constipation, but no disturbance of the bladder or sexual functions. His condition continued slowly to get worse until I saw him, in October, 1898. At that time he was still a vigorous, strong-looking man, but walked with a slightly ataxic gait. He had some swaying when he stood, but could manage to stand fairly well with his eyes closed. There was slight ataxia in the left hand, shown by his not always successfully carrying it directly to the tip of the nose with the eyes closed. The knee jerks were normal, and the pupils were even and normal. There was some weakness of the grasp of the hands and considerable weakness in the lower limbs, as shown by an inability to be on his feet long without evidences of fatigue. There was no atrophy of any of the muscles. There was a slight amount of anæsthesia of the finger tips, but no distinct anæsthesia of the feet, no analgesia, nor heat anæsthesia. There was no tenderness over the course of the nerves. Electrical examination was negative. Examination of the heart, lungs, urine, liver, and spleen gave negative results. Examination of the blood showed no malarial and no marked anæmic changes. The urine had a specific gravity of 1.014. Subjectively he complained of feeling nervous, irritable, and depressed, and he had not been able to work for six months on account of his condition and general weakness.

FIG. 6.—Sacral. Combined Sclerosis.

The patient presented, on the whole, the appearance of a person with a moderate degree of ataxia, considerable paræsthesia, considerable weakness of the extremities, and especially of the legs. I pronounced it at this time a case of combined sclerosis, due to some poisoning or infection unknown.

I saw him again on November, 1898, in consultation with Dr. Gregory, of Norwalk, Conn. The knee jerks were then lost. The pupils were large and even, and reacted rather poorly to light and accommodation. The paræsthesia had increased, involving the hands and forearms, and extending up above the knees; he had a decidedly ataxic gait, and Brauch-Romberg symptom. He had very little pain, and this was mainly in the back, as though from muscular weakness. The bladder functions were normal, except that micturition was frequent. The bowels were very constipated. He was then very anæmic, and looked like a much sicker man than when I saw him at first. From this time the disease began to progress very rapidly.

I saw him again, in consultation with Dr. Gregory and Dr. Culver, of this city, on January 2d. He was then unable to walk, on account of the paralysis and ataxia of his lower limbs; he could still freely move them while lying in bed, but he was unable to stand. The arms were also very weak, the grasp of the dynamometer being not more than ten pounds. He could move them, however, freely, but they were very ataxic, and he had some difficulty in carrying things to his mouth. The knee jerk was still gone. There was considerable anæsthesia to touch, pain, and temperature in the lower limbs, extending up as high as the trunk. He had considerable pain in the back, but no darting pains, and no severe pains of any kind in the extremities. There was no marked muscular atrophy. The bladder was still normal, but the bowels were extremely constipated. In general, his appearance was that of a very weak and ataxic man.

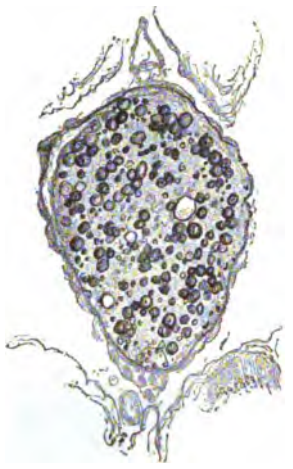

FIG. 7.—Posterior Root of Fifth Dorsal, showing degeneration.

His blood was carefully examined on two occasions by Dr. Camac, who reported a marked decrease in the red blood cells and in the hæmoglobin amount. The examination gave the following: Red blood cells, 3,404,000; white blood cells, 4,000; hæmoglobin, between 70 and 80 per cent. Microcytes, macrocytes, and poikilocytes were present; normoblasts and giganto-blasts, not present. The second was about the same, except that it gave a count of about 200 more red blood cells. But in other respects Dr. Camac considered it at both times to be the blood of a case of secondary anæmia. The progress of the malady then became very rapid. The patient became totally paraplegic, the bladder became inactive, the anæsthesia extended higher and higher, and the paralysis with it. The arms became weaker and more ataxic and anæsthetic, and ten days

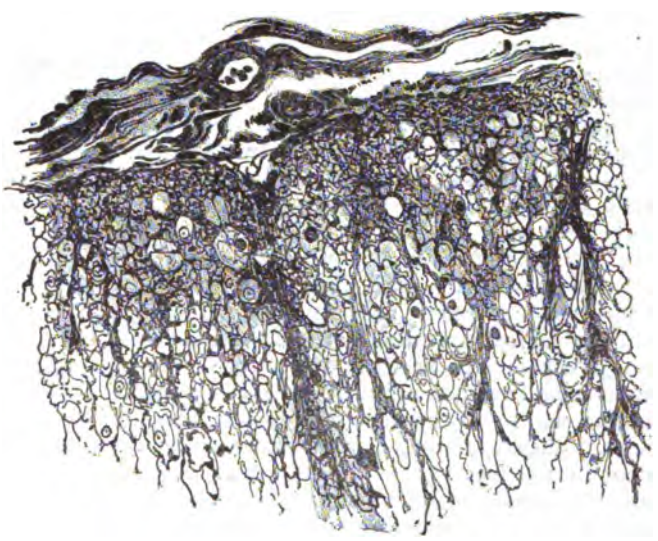

FIG. 8.—Showing Vacuolar Degeneration, posterior column dorsal cord. × ¼.

later, about January 18th, he died. No autopsy could be obtained.

During the course of the disease the patient was treated thoroughly with mercury and iodide, which seemed only to make him worse. He also received large amounts of arsenic and quinine, which failed to do him any good; iron was given, with equal lack of success. In fact, no therapeutical measures which we could devise seemed to have any effect in averting or shortening the course of the malady, nor was I able at the end to find out what the original cause of his trouble was.

CASE III.—Mrs. H——, aged sixty-three years, married, two children. The patient had always been well and active. Her hereditary history was good. Her children were healthy. She had lived a life involving much domestic labor and personal anxiety

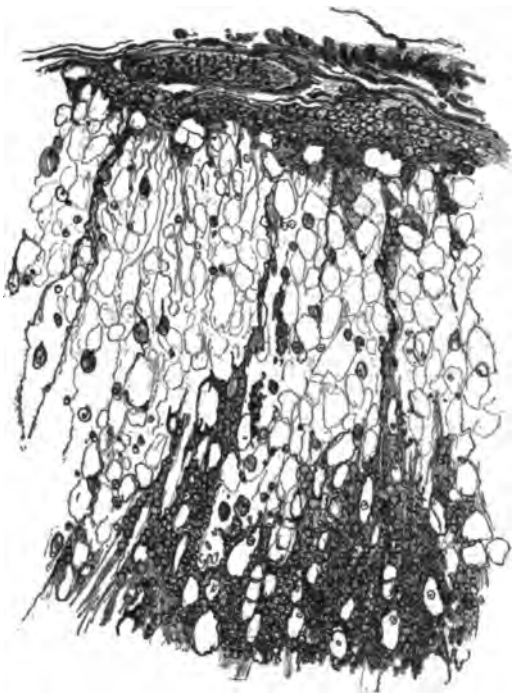

FIG. 9.—Showing Vacuolar Degeneration of crossed pyramidal tract.

and worry. There had been no malarial or other infection before the present illness.

In the summer of 1896 she was attacked with a prolonged and exhausting diarrhœa, somewhat dysenteric in character. She did not entirely recover from this. In the fall she noticed some symptoms of numbness and prickling in the arms, with accompanying weakness. The following winter she noticed the same symptoms in the legs. She did not suffer any special pain, but only from discomfort. In 1897 the symptoms in the arms improved somewhat, while the numbness and weakness of the legs increased, so that by December, 1897, she was not able to walk, except with the assistance of a cane. The symptoms slowly increased in severity, until when seen by me, in May, 1898, she was barely able to walk with help. The patient had lost some flesh but was not emaciated. She was pale but not cachectic in appearance. She suffered from some constipation but there was no special dyspepsia and no disturbance of the heart, lungs, or kidneys. She complained of a constant sensation of coldness in the feet and, to a less extent, in the hands also—of sensations of numbness in the feet and legs and in the tips of the fingers. There was also a feeling of pressure and discomfort over the abdomen. There was no tremor. The movements of the arms were normal and strong. She had some ataxia but no anæsthesia, except a light cutaneous anæsthesia in the finger tips. The cranial nerves were normal. She had no nystagmus, no tremor of the tongue. The legs could be moved in every direction but were somewhat weak; there was no rigidity of them. The knee jerks were slightly exaggerated. There was no clonus. There was anæsthesia to touch, pain, and temperature in the feet, especially the toes and ball. She knew perfectly well the position of the limbs. On standing she swayed, even with the eyes open, and could not stand with the eyes closed. The gait was awkward and ataxic. There was no disturbance of the bladder or rectal functions.

Summary.—There is a class of cases of spinal-cord disease, characterized by symptoms of numbness, ataxia, and paralysis, involving the legs and then the arms, progressing at first slowly and then rapidly, and ending in one or two years, to which the name of "subacute spinal paralysis" may be given. The cause is not known, but the trouble is due, beyond much question, to some form of toxæmia. It is more often associated with pernicious anæmia or profound secondary anæmia than with any other single condition. It is seen after profound malarial and lead intoxication. It occurs usually in middle life or later, and oftener in women than in men. It resembles light grades of multiple neuritis, such as are due to arsenic or diabetes; on the other hand, it resembles somewhat locomotor ataxia in its earlier stages. It is to be recognized mainly by the presence of anæmia or cachexia, the age of the patient, the progressive and rather rapid character of the symptoms, absence of much pain or tenderness over the nerves, and the absence of eye symptoms and of the visceral symptoms of locomotor ataxia. The pathological anatomy consists in a progressive degeneration, involving most the posterior columns, and to less extent the lateral columns of the spinal cord, and later the gray matter and other parts of the white matter. At the beginning the disease is systemic, affecting, however, the cervico-dorsal part of the cord more severely, as a rule, but usually developing two or three specially marked foci of degeneration lower down in the cord.

Pronounced changes in the blood-vessels sometimes accompany the degeneration, which is non-inflammatory and often ends in softening.

The treatment of the disease is always ineffective in the later stages. In the earlier stage the trouble may be helped by the use of arsenic, quinine, tonics, proper feeding, and the use of saline injections.

Chorea.—Chorea in children is a disorder frequently met with in well-developed but ill-nourished brains under the stress of circumstances. The main facts concerning this form of brain disturbances are: (1) The association with rheumatism and heart disease. (2) Chorea occurs in well-developed, highly evolved brains, and not at the youngest ages, and brain health may be recovered. (3) It is more frequent in girls than boys. (4) Almost all subjects of chorea are under the normal weight for their age; the body weight continues to fall for a time, but continues to rise before the movements subside, and they usually cease soon after the body weight becomes normal. (5) The condition is characterized by weakened force of the nerve centres on muscles and by spontaneous action. (6) The movements seen are seldom co-ordinated by impressions from without, but combination of movements are normal. Can any explanation be given why a well-developed child's brain, when ill nourished, should under the stress of environment fall into a condition of disorder in the nerve centres, resulting in their becoming weak in motor action and liable to constant spontaneous discharge of force? Such appears to be the problem.—FRANCIS WARNER.

MILIARY TUBERCULOSIS OF THE PLEURA WITHOUT OTHER TUBERCULOUS INVOLVEMENT OF THE LUNG.*

By EUGENE HODENPYL, M.D.,

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If the pleural surfaces of adults are critically scrutinized after death, they will be found, not infrequently, more or less thickly studded with tiny white circumscribed nodules or patches. The real nature of these little nodules has not yet, it seems, been clearly defined. From a study which I have made of a large number of cases, I am of the opinion that they are neither simple fibromata nor fibrous hyperplasias, the result of coal-dust pigment, as is so commonly believed, but are in most instances miliary tubercles.

The object of this paper is, first, to draw attention to the relative frequency of miliary tuberculosis of the pleura without tuberculosis of the parenchyma of the lung, or so-called initial tuberculosis of the pleura; second, to point out that in this situation, perhaps more than in any other of the body, tubercles are prone to undergo more or less complete spontaneous healing; and, third, to indicate the probable significant relationship between this lesion and acute tuberculous pleurisy.

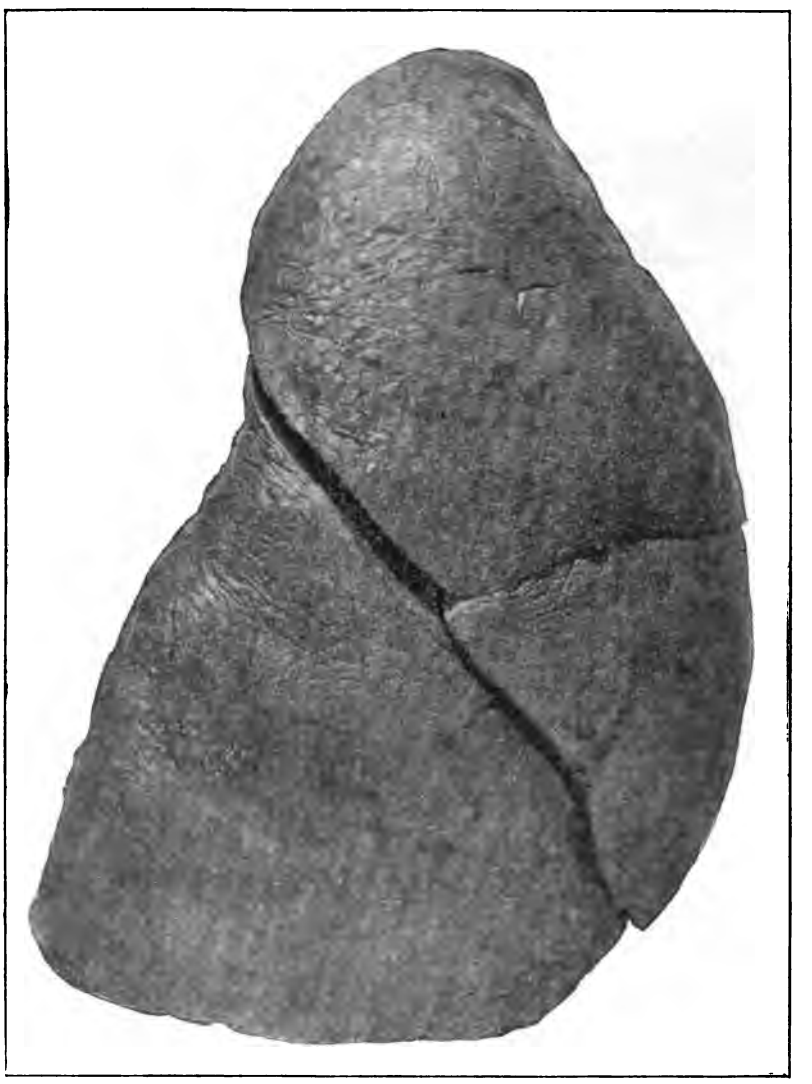

Fig. 1.—Miliary Tubercles of the Pleura, Upper Lobe.

It is necessary to point out, at the outset, that tuberculosis may affect the pleura in one of two ways, either of which may be primary or secondary. First, the pleura is more or less thickly beset with nodules and patches, which are the result of a tuberculous inflammation (miliary tuberculosis). Second, in addition to the above, there may be an escape of living germs into the pleural cavity, with the result that an acute exudative inflammation, with the production of serum, fibrin, and pus, is developed. This latter condition is usually spoken of as acute tuberculous pleurisy.

While primary miliary tuberculosis has for a long time been recognized as an independent pathological lesion, having been mentioned as far back as 1827, the subject has, nevertheless, so far as I can ascertain from the literature at hand, received but scant attention, and some of the important points regarding this lesion have been apparently ignored or overlooked. I have found but occasional mention of primary miliary tuberculosis of the pleura in the text-books, monographs, and journal articles which I have consulted, and on the other hand, in several of the larger treatises on diseases of the pleura, Gerhardt's,[1] for instance, the disease is not mentioned at all. Still further, the real nature of these little nodules in the pulmonary pleura has sometimes been misinterpreted, for we find the statement "that miliary fibromata of the pleura is a common affection" (Schlodtmann[2]). Weigert's[3] article, published in 1883, is the best which I have found, although he devotes less than half a page to the subject. He mentions, among other things, that when miliary tubercles of the pleura have existed for some time they can no longer be distinguished from miliary fibromata. The frequency of the lesion, the natural fate of the nodules, except in Weigert's brief statement just noted, and their relation to so-called primary tuberculous pleurisy, have, so far as I know to the contrary, not been commented upon.

Relative Frequency of Primary Pleural Tuberculosis. — I have during the past three months examined the pleural surfaces of one hundred and thirty-one adults, which have come to autopsy. Children's lungs were not included in this list. The ages of the subjects varied between fourteen and ninety-two years. In thirty-seven cases, there was more or less advanced pulmonary tuberculosis. In three cases, the pleuræ on both sides were so covered with adhesions that the presence or absence of tubercles could not readily be determined. On gross inspection of the remaining ninety-one cases, in which the lungs were free from tuberculosis, in forty-five, or nearly fifty per cent., there were seen on the surface of the pulmonary pleura, and in one case on the costal pleura as well, certain nodules and patches which previous studies had led me to regard as being tuberculous in character. The gross diagnosis was confirmed by microscopic examination in all but four of these forty-five cases. In three of these cases the tiny raised nodules on the pleura proved to be miliary air cysts (see Fig. 4). In one case the nodules, six in number, were found to be miliary endotheliomata. In the forty-six remain-

* Read before the New York Pathological Society, April 12, 1899.

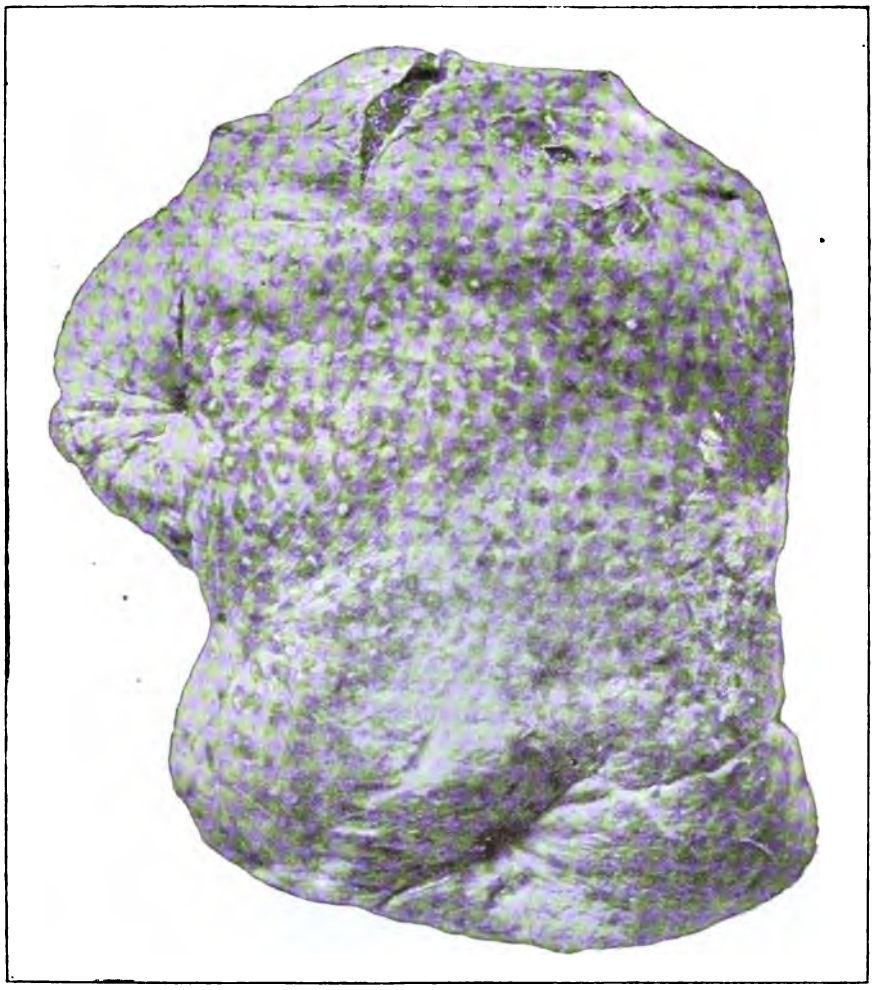

Fig. 2.—Miliary Tubercles of the Pleura.

ing cases, the pleural surfaces as well as the parenchyma of the lung were free from visual evidences of tuberculosis. In several instances, however, sections were made of the pleura in these negative cases, and in three microscopic evidences of tubercle were found, *i.e.*, tuberculous foci too small to be determined by the unaided vision. The bronchial lymph nodes were found tuberculous fifteen times in the ninety-one cases, six times unassociated with tuberculosis of the lungs or pleura, and nine times in connection with tuberculosis of the pleura alone.

Channels of Infection in Miliary Tuberculosis in Cases in which the Lung is not Involved.—The tubercle bacillus may become finally lodged in the subpleural connective tissue, either by means of the blood-vessels (hæmatogenous infection) or by the lymphatics (lymphogenous infection). In the case of the lymphatics, there are apparently six possible routes of infection: First, directly from the air vesicles of the lung through the lymphatics to the pleura; second, from the bronchial lymph nodes to the pleura; third, from the peritoneum; fourth, from the pericardium; fifth, from a tuberculous breast or rib adjacent; sixth, from tuberculous foci in the neck.

Notwithstanding that the current in the lymphatics of the lung is from the periphery toward the root, there is abundant evidence at hand, morphological as well as experimental, to show that particles of various kinds, bacteria, cellular elements, etc., may, when they obtain entrance into the blood circulation, or the lymph stream as well, travel in the reverse direction of the current almost as readily as with the flowing stream (rückläufige Transport). Fleiner[1] has shown, moreover, in a series of experiments, that various particles, especially red blood corpuscles, when allowed to escape into the air vesicles were, within a few minutes, largely carried from thence through the lymphatics in both directions of the current, partly to the bronchial lymph nodes and partly to the pleura. Fleiner considers it very doubtful whether foreign particles of any sort deposited in the pleura ever find their way into the pleural sac, provided the surface endothelium or epithelium, as one chooses to call it, is intact. In one of my cases, for which I am indebted to Dr. F. C. Wood, the patient died of an acute tuberculous pleurisy, starting from an old tuberculous sinus in the neck. In this case both surfaces of the pleura on the affected side were thickly studded with fresh miliary tubercles. In the sac was a large amount of fresh exudate, serum, fibrin, and pus.

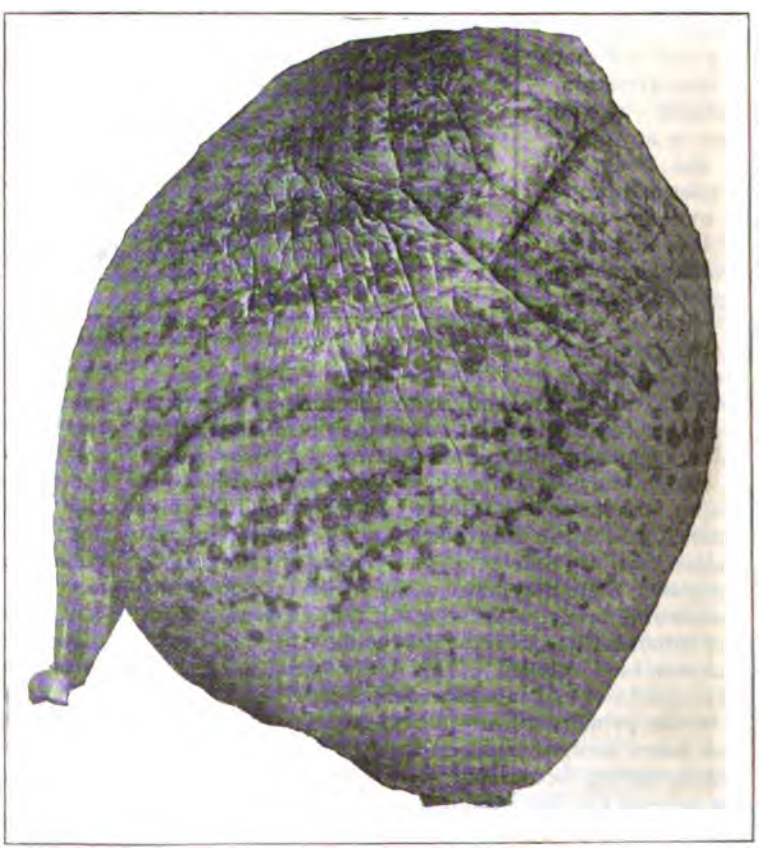

Fig. 3.—Pleura Studded with Miliary Tubercles. A tuberculous fibrous patch near the apex.

Macroscopic Features of Miliary Tuberculosis of the Pleura.—Miliary tubercles affecting the pleura vary somewhat in different cases. The pleuræ of one or both sides may be involved. In most cases the costal pleura is not involved. In number they vary from a single nodule to several hundred. No particular part of the pulmonary pleura seems especially apt to be invaded. As a rule they are formed in the subpleural connective tissue, and are seen on the surface as flat or somewhat raised whitish structures, which vary in size from 1 to 5 mm. in diameter. Almost invariably they are surrounded by a distinct zone of pigment (coal dust). Sometimes they are found surrounded by lymphoid tissue, Arnold's lymph nodules. Sometimes they are found embedded in the substance of the lymph nodes of the pleura first described by Heller.[5] On section, they frequently contain calcareous centres. In addition to these focal areas, there are not infrequently seen on the pleura more diffuse fibrous patches, which may be calcareous and which may show microscopically the other evidences of tuberculosis.

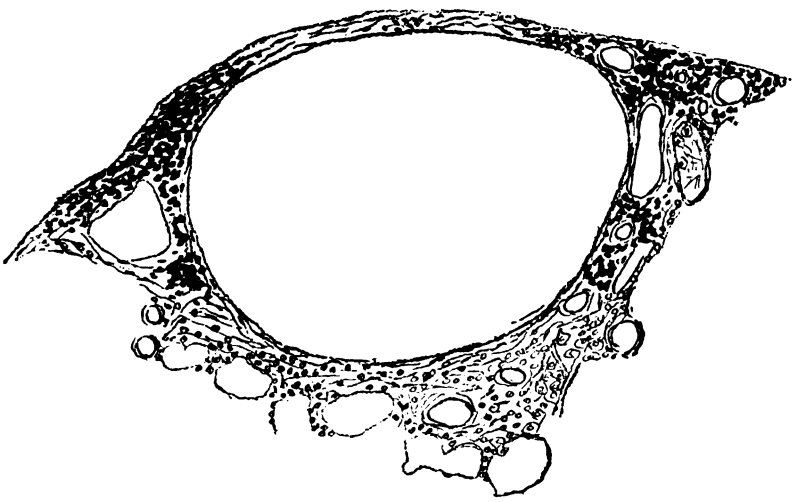

FIG. 4.—A Miliary Air Cyst of the Pleura.

Microscopic Features of Tubercles of the Pleura.—The striking morphological peculiarity of tubercles of the pleura is the frequency with which the tendency to fibrous-tissue metamorphosis is observed. Apparently the older the lesion the more dense and fibrous are the tubercles apt to become. In the substance of the nodules, but more especially surrounding them, a considerable accumulation of coal dust in the form of tiny granules is invariably found. One is justified, it would seem, in assuming for the coal dust deposited about the nodules an important rôle in the induction of the marked tendency to fibrous changes which they so commonly present. The many observations on this point, notably the now classical work of Julius Arnold[6] on Staubinhalation, prove conclusively that foreign inorganic particles lodged in the tissues are regularly followed by connective-tissue proliferation about them. Tubercles in the pleura are sometimes conglomerate. Giant cells, cheesy and calcareous degeneration, and other morphological characters of tuberculous inflammation are frequently met with. It was noted in several of my cases that different nodules from the same pleura evidently represented different stages of development. Some were so fibrous that they could not be differentiated from miliary fibromata; others contained cheesy centres, and still others giant and polyhedral-shaped cells in addition.

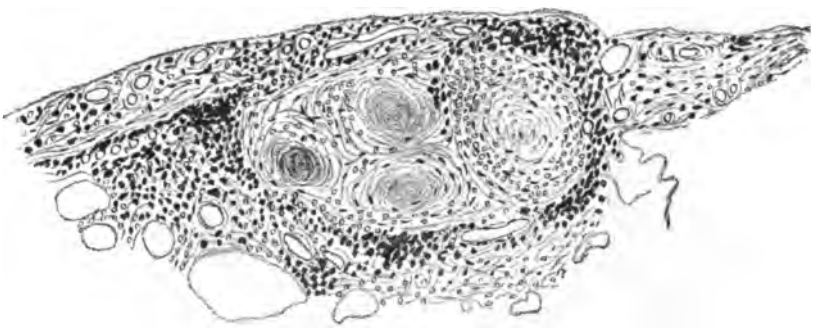

FIG. 5.—A Conglomerate Tubercle of the Pleura.

Presence of Tubercle Bacilli.—In but two cases were tubercle bacilli satisfactorily demonstrated in sections. Nor is this small number of cases in which the bacillus was demonstrated so surprising, when the fibrous nature of the nodules is taken into account. In chronic apex tuberculosis, the tubercle bacillus not infrequently disappears entirely from the lesion. This is notably also the case in chronic tubercles of the bronchial lymph nodes. As yet, inoculation experiments with tubercles from the pleura have not been undertaken by me.

While it is true that the lesions in general resulting from the growth of tubercle bacilli in the human body present no positive, characteristic morphological features, still it is also true that, in most cases, the appearances presented in microscopic section are so peculiar that it is but rarely that serious difficulty is encountered in diagnosis between miliary tubercles and nodules caused by other agents. In my cases, sections were made from different nodules in each case, and while in some of them, or in certain sections of the same nodule, the differential diagnosis between tubercle and fibroma was not clear, yet the examination of the cases, as a whole, revealed appearances which could fairly be regarded as being tuberculous in character.

Differential Diagnosis.—Nodules which in gross appearance closely resemble miliary tubercles are sometimes observed in the pleura. These, however, can readily be distinguished in section from tubercles. Miliary air cysts of the subpleural connective tissue, or miliary lymphangiomata, are not uncommon. Miliary endotheliomata are also sometimes met with; and occasionally nodules which are apparently true fibromata are seen.

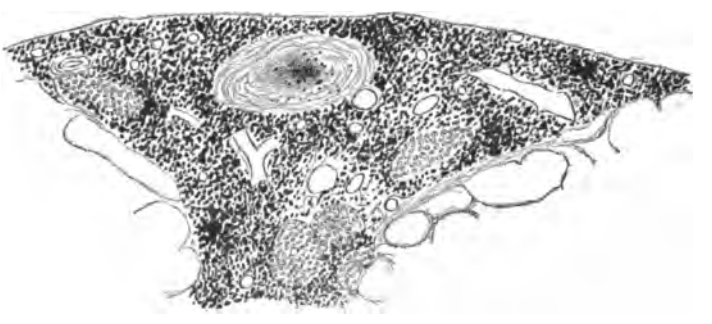

FIG. 6.—A Miliary Tubercle of the Pleura, Surrounded by Coal-dust Pigment.

Relation between Miliary Tuberculosis of the Pleura and Acute Tuberculous Pleurisy.—Much experimental evidence has accumulated of late years,

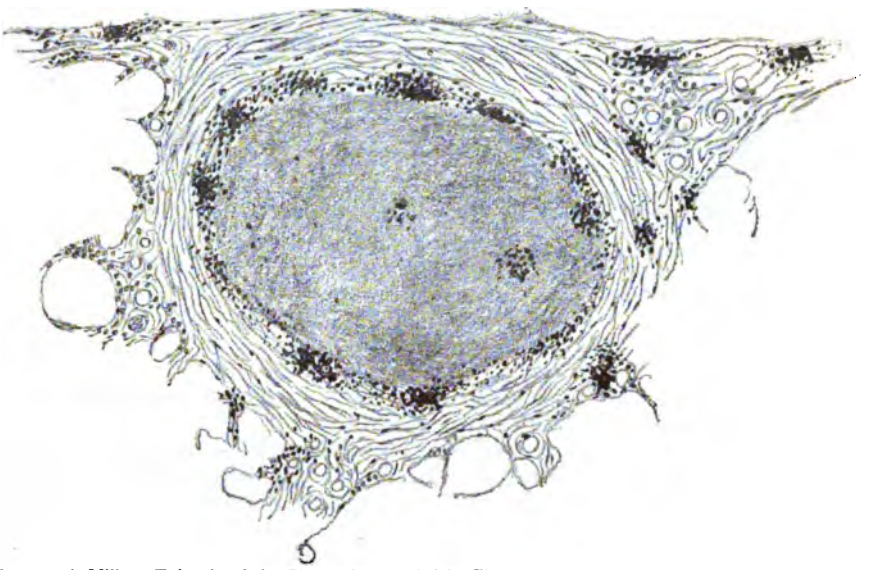

FIG. 7.—A Miliary Tubercle of the Pleura, Surrounded by Fibrous Tissue and Composed Largely of Cheesy Material.

showing that a large percentage of cases of acute pleurisy with effusion are really of tuberculous origin. Much or most of this evidence has been based upon the result of animal inoculations of the serous exudate; and most of these published results have not been confirmed by post-mortem examination. The percentage of cases of acute tuberculous pleurisy, in which tubercle bacilli were found in the stained exudate, or in which positive evidence of tuberculosis was obtained by animal inoculation of the serous exudate, has thus far varied within wide limits in the published results of different observers, from ten per cent. to one hundred per cent. This wide range of results is, perhaps, partially accounted for, at least, by the selection, or want of selection, of cases adopted by different investigators, and especially by the different technique employed. Daminy inoculated large quantities of the serous exudate into susceptible animals, 300 c.c. in divided doses of 10 c.c., from each case, and claims positive results in all but two

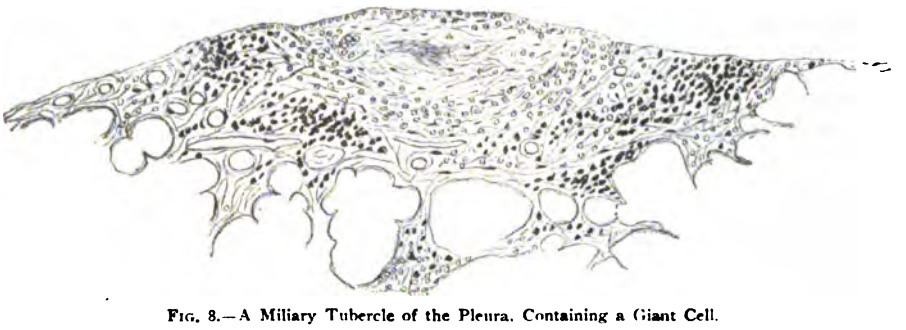

FIG. 8.—A Miliary Tubercle of the Pleura, Containing a Giant Cell.

of more than fifty cases. The two negative results were in cases in which the quantity of serous effusion was scanty. In three cases of acute pleurisy with effusion, which have recently come to autopsy, I found in addition to the pleural exudate a crop of miliary tubercles embedded in the subpleural connective tissue. In one case (see Fig. 9) the tubercles were on the surface of the pleura and the cheesy areas communicated with the pleural sac. In these three cases the tubercle bacillus was not demonstrated in the exudate, nor was the serous fluid inoculated into animals. Were these cases examples of true tuberculous pleurisy, or were they examples of miliary tuberculosis of the pleura with concurrent or mixed infection?

It is difficult to decide in these cases, in the absence of important pathological data; but the presumption would seem to be strong that the miliary tubercles present were the determining factors of the new-formed exudate. This presumption is based upon, first, experimental observation, which indicates that it is very improbable that bacteria are ever capable of passing through the pleura into the pleural sac, provided its cellular lining be intact; second, experimental evidence that tubercle bacilli inoculated into the pleural cavities of susceptible animals are capable of inducing an acute exudative inflammation, with the formation of serum, fibrin, and pus; third, escape of

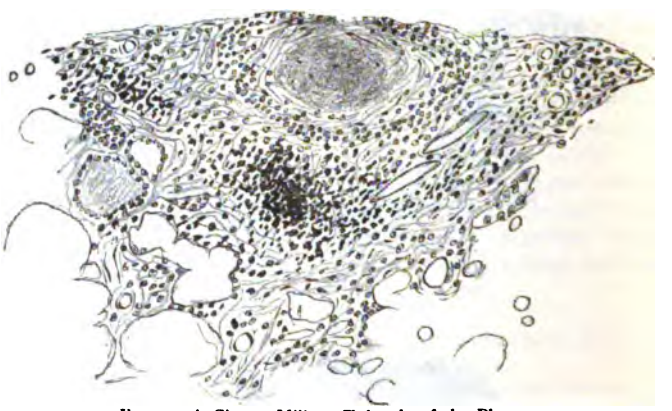

FIG. 9.—A Cheesy Miliary Tubercle of the Pleura.

tubercle bacilli into the pleural cavity is greatly facilitated in those cases of miliary tuberculosis of the pleura in which the tubercles involve the surface, and is almost inevitable when cheesy areas communicate with the sac.

It is not altogether improbable that pleural tubercles in susceptible individuals may occasionally serve as primary nidi for a subsequent tuberculous infection of the parenchyma of the lung.

Conclusions.—First: Miliary tuberculosis of the pleura, without other tuberculous manifestations of the lung, is of frequent occurrence.

Second: Miliary tubercles of the pleura may, ap-

FIG. 10.—Diffuse Tubercle Tissue of the Pleura, from Case of Multiple Miliary Tuberculosis of the Pleura.

parently, assume unusual significance either in causing in susceptible individuals, or under otherwise favorable conditions, a generalized tuberculous exudative pleurisy; or by complicating, through concurrent infection, an acute exudative pleurisy of independent origin.

Third: Miliary tubercles in this situation are prone to become fibrous.

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THE POST-FEBRILE INSANITIES.

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The influence of fevers as factors of insanity has long been recognized, and post-febrile insanity has been advocated as a term to express that form of mental disturbance developing during the period of exhaustion following various infectious and other fevers. Modern writers have shown that not only is insanity of this kind a feature of many acute illnesses characterized by rise of temperature, but it directly depends upon bacterial infection, and may occur at any stage of the acute affection. In the consideration of the subject it is important to draw deductions from actually observed cases, for, as a rule, the records of insane asylums, which have often been pressed into service, give only the etiological history obtained from the friends of the patient, which is usually unreliable. It is also necessary to eliminate from this class of mental diseases cases incident to coarse destruction of the brain substance, which occurs so often with encephalitis in scarlatina, smallpox, cerebro-spinal meningitis, and other exanthemata, the symptoms having no individuality or systemic grouping. The term "post-febrile insanity" was first used by Skae, whose involved and much-criticised classification contains references to various somatic insanities, and, among others, to post-febrile mania. Bucknill and Tuke, at the time, attacked his abuse of terms, alleging that he disregarded the psychical causes of insanity, which were, after all, those of the greatest importance. To-day, however, not only is "traumatic insanity," which was one of Skae's subdivisions, but "post-febrile insanities," especially those arising from, or occurring in connection with, typhoid fever, recognized and regarded by psychiatrists generally as distinct psychoses.

In referring to post-febrile insanity, which, in spite of their disapproval, they apparently acknowledged, Bucknill and Tuke said: "We believe it will be found that insanity more frequently follows continued fever accompanied by the mulberry than the rose-colored rash, and also that it is less curable when it succeeds the former—the type of Dr. Jenner." The learned Trousseau had already distinguished an insanity consecutive to typhoid, which he referred to many years ago, and which he did not believe to be due of necessity to "congestion and inflammation of which we can find traces on examining the dead body," but more often to septic infection and to exhaustion, starvation, or loss of blood. He recognized an atonic state characterized by delirium and vertigo, supervening during convalescence, and an "hebetude which the patients retain for even from five to ten months after recovery, and which some never lose." Post-febrile dementia has been observed by many psychiatrists and by Savage, who says: "I often meet with cases following fevers, in which the most marked evidence of weakness of intellect is loss of memory, and it may be said generally that loss of memory has to be considered as the most important symptom."

The insanity of typhoid fever is most commonly, then, an episode of convalescence, and is usually due to exhaustion and probably to the condition of the intestinal tract, which favors toxic absorption, and its appearance may and does occur after subsidence of the ordinary manifestations of the typhoid state, and generally after the twenty-first day. Possibly there may have been an initial delirium and a disturbed mental state, due to the high temperature, but the post-febrile condition may develop after the delirium has completely subsided, and after an intervening clearness of mind. It may be of a depressed or exalted kind, but more commonly the latter, when the psychosis resembles in every respect an ordinary, lively, acute mania, lasting from a few days to several months. The toxic character of the insanity is suggested by the variety and shifting character of the hallucinations and delusions, and the excitability of the patient. Delusions of identity are associated with those of an expansive character, and there are often violence and destructiveness with attempts at suicide, the latter being more or less impulsive. In this form as well as typhus, and in many other insanities following fever, it is a fact that at certain times there is a comparative lucidity, which, as a rule, is greatest in the earlier part of the day; however, if the psychoses are at all grave, the mental symptoms are continuous in their expression, and there are the asthenic confusion and feeble excitement which are characteristic. The dementia is quite characteristic, in being the sequence so often of a primary, light, confusional condition, and deepening very rapidly. Again, it follows a stuporous, inactive state with katatonic rigidity, that may last for some weeks. Pilgrim, of the Hudson River State Asylum, found that of six thousand patients who had entered that institution, there were histories of but twenty-four cases of post-febrile insanity, and thirteen of these followed typhoid fever; and there were seven cases of melancholia, four of mania, and two of dementia. In four there was a history of hereditary predisposition. The entire reliability of statistics based upon causes assigned by friends makes one doubt the preponderance of melancholia, which, according to most observers, is far less common than mania.

The connection of malarial poisoning with mental disturbances has long been recognized, and even Sydenham observed mania of a peculiar form occasionally following long-existing malarial states, especially if they were of the quartan type, and what appeared to be a dementia which "from the exhibition of strong evacuants degenerated into fatuity." Malarial insanity, according to various authorities, differs greatly in type, and is more apt to be melancholic than maniacal. In personal cases it very often developed after a prolonged attack of tertian ague, while in one or two there was a distinct periodic variation in the disturbance; and Spitzka refers to a patient in which the attacks of insanity were distinctly cyclical. Undoubtedly occasional cases of insanity develop in malarial patients as the result of the administration of enormous doses of quinine and other cerebral hyperæmiants, and short-lived mania and confusional trouble have, in the writer's experience, been found of such origin.

The insanity of epidemic influenza has received more attention in the last decade, because of its development in cases of the severe form of infection which has twice been attended by such disastrous results. In the cases seen by the writer, which are numerous, there was no definite period at which the mental symptoms developed themselves, but they most frequently appeared after the continuance of influenza for several days or weeks, and after there had been a very appreciable degree of exhaustion and general disturbance. Just as we recognize to-day a form of influenza attacking the abdominal viscera with little or no coryza, so is it possible to have an infection of the nervous organs with predominant symptoms, those of a psychical kind preponderating. In some of these there are the initial rise of temperature, general pains, sense of fatigue, and within a few days a condition of mental depression followed by excitement and confusion and by a lively train of hallucinations and delusions, which are so general and unsystematized as to almost, if not quite, constitute delirium. The subjects are often apprehensive and suspicious. The hallucinations are more often visual or connected with perverted cutaneous sensibility, and in some respects resemble those associated with the delirium of acute alcoholism. There is, however, rarely the exhaustion of the latter, and a more ready response to sedatives upon the part of the patient is the rule. The mental involution and disturbance are also more slow in their advance. Loss of identity occurs early, and in some cases seen by the writer was accompanied by expansive delusion. An increase of temperature is by no means constant, and the psychical signs of the originating disease are not marked.

Hutchings believes that melancholia is more often the result of epidemic influenza than mania, and that women are more frequently afflicted with this mental disorder. He found that while thirteen melancholic subjects were women, but five were men, and that in only four women and five men mania followed the grippe. This has not been the experience of the writer, except when the mental disturbance was a sequela, when melancholia was very common. The active expression of the confused excitement first referred to belongs to the early stage of the disease, and is undoubtedly a toxic manifestation. A light form of insanity characterized by the sudden development of imperative concepts is a rare sequela of grippe. In a recent case, seen with Dr. Bailey, the patient was a lady who recovered slowly from her influenza, which had been of the ordinary epidemic type. There were weeks of asthenia with insomnia, and slight depression which followed. She had recently taken an apartment, which she had furnished after much thought and care, with an idea to its artistic effect. Unhappily this was not a success, and there began a brooding and dominating idea that she had made a grave mistake in her selection. This foolish idea haunted her day and night, and gave rise to irresolution as to what she should do. She was possessed with torturing ideas that all centred about the original persistent disordered one. She became restless, tremulous, and tearful. When she left her house on a visit, she had impelling ideas to return to the place of discomfort, and spent her days revolving in her mind her original subject of distress. She is now the subject of agitated melancholia with a hypochondriacal tinge, and refuses food.

The insanity of grippe seems to disregard age or sex in its selection of victims, and may attack youths or old men. Of the nineteen men and twenty-one women seen by Hutchings, the youngest was nineteen and the oldest eighty-three. Most of the writer's patients have been between twenty and fifty. In about forty per cent. there is a history of hereditary influence. So far as curability is concerned, about seventy-five per cent. recover in a few months. In those of the melancholic form the recovery is slower, and such melancholia is apt to end in a terminal dementia. The influence of grippe as well as other epidemic diseases of the kind is to light up delusions in insane patients, and to favor exacerbations of excitement. The mental disturbances that may occur in the course of smallpox, scarlet fever, or measles are really not true insanities, being either the forms of delirium due to high temperature, poisoning, or exhaustion, or post-febrile manifestations of encephalitis, meningitis, or other forms of coarse diseases of the brain. These disorders usually take ultimately the form of dementia, and have no distinct character of their own. Several cases of measles, however, have been mentioned in which the mental symptoms were so characteristic and suggestive that they might properly be considered as those of genuine insanity. Two of them are reported by Finkelstein, one being that of a boy of thirteen years and the other that of a girl of fourteen. The first patient was admitted to the hospital twenty-eight days after the onset of measles, the psychical disturbance having existed since the twenty-first day, beginning with furious delirium of terror, increased knee jerks, and acceleration of cardiac action. Upon admission to the hospital he was dull, and responded slowly to questions that had been repeated several times. He had had terrifying visual hallucinations, during which he had seen "black men," and fought with them. There was recovery after a week. The father of this boy was an alcoholic.

The second case, that of the little girl, manifested mental disturbance from the invasion of the disease six days before admission to the hospital. During the first two days the girl was moody and taciturn, and on the third excited and apparently afraid of all about her, crying out, and throwing away anything that touched her. She ran about trying to avoid every one, and repeated frequently the one word, "injustice." She died six days after the appearance of the rash, of pneumonia, in a quiet, stuporous state, the mind never clearing.

The prognosis of post-febrile insanity, as has been said, is usually good when no extensive inflammation of the brain substance has occurred. Pilgrim places the recoveries of the typhoid form at fifty per cent., which the writer believes is too low. He has found periodical cases and other chronic terminal states. Of course the demented cases are incurable, but one cannot be too careful in distinguishing between the atonic depressed cases and those of real dementia, for the former are by no means hopeless. The insanity of grippe is usually cured in from three weeks to four months, especially if it is a maniacal expression.

The indications for treatment are the efficient disinfection of the gastro-enteric tract, the inducement of elimination, and the systematic and full provision of proper agents of repair, which must be determined in the individual case. Naphthalin and salol have been of greater service in my hands than any other antiseptics, and should be used in connection with calomel and soda, or with castor oil, and should be given in full doses.

Concentrated and easily digestible foods and milk are always indicated, and in the stuporous or demented cases alcoholic stimulants often do much good, especially if strychnine, nitroglycerin, or morphine are given at the same time. For the reduction of excitement or the relief of the insomnia the treatment need not differ from that usually employed in ordinary cases. The coal-tar remedies seem to be often followed by a condition of depression and gastro-enteric distress, hence hyoscyamine, paraldehyde, or even the much-abused chloral is preferable.

FIBROMA OF THE ABDOMINAL WALL.

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THE abdominal wall is seldom the site of tumors, and of those found occupying this region fibromata constitute the predominating variety. The other tumors are quite rare and hardly deserve special study, but fibromata present some special characteristics, and occur sufficiently often to demand a thorough knowledge of them. Of seventy cases of tumors of the abdominal wall collected by Sänger, sixty were fibromata. While being the most frequent tumors of the abdominal wall, they are nevertheless of rare occurrence. Leon Labbé, according to Michaux, observed only ten cases in the Paris hospitals in twenty years, and T. F. Richardson states that the records of Charity Hospital (New Orleans) for the last five years fail to show a single case.

The study of these growths seems to have been neglected or the affection not recognized, for no literature upon the subject antedates 1850. During the ten years following 1850 eight cases were recorded, but, says Michaux, it remained for Huguier in 1866 to make the first collective study of the cases. Senn attributes the first description of them to Nélaton, but his writings appeared after those of Huguier and confirmed some ideas advanced as to the supposed origin of these growths. Their opinion was that the growth was always attached by a bony pedicle to a neighboring bone (most usually the iliac bones), and the treatment proposed was ligature of the pedicle. This opinion prevailed until Guyon in 1876 recognized their true aponeurotic origin and suggested the method of treatment followed at the present time. The most extensive study of the subject was arranged by Leon Labbé and Charles Remy in 1888, and was based upon one hundred cases that had been collected from literature. From this material they were able to show the special characteristics of these tumors, and most writers since that time have only confirmed their work.

In no other fibromata can the exciting cause be so readily discerned as in these. Trauma seems to be the most important determining factor in every instance. They occur almost exclusively in women, and are limited to the period of sexual activity and intimately connected with childbirth. Senn states that of forty-two cases collected by Guerrein thirty-nine were in women. Only four cases have been observed by Senn, all of which were in women. In the largest majority of cases the tumor makes its appearance soon after childbirth; and while any region of the abdominal wall may be affected except the umbilicus or median line, it is usually found in the iliac regions or sheaths of the rectus muscles, where the tissues are more liable to be injured during parturition. It is often difficult and in some instances impossible to ascertain the exact anatomical position of the tumor. According to Senn the primary starting-point is most frequently near the peritoneum. Michaux states that the point of origin is not generally preperitoneal or subcutaneous, but in the fascia and muscles.

The pathology of these fibromata has afforded an interesting study, owing to the fact that such growths present an arrangement of their elements different from those of other regions.

Senn states that great confusion has existed in regard to their proper classification, and that some authors are inclined to regard them as a variety of fascial sarcoma, but their histological structure bears a closer resemblance to fibroma and keloid than to sarcoma. Michaux also terms them true fibromata. The tumor is composed of young connective-tissue cells with a scanty intercellular substance, and belongs to the class of benign connective-tissue tumors which Müller termed desmoids. Removal of the growth is often followed by recurrence, especially if enucleation has not been complete. As a usual rule the growth is circumscribed and encapsulated, making the removal quite easy; but Senn states that the encapsulation is incomplete—an important point to be remembered in the operative treatment. Sarcomatous degeneration occurs in a sufficient number of cases to warn the surgeon against delay of operation; in fact, some cases are of the sarcomatous type from the beginning.

The general history of these growths is strikingly similar. They occur most usually soon after labor as a small, painless nodule, which gives rise to no inconvenience and is usually discovered by accident. The growth often acquires considerable proportions before being recognized, especially if the bulk of it extends toward the abdominal cavity. It may be round, pyriform, or cylindrical, the last form occurring most usually in those connected with the rectus-muscle sheaths. If the development has been in an outward direction and the abdominal walls are lax, the tumor becomes particularly prominent and is very mobile under the skin, but becomes fixed upon muscular contraction. This is considered a pathognomonic symptom by some surgeons, but it is well known that an intra-abdominal tumor which has become attached to the abdominal walls will present the same characteristic. The ease with which a diagnosis can be made depends largely upon whether the affection is deep-seated or not. It could be mistaken for fibroid tumors of the uterus, malignant tumors of the round ligament, hydatid cysts, ovarian cysts, cysts of the urachus, gummata, or lipomata. Recently I saw an eminent surgeon puzzled as to the nature of a small tumor present in a man whose abdominal walls were quite thick. He was inclined to believe the growth a fibroma, but an incision revealed the presence of a deep-seated lipoma which had presented the well-known hardness of a fibroid, and it was impossible to differentiate it before operation. If the tumor lies near a bone and is of any size, the tendons and muscular fibres can be felt as tense and firm as a rope stretching between the growth and the skeleton; this is due to the growth being restrained within the muscular sheath and advancing toward the point of bony insertion. This constitutes the bony pedicle described by all the early writers, and was present in the case observed by me.

A point of practical importance to be remembered in differentiating fibromata from hydatid and urachal cysts is that they never occur in the median line nor at the umbilicus. Hydatid cysts of the subperitoneal tissues may occur anywhere, but are most frequent in the umbilical region and are extremely slow in development.

Michaux states that two distinct periods are to be recognized in the evolution of these tumors: The first is a period of slow growth, the tumor being benign in character and requiring many years to attain any considerable size; while in the second instance evolution is quite rapid and calls for immediate intervention. The influence of a new pregnancy is often sufficient to excite marked changes in the size and nature of the tumor. Growths so situated are especially exposed to injury, and the form of dress common among women has led to serious sloughing in some instances. It is therefore the duty of the surgeon to advise prompt surgical treatment. If the tumor is of long standing and has attained some size the peritoneum becomes involved, thus making any operation for its removal practically intraperitoneal and increasing considerably the liability to hernia. In three of four cases observed by Senn resection of the peritoneum was necessary. In some instances the tissues are so extremely involved that re-

moval is impossible. This should be the strongest argument in favor of early operation. Hernia is particularly liable to follow such operations, owing to the removal of extensive areas of tissue. This is to be avoided by carefully suturing the peritoneum and muscular layers separately with buried catgut sutures, and at the same time reinforcing all by deep sutures of silkworm gut or silk. In instances in which the tumor lies on the peritoneum and has been enucleated without opening the cavity, a large space of peritoneum is exposed and its blood supply possibly seriously interfered with. This is to be carefully brought in contact with the muscular layers with sutures, else a dead space may be left which may give rise to sloughing or to sepsis.

I append here the report of three cases. The first one occurred in the private surgical work of Dr. E. S. Lewis, at which operation I assisted. The other two reports were arranged by Dr. T. F. Richardson, U.S.M.H.S., while an interne in the Charity Hospital, and were made the subject of a graduation thesis. As this thesis was not published, Dr. Richardson accorded me the privilege of including the clinical reports in this article.

Case I.—A married woman, of the best family and personal history, twenty-one years of age, consulted Dr. E. S. Lewis to ascertain the nature of a tumor in the lower part of the right lumbar and the upper part of the right inguinal region, which had been steadily increasing in size for two years. It was first recognized as a small, hard, painless nodule, exactly over McBurney's point, and made its appearance about two weeks after the termination of her only pregnancy. Then for several months it grew rapidly but gave no inconvenience, as there was absolutely no pain. For seven months prior to the operation there was no appreciable increase in its size. Three months before she consulted Dr. Lewis, however, sharp pain, though not of a severe type, commenced in the growth and has continued at intervals up to the time of operation. The tumor occupied parts of the right lumbar and inguinal regions, was ovoidal in shape, about eight inches long, five inches broad, quite hard, painless, and particularly prominent. Manipulation of the tumor imparted a feeling of strong attachment under it, and because of the close proximity to the iliac bone it was at first thought that its origin was in the iliac fossa. Vaginal examination, however, showed that the tumor occupied a position above the pelvic borders and was not connected with any pelvic viscera. The inner border of the growth extended to the outer border of the right rectus muscle. Its removal was not attended with any difficulty. After an incision in the line of axis (which was parallel to the median line) the growth was easily and quickly enucleated except along its outer border, where the abdominal muscles seemed to lose themselves in the substance of the fibroid. The growth seemed to be intimately connected with the transversalis and internal oblique muscles. Fibres of the external oblique passed over it. The peritoneum was not opened, but was laid bare over an area fully six inches square. After enucleation of the tumor the remaining muscles and fascia were united with buried catgut and the skin was closed with silk sutures. The wound healed readily, and recovery was uneventful. The tumor weighed about five pounds, and was pronounced a true fibroma by the pathologist.

Case II. (Reports of Dr. T. F. Richardson).—This case occurred in the service of Dr. E. S. Lewis at Charity Hospital during the writer's interneship. Adelia V—— a strong and healthy negress, thirty years of age. Her hereditary and personal history was good. She had had four full-term children, the last labor being in June, 1896.

The history of the tumor was as follows: She first noticed the tumor eighteen months before coming to the hospital, just after a confinement, as a lump about the size of an egg, low down in her left side. It was hard and painless, and apparently growing very slowly. During her last pregnancy its growth was quite rapid, and at time of delivery it had probably trebled in size. It had never given her any pain nor any inconvenience beyond that caused by its size. At the time of admission to hospital, November 20, 1896, the tumor occupied parts of the left lumbar and inguinal regions, causing a very marked prominence. It was ovoidal in shape, with large axis parallel to the median line, about ten inches long by six broad, quite hard, very slightly lobulated, perfectly painless on manipulation, and freely movable. Vaginal examination showed the growth to project markedly into the abdominal cavity, but no adhesions or anything like a pedicle could be felt.

On November 24th the tumor was removed. The peritoneum was not opened, but portions of the muscles and fascia were necessarily resected. The patient was returned to the ward in excellent condition. At 1:30 P.M., about four hours after the completion of the operation, she was found literally pulseless, with gasping, shallow respiration and dilated pupils. The dressings were saturated with blood. As soon as possible the intravenous injection of physiological salt solution was begun, and during its progress the wound was reopened and the bleeding point—a branch from the deep epigastric—secured. Five pints of the hot saline solution were given. At the completion of this operation the pulse was 130, but full and of good character. In one and one-half hours the patient's temperature was 100.9° F.; in two and one-half hours, 102° F.; pulse, 124. Seventeen ounces of urine were drawn by catheter. In five hours her temperature was 101.6° F., and in ten hours 100° F. The patient's recovery was rapid, though the wound suppurated. She was discharged on the thirteenth day after the operation, a small sinus still existing in the wound. The tumor weighed eight pounds and was found to be composed entirely of fibrous tissue.

Case III.—This case is from the hospital service of Dr. E. Denegre Martin, and is here reported with his permission.

Mollie C——, negress, twenty-three years old. Her history as far as obtainable was good. She had three children, the last one born March 31, 1896. The history of the tumor was as follows: Two weeks after her confinement in March she noticed a lump, about the size of a partridge egg, in the left iliac region. Its growth had been steady and painless. When admitted to the hospital, about one year after it was first noticed, the tumor was about eight inches long by three and one-half broad, occupying the left inguinal region. In shape, salience, and general appearance it closely resembled that of Case I. The growth was freely movable, but on active abdominal contraction it became fixed. Vaginal examination was negative. She was operated upon May 3, 1897. The adhesions were slight, the peritoneum was not opened, and the wound was closed in layers with buried sutures. Her recovery was rapid and uncomplicated. The tumor weighed six pounds. Microscopical examination proved it to be a pure fibroma.

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FRACTURE OF THE PATELLA.

FOR a bone of its size, the patella certainly gets its share of discussion. When it is fractured, the outcome of whatever method of treatment that is employed is to some extent doubtful, and bad results are not easily overlooked by the patient or his friends. The non-operative treatment seems already to have been placed in its proper niche, but the different aspects of the operative treatment of the condition continue to excite discussion of varying degrees of acuteness. We are speaking only of cases seen within seven or eight days from the time of the injury. The operative treatment of the typical case of fracture of the patella may be divided into two classes: first, treatment by those methods which aim to interfere with the joint as little as possible; and second, the method of free opening and cleansing of the joint with salt solution previous to suture of the fragments. Advocates of the first plan claim simplicity, safety, and convenience for the methods they employ, and say that in case of infection the results of their methods are not so disastrous as when the same accident occurs after free opening of the joint. We should, for the purpose of discussing this question from the theoretical point of view, be able to disregard the occurrence of infection. Infection ought never to occur when a simple fracture of the patella is operated upon, and what we ought to think about most is the final result and the means which lead toward perfection in that particular. All the methods of working through a small skin incision leave much to be desired in mere operative detail. We are always working more or less in the dark. We cannot be sure of the condition of the interior of the joint, the exact contour of the fragments, or the disposition of shreds of periosteum and synovial membrane, and by most of the methods we are introducing a long thread of foreign material, with a very distinct fluid-conducting power if it is silk, a long distance under the skin, very close to an important serous cavity. The objection urged against more extensive operative work is always against this very extensiveness and the opportunities for infection which may thus be afforded to the elusive bacteria. But, as we have said, infection should not occur, and the corollary of this statement is that only those accustomed to performing all kinds of surgical operations should undertake this particular one. The question of suture material is of great importance, and several materials have been recommended. Here, as elsewhere in the body, an absorbable suture is much the most desirable if there are no mechanical objections to its use. It has long seemed to be the idea of many surgeons that the fragments of a fractured patella were subjected to a great deal of tension, and consequently that suture material must have considerable strength and permanence in order to be useful. The result of this reasoning showed itself in the use of silver wire and thick silk in operations upon the fractured patella. There are, however, several very serious objections to the use of silver wire, which also hold good in the case of silk, but to a lesser degree.

Great tension is not needed to hold the fragments in position after the operation we are considering; in fact, great tension is almost as injurious in bone as it is in soft tissues. The wire is non-absorbable, and is thus sure to cause irritation and perhaps necrosis if left any length of time, not in every case, but in a proportion large enough to be very noticeable. The function of the suture in fracture of the patella is to hold the fragments in apposition long enough for the rigid dressing or splint to be put in place, and to continue acting long enough for the danger of spasmodic or convulsive movements of muscles to pass off. The importance of the correct application of the dressing is exceedingly great. We do not put silver-wire sutures into a torn or cut quadriceps tendon, and we do not use them in the patella. Reasonably strong and above all things sterile catgut answers all purposes, and it need not be subjected to any special hardening process. If we are going to perform the extensive operation upon a fractured patella, we cannot do better than suture the fragments with catgut through drill holes not involving the articular surface of the bone, and use extreme care in applying the plaster-of-Paris dressing. The joint ought to be washed out with a hot decinormal salt solution to remove the clots.

Recently a compromise operation has been suggested, and excellent results are reported. This operation is done through a transverse incision and the fragments are tilted up by means of sharp retractors, so as to allow the joint to be washed out as much as possible without having the fingers touch any part of its interior. The suturing is done with catgut, and includes only the periosteum. We may be certain that success in suturing the patella will depend upon two things—asepsis and suture material.

THE LONDON SCHOOL OF TROPICAL MEDICINE.

MR. CHAMBERLAIN, the Colonial Secretary of Great Britain, who has for some time been exerting his influence in favor of the establishment in London of a school of tropical medicine, presided on May 10th at the festival dinner of the Seamen's Hospital Society. This dinner aroused much interest, as it was understood to have reference to the aforesaid projected school. The

British Secretary for War, who was present at the banquet in order to emphasize the need of the means of studying tropical diseases under the most favorable conditions, gave statistics tending further to prove the already well-known fact, that disease is much more to be dreaded and a far more deadly foe to an army in the field than are shot and shell or any other weapon wielded by human agency. According to the London *Times*, "he observed that in the Tirah campaign—a frontier expedition which was undertaken recently in India—there were one thousand admissions to hospital on account of wounds received in battle, while there were eleven thousand cases of fever and dysentery. There were one hundred deaths among the sufferers from wounds and injuries, but there were nearly six hundred deaths due to diseases of a tropical climate. These figures, which probably represent fairly enough the general ratio between the two kinds of mortality, are sufficient to prove the importance to the British army of the fullest knowledge that can be obtained concerning the immense variety of tropical diseases to which our troops are exposed. It must be remembered, however, that the deaths in hospital and the weakening of the fighting line by the numerous cases of disease represent only a part of the mischief. Many of these diseases cause permanent impairment of health of a more or less serious kind, which, as there is every reason to hope, might be greatly mitigated or entirely overcome by better knowledge of the maladies to which it is due and the means of curing them."

The above words have been quoted because under existing circumstances they apply with almost as much force to the soldiers of the United States as to the British army. So far as can be judged from the present state of affairs, American troops will be stationed in the Philippines and in Cuba, at any rate, for some time to come, and consequently it will be necessary for army surgeons to have a competent knowledge of the tropical diseases peculiar to those climates. Why should not a school of tropical medicine be established in this country?

A NEW METHOD OF ANÆSTHESIA.

The manifest disadvantages of ether and chloroform at times, and the marked limitations to the use of local anæsthetics, have caused no end of anxiety to the surgeon when confronted by unusual conditions. That a way of relief has been ingeniously contrived would seem to be found in the device recently advocated by Bier, of Kiel, in the *Deutsche Zeitschrift für Chirurgie*, April, 1899. He adopts Quincke's method of lumbar puncture after preliminary local anæsthesia by Schleich's infiltration, and injects into the sac of the spinal cord small quantities of a dilute solution of cocaine, using from one-tenth to one-sixth of a grain. This seems to influence the spinal ganglia and the root zones and the medullated fibres before they emerge from the cord, and produces a complete analgesia below the line of injection, which comes on from eight to ten minutes after the injection. By using this method he has been enabled to do major operations without pain, and yet the patient does not lose the sensations of touch and of temperature. Osteoplastic operations on the knee and ankle and hip joint, resection of the femur, necrotomy of the tibia, and resection for osteomyelitis of the femur were performed without pain and with entirely satisfactory results. The author has experimented upon himself and a colleague, and reports that thus far the only untoward results obtained have been those due to a loss of the cerebrospinal fluid. This happened in his own case by self-experimentation, and he was confined to bed for some days, suffering from dizziness, headache, nausea, and vomiting when he attempted to assume the upright posture. Since the experiments along the line of lumbar puncture have been so numerous it is by no means improbable that a method can be devised to overcome this disadvantage, and the device after further experimentation and perfecting will undoubtedly open up new fields in surgery.

News of the Week.

The New Medical-Practice Law in Illinois.—Under the provisions of the law at present in force in that State, certificates are issued by the State board of health to graduates of medical colleges in good standing, as may be determined by the board. The fee for such certificate is $5. But on and after July 1, 1899, all applicants (except graduates of medical colleges in Illinois in good standing, as may be determined by the board, who may be granted certificates without examination) will be required to present a diploma from a legally chartered medical college in good standing, as may be determined by the board, and pass an examination. While the board has not adopted any rules relative to the examination, and will not do so until the regular quarterly meeting on July 11th, it is probable that the subjects in which such candidates will be examined will be the usual ones—of anatomy, physiology, chemistry, materia medica and therapeutics, pathology and bacteriology, surgery, theory and practice of medicine, obstetrics, gynæcology, hygiene, and medical jurisprudence. The examination is to be in writing. It is probable also that the first examination will be held in Chicago, at the Great Northern Hotel, on Wednesday, Thursday, Friday, and Saturday, July 26th, 27th, 28th, and 29th, commencing at 9 A.M. on the 26th. It is thought that all applicants, including graduates of Illinois colleges, will be required to pass an examination. The fee for this examination is $10 and for a certificate $5. Applications for an examination should not be made until July 1st. Applicants who desire to be registered under the present law should forward their diplomas by express prepaid to the secretary of the board at Springfield, for verification. Applications should be made on or before June 30, 1899, and be accompanied by two letters of recommendation, signed by licentiates of the board. In the case of physicians residing in other States, the letters can be signed by members of the State board of health or of registration and exam-

ination, or by physicians of national prominence. Under the provisions of the law now in force, non-graduate applicants for a license to practise medicine and surgery are examined by this board, and if found qualified are granted certificates. This law will be repealed on June 30, 1899, after which date each applicant must present a diploma. A final examination for non-graduates in medicine will be held at the Great Northern Hotel, Chicago, on Wednesday, Thursday, Friday, and Saturday, June 21–24, 1899, commencing at 9 A.M. June 21st. The examination will be in anatomy, physiology, chemistry, materia medica, pathology and bacteriology, surgery, theory and practice of medicine, obstetrics, gynæcology, hygiene, and medical jurisprudence. The fee for this examination is $20, which is returned if the applicant fails.

The American Institute of Homœopathy.—The fifty-fifth annual meeting of the national homœopathic society was held this week at Atlantic City, N. J., under the presidency of Dr. Benjamin F. Bailey, of Lincoln, Neb. The twelfth annual meeting of the American Homœopathic Eye, Ear, and Throat Society was also held at the same time and place.

Wedding Gift to a Hospital.—According to the Butte (Mont.) *Miner*, Mr. Arthur P. Heinze, of Brooklyn, and his brother celebrated the marriage of the former by a donation of $5,000 each for the establishment of an emergency hospital in Butte.

Pathological Society of Philadelphia.—At a stated meeting held May 25th, Drs. W. M. L. Coplin and E. Q. Thorton demonstrated an enormous aneurism of the aorta, with fatal rupture into the pericardium. An earlier rupture into the pulmonary artery had been closed by a thrombus. Dr. J. N. Hunsberger exhibited by invitation a bilocular heart from a girl twelve years old. There were indications of undeveloped interauricular and interventricular septa, and while but one large vein leading to the heart and one large artery leading from it were obvious, closer examination disclosed the presence of others. The leaflets of the tricuspid valve presented endocardial vegetations, dislodgment of some of which had given rise to right hemiplegia and aphasia and ultimately death. The child had presented during life cyanosis on exertion, but no shortness of breath, and her fingers and toes were clubbed. Dr. F. P. Henry exhibited a heart from a man dead in middle life with a marked deficiency of the interauricular septum. The patient had during life exhibited no symptom or physical sign indicative of the cardiac defect. Dr. W. E. Robertson exhibited specimens of—(1) aneurism of the innominate artery; (2) rupture of the left ventricle; (3) hypertrophy of the heart; (4) hypertrophy of the heart. Dr. J. Hendrie Lloyd demonstrated a tumor of the hypophysis from a man who had presented symptoms of general paresis and none of acromegaly. Dr. D. Riesman demonstrated (1) hernia of the appendix; (2) cholesterin cyst of the spleen, with a calcified capsule. Dr. Riesman demonstrated for Dr. A. A. Eshner specimens from a case of pronounced tuberculous enlargement of the mesenteric glands. The lungs and spleen also were full of tubercles. The abdominal cavity contained chylous fluid, in which bacilli and cocci were found. During life the patient had presented for a time symptoms of typhoid fever, and subsequently those of tuberculosis became more prominent.

Philadelphia County Medical Society. — At a stated meeting held May 24th, Dr. F. O. Stem exhibited two cases of atresia of the vulva. Dr. Edward Jackson, now of Denver, read his presidential address. Dr. W. J. Taylor read a paper entitled "The Necessity for the Early Recognition and Prompt Removal of All So-called Benign Tumors of the Female Breast."

An Anti-Spitting Ordinance, passed recently by the Hoboken authorities, prohibits spitting in all public places except into cuspidors, which are to be furnished by the city. The penalty for the first offence is $10, and for the second offence $25. Policemen are instructed to warn people whom they see expectorating in the street, not to repeat the offence under penalty of arrest.

Fighting Tuberculosis in Chicago.—A society for combating tuberculosis has been organized in Chicago. It is to be known as the Illinois Society for the Prevention of Tuberculosis, and its membership will include all physicians, health officers, veterinarians, and others interested in the extermination of tuberculosis.

The University and Bellevue Hospital Medical College.—By the will of the late Dr. Valentine Mott, perpetual provision was made for the following medals: A gold medal to the candidate who shall prepare the best anatomical or anatomico-surgical preparation; a silver medal to the second best of that description; a bronze medal to the candidate who shall furnish the best book of recorded cases and remarks of the professor at the surgical clinics. This year the gold medal was awarded to Albert S. Morrow, A.B., class of 1901, the silver medal to Arthur B. Bradshaw, class of 1901, and the bronze medal to Willard Monfort, class of 1899.

A Step Backward in Tennessee.—The legislature in Tennessee recently amended the medical-practice law so as to admit to practice without examination all graduates of reputable medical colleges in that State. Graduates of colleges outside the State must pass an examination before obtaining a license. The legislature will not meet again for two years, so there is ample opportunity for increasing the stock of incompetents in the State before a new restriction law can be passed. One of our Tennessee contemporaries says that the law was amended because some of the examiners had threatened to pluck all the graduates of a certain local medical school who might appear before them. A poor remedy for a bad disease.

A Yellow-Fever Serum.—According to the daily papers of Wednesday, Dr. Alvah P. Doty, health officer of the port of New York, has elaborated a serum which is alleged to be prophylactic as well as curative of yellow fever. Experiments on guinea pigs are said to have shown the efficacy of the remedy. The serum

has not yet been tried on man, but some is now on the way to Havana, and will be tried there if the sanitary measures taken since the exit of the Spaniards have not entirely wiped out the disease in that new health resort. Vera Cruz is, however, a field for the therapeutists' efforts.

A Transformed Santiago. — Brig.-Gen. and Dr. Leonard Wood, military governor of Santiago since the capitulation of the city last summer, recently passed through New York on his way to Washington. A reporter for the *Sun* met him and inquired about the health of the city. "There is no yellow fever in the province and no other contagious disease," was the answer. "Santiago is all right. All we want is a chance to earn an honest living down there and an opportunity to go to school, and we'll get along. There is no illness to speak of in the whole province. The death rate there is lower than it is in New York or Philadelphia. To be more definite, the death rate is about 14 in 1,000. In New York last week it was 18.2. Yellow fever is virtually stamped out and there are no indications of its return. This is the first summer in the history of the province when there has not been some yellow fever." Several cases of yellow fever have, however, occurred in the city and province during the past week. When asked what he had done to make Santiago so healthy, he said that he had merely insisted that the ordinary sanitary laws be enforced. "We insisted that the people shall take a bath once in a while, that the vaults shall be drained and whitewashed, and that houses and yards shall be kept cleaned. All the streets are drained in ditches now, and the drainage is carried away. The Barber Asphalt Company is laying pavement in many of the streets, and whenever a block is asphalted new water and sewer pipes are put down and the houses along the block are connected with the mains."

The Northampton County (Pa.) Medical Society celebrated the fiftieth anniversary of its organization at Easton, on June 13th. Dr. Amos Seip, of Easton, the only survivor of the twenty-two original members, read a paper entitled "Historical Recollections of the Society." Dr. Charles McIntire, of Easton, president of the society, presented a communication entitled, "Physic and its Practitioners in Old Northampton." In the evening, a banquet was held, and the following toasts were responded to: "Fifty Years of Medical Organization," by Dr. Charles McIntire; "Our Parent Society," by Dr. W. Murray Weidman, of Reading; "Our Daughter Society," by Dr. L. H. Taylor, of Wilkesbarre; "Affiliated Societies," by Dr. John B. Roberts, of Philadelphia; "The Benefit of the Clergy," by Dr. E. D. Warfield, of Lafayette College; "Medicine and Law," by Russell C. Stewart, Esq., of Easton; "Education and Medicine," by Rev. Gilbert H. Stirling, of South Bethlehem; "Vade Mecum," by Dr. C. D. Schaeffer, of Allentown.

Further Quarantines of Charitable Institutions. —The board of health has quarantined St. Ann's Home, at Ninetieth Street and Avenue A, on account of scarlet fever. The Five Points House of Industry, at No. 155 Worth Street, has also been quarantined on account of the presence of a case of measles.

Smallpox in Ohio.—According to the thirteenth annual report of the Ohio State board of health, submitted to the governor on June 17th, the year of 1898 was one of unusual good health, no epidemics having prevailed except smallpox, which was of an unusually mild character. An account of the first outbreak of this disease is given, and the history of the epidemic to the time of closing the report is recounted. It is shown that vaccination afforded almost complete protection against the disease. It is pointed out that on account of the large number of unvaccinated persons in the State, smallpox is likely to continue during the summer months, here and there, to become epidemic again in many places during the winter of 1899–1900.

The Medical Society of Delaware held its one hundred and tenth annual meeting at Wilmington, on June 13th. After an address of welcome by Dr. H R. Spruance, the following papers were presented: "Serum Therapy," by Dr. William C. Pierce; "Bacteriology as an Aid to the Physician," by Prof. S. D. Chester; "Diabetes of the Aged, its Prognosis and Treatment," by Dr. Charles M. Ellis; "The Laboratory as an Aid in the Diagnosis and Treatment of Diseases of the Stomach," by Dr. Albert Robin; "Foreign Bodies in the Ear, Nose, and Throat," by Dr. W. G. Winner; "Some Interesting Pathological Specimens," by Dr. W. H. Hancker; "The Significance of Uterine Hemorrhage Occurring at or near the Menopause," by Dr. W. H. Woods; "Ophthalmia Neonatorum," by Dr. R. R. Tybout; "Fecal Impaction," by Dr. Swithin S. Chandler. The following officers were elected for the ensuing year: *President*, Dr. O. D. Robinson, of Georgetown; *First Vice-President*, Dr. William H. Hancker, of Wilmington; *Second Vice-President*, Dr. John W. S. Clifford, of Kent County; *Secretary*, Dr. John Palmer, of Wilmington; *Treasurer*, Dr. William C. Pierce, of Wilmington. The next meeting will be held at Rehoboth.

The Health of Havana.—According to the official statistics of the sanitary department of Havana there were 844 cases of infectious disease in the city from June 1st to June 15th, as follows: 47 cases of consumption, 6 of diphtheria, 3 of yellow fever, 8 of typhoid fever, 13 of infectious fever, 1 of typhus fever, 1 of smallpox, 1 of scarlet fever, and 764 of measles. During those fifteen days there were 318 deaths, against 2,160 in the corresponding period of last year. One of the officials of the Marine-Hospital service in that city is reported as saying that there is not nearly so much yellow fever in Havana this year as usual, but there is more than has been admitted, and this will continue to be the case just so long as the Americans use the former Spanish military hospitals, which will always breed contagion. Such purification of these structures as has been attempted is superficial, and the buildings, which are an ever-present menance, should be destroyed. It is not believed there will be an epidemic this summer, for the city is in a wonderful condition of health.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the United States navy for the week ending June 17, 1899. June 13th.—Passed Assistant Surgeon M. S. Guest detached from the *Detroit*, June 20th, and ordered home to wait orders; Passed Assistant Surgeon W. C. Braisted ordered to the *Detroit*, June 20th. June 14th.—Surgeon A. F. Magruder granted leave for four months, with permission to leave the United States. June 15th.—Surgeon D. J. Gatewood detached from the bureau of medicine and surgery and ordered to the *Lancaster*, June 22d; Surgeon P. A. Lovering detached from the *Lancaster*, June 22d, and ordered home and to wait orders.

An Impudent Consumption Curer.—Most of our reader have probably seen newspaper reports of a paper on the cure of consumption alleged to have been read by Dr. F. Crotte, of Paris, at the recent meeting of the American Medical Association. The history of this advertisement is given in the *Journal* of the association for June 17th. It seems that a representative of Dr. Crotte was at the Columbus meeting and called on the chairman of the section on medicine, stating that he had a paper written by Francisque Crotte and desired the privilege of reading it before the section, or, if it would be perfectly satisfactory, to read it by title. The chairman of the section replied that it was not on the programme and that it really did not belong to his section; that he could not accommodate the gentleman, and referred him to the chairman of the section on state medicine. Again the enterprising representative of Crotte received a rebuff, and, after seeing the president of the association, again applied to the chairman of the section on general medicine, and stated to him that he was anxious that it should either be read by title or published in the *Journal*, so that it could have the indorsement of the American Medical Association. He was referred to the editor of the *Journal*, to whom he applied, asking that his paper be published, and at the same time he intimated to the editor that he would gladly pay for the privilege. The paper was submitted for consideration and was declined. Nevertheless, this agent, through the Associated Press, had telegraphed all over the country that his method had been accepted and indorsed at the meeting of the American Medical Association, and as a result another "cure for consumption" has been launched upon the public. If Dr. Francisque Crotte, of Paris, is not a quack it would be advisable for him to disavow the disreputable methods which his agent in this country has thought wise to adopt.

The William F. Jenks Memorial Prize.—The fifth triennial prize of $500, of the College of Physicians of Philadelphia, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Various Manifestations of Lithæmia in Infancy and Childhood, with the Etiology and Treatment." The conditions of this prize are that the prize must always be for some subject connected with obstetrics, or the diseases of women or of children; and that the trustees can, in their discretion, publish the successful essay, provided the income in their hands is sufficient for that purpose. In case the trustees do not publish the essay, it shall be the property of the College of Physicians of Philadelphia. The prize is open for competition to the whole world, but the essay must be the production of a single person. The essay, which must be written in the English language, or, if in a foreign language, accompanied by an English translation, must be sent, before January 1, 1901, to Richard C. Norris, M.D., chairman of the William F. Jenks prize committee, Philadelphia, Pa. Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year. The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

Obituary Notes.—Dr. Frances J. Fella, of Toledo, O., died in that city, on June 17th, of injuries received from a fall on a defective sidewalk, a short time ago. He was a graduate of the Northwestern Ohio Medical College in the class of 1891.—Dr. Abraham E. Conrow, of Moorestown, N. J., died in Philadelphia on June 5th, after an operation for appendicitis. He was born in 1857, and was a graduate of both the veterinary and the medical departments of the University of Pennsylvania, the latter in 1892.—Dr. Maria C. Douglass died in Philadelphia on June 9th, at the age of sixty-three years. She was a graduate of the Woman's Medical College of Pennsylvania, and was for a long time a missionary in British India.—Dr. Thomas Osmond Summers, of St. Louis, late major surgeon in charge of the fever hospital at Santiago, committed suicide on June 20th. Despondency, caused by fancied lack of appreciation by the Government of his services during the Spanish war, is assigned as the cause for the act. Dr. Summers was a graduate of the University of Nashville, Tenn., in 1871, and was M.D. of the University of London in 1875. He was, up to the time of his appointment in the army about a year ago, editor of the St. Louis *Clinique*, and was professor of anatomy in the St. Louis College of Physicians and Surgeons. It was in the lecture-room of this college that he shot himself, while he stood facing a skeleton used in illustrating his lectures.—Dr. Nathan Pratt died at Milford, Del., on June 18th, at the age of sixty years. He was graduated from the University of Pennsylvania in 1860, and during the Civil War was assistant surgeon in the United States hospital at Philadelphia and subsequently in Sheridan's field hospital at Winchester, Va. He was State auditor from 1875 to 1879 and later insurance commissioner. He was a presidential elector in 1884 and a member of the Constitutional Convention in 1896. He was also a trustee of Delaware State College and an active member of the Delaware State Medical Society.

Society Reports.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, May 22, 1899.

S. O. VANDER POEL, M.D., PRESIDENT.

The Craig Colony for Epileptics.—DR. W. P. SPRATLING, of the Craig Colony at Sonyea, N. Y., gave a detailed description of this colony and of its work, freely illustrating his remarks by the aid of lantern slides. He said that while it was easy to keep the epileptics occupied during the summer, it had been a difficult problem to do so during the long winter of that region. Some of them were now engaged in the winter in the work of making straw mats. It was the policy of the institution to change entirely the occupation and mode of life of those coming there. By a process of evolution extending over the past three years it had been made possible so to train and educate some of the patients that they could act as efficient nurses, taking care of their fellow-patients even during their seizures. In the more recently erected buildings a family of twenty persons was taken care of at the small cost of about $85 per year for each patient.

DR. FREDERICK PETERSON predicted that the time would come when the colony or village system would be applied to the chronic insane, and to idiots and inebriates as well as for reformatory purposes. He said that this was the first and only colony in the State devoted to the care of the defective classes, and accordingly every effort was being made to have it a model.

DR. IRA VAN GIESON said that the work that was now being done for the epileptics reminded him strongly of the change that had been effected in the condition of the insane about twenty years ago. He thought the scientific work embodied in a recent paper by Dr. L. Pierce Clark, of the Craig Colony, was an earnest of how much more might be added to our knowledge of this disease by careful and systematic observation, such as could be carried on to the fullest extent only in such a colony.

DR. W. M. LESZYNSKY said that as this colony was intended only for indigent epileptics it was difficult to get many individuals to give up their liberty and go to such a place.

DR. SPRATLING, in closing the discussion, said that they had found that the regulation of the life-habits of epileptics had proved more efficient than any known drug treatment. As a case in point reference was made to a man who had gone from one institution to another in St. Lawrence County, and had been discharged from each one as hopeless and incurable. He had finally come to the Craig colony, and a most searching examination had failed to show anything wrong with him except a general malnutrition. Acting on this idea every attention had been given to feeding him and supplying proper exercise in the open air. The first month this man had had one hundred and ten seizures, the second month ninety-eight, the third month three, and the fourth month none at all. He had been discharged from the colony on April 27, 1898, having gone twenty-four months without a seizure. A few days ago this man had reported to him that he had had no more seizures and was earning his living. The speaker said that he could cite six or eight similar cases.

The Early Diagnosis of Uterine Cancer.—DR. JOSEPH H. WIENER read a paper on this subject. He said that patients often neglected seeking medical advice because they experienced no pain, but the diagnosis of uterine cancer must be made before the occurrence of pain if a cure was to be effected. Hemorrhage was a more important diagnostic hint than was the presence of a leucorrhœal discharge from this organ. Statistics showed that between twenty-one and forty-five years of age, sixty-two per cent. of the cases of uterine cancer developed, whereas after the climacteric only nine per cent. made their appearance. In endometritis was to be found, in all probability, a very important factor in the etiology. Out of seventy cases in which the uterus had been removed Becker had failed only three times to find an endometritis. The former belief that carcinoma commonly arose in lacerations of the cervix had been quite generally abandoned. No age was exempt from cancer of the uterus, and it developed in nulliparæ as well as in multiparæ. In the same uterus it was not uncommon to find normal areas side by side with areas involved in malignant disease. From this it followed that not the slightest reliance could be placed upon scrapings removed with a dull curette, or when the scraping had not been thorough and systematic. In spite of the recent advances in technique in abdominal surgery the results from operating upon cases of uterine cancer were lamentable; sixty-six per cent. of failures was not unusual. Some surgeons claimed that fully twenty per cent. of the cases coming to them were inoperable when first seen. Becker, out of seven hundred and five cases, found only seventy—ten per cent.—in which hysterectomy could be performed. Winter, of Germany, had expressed the opinion that uterine cancer was a local disease, and that a cure could be effected in every case if diagnosticated and radically treated sufficiently early. The difficulties attendant upon the microscopical examination of uterine scrapings were very great, it being necessary to differentiate several conditions giving somewhat similar microscopical appearances. In rare cases, strange as it might seem, the endometrium of pregnancy might be confounded with malignant disease. Atypical hemorrhages should always arouse suspicion, particularly if occurring near the menopause. When in doubt, it was only necessary for the physician to introduce a speculum, dilate the uterus, scrape away some of the tissue, and submit it to a competent microscopist.

DR. H. C. COE said that he was pleased that the reader of the paper had considered this vital subject from the standpoint of the clinician as well as that of the pathologist. A slight "show" of blood would usually be the first sign to attract attention. With such a symptom there was no excuse for any one not insisting upon prompt and thorough exploration of the interior of the uterus. He felt sure that if this was done as a routine measure the number of cases of operable carcinoma in this country would be greatly augmented. He had seen two or three undoubted cases of carcinoma of the cervix in virgins, so that the old theory that lacerations of the cervix might be the cause of carcinoma did not find support at the present time. He had not always found that the report of the pathologist in these cases had been satisfactory, and consequently if he had scraped out a quantity of tissue, and after having watched the patient had found that she still had irregular hemorrhages, he would feel it to be his duty, even though the pathologist reported the case to be non-malignant, to advise operation. Dr. Coe said that several years ago he had called attention to malignant adenoma, and had spoken of it as "the precancerous stage." In these cases the disease had been limited to a small area at the fundus. So far as he knew these four patients were all well at the present time. In such cases the prognosis was good, but in diffuse carcinoma of the endometrium the prognosis was very bad. The not infrequent occurrence of small carcinomatous nodules showed the necessity for thorough curetting in order to secure proper material for

the microscopist. It should be borne in mind, however, that there was some danger from the use of the curette. In one instance, although using the curette gently, it had unexpectedly perforated the uterus, necessitating an immediate vaginal hysterectomy. It was very natural that the physician when consulted by these grave cases should feel inclined to throw part of the responsibility upon the pathologist, but he could not do so entirely—the clinical evidence should be carefully gathered and weighed. It was better to have a radical operation done by a competent surgeon than to have the woman live for months in painful suspense regarding a possible diagnosis of malignancy.

Dr. Wiener, in closing the discussion, said that he believed that the fallacious doctrine regarding cancer developing in cervical lacerations had been responsible for many erroneous diagnoses, and for unwarranted delays in operating. Many physicians had been in the habit of excluding carcinoma of the uterus on learning that there was no laceration or that the woman had never borne children. In procuring the scrapings the curette must be sharp, the curetting thorough, and all of the scrapings should be sent to the pathologist for examination.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEDICAL COUNCIL: EXCUSE FOR ITS SLOWNESS, STATISTICS, INSPECTION OF DOCUMENTS, REPRESENTATION, RECIPROCITY OF PRACTICE WITH ITALIANS—THE MARSHALL HALL LECTURE—REMOVAL OF BODIES FROM A CHURCH—SIR F. LAKING—SIR WILLIAM MACCORMAC—DEATH OF DR. NORMAN KERR.

London, June 2, 1899.

The General Medical Council met on Tuesday, and the sitting continues. Sir W. Roberts having died since the last meeting, his successor as representative of London University is Dr. Pye-Smith, who took his seat.

Last week *The Lancet*, in an anticipatory leader, said the council "has even more excuse for slowness in reform than Parliament has," adding, as if for excuse, "it cannot make its own laws." It is almost a proverb that it takes about thirty years to accomplish anything needing parliamentary sanction. But the Medical Council far exceeds this. "It cannot make its own laws," but it takes a generation or more to act upon those it has. The council practically abolished the unqualified assistant by two or three resolutions, but it took nearly forty years before it could be driven to that course.

The president delivered his address. Happily this was shorter than most of its predecessors, but it really seems a useless function. Considering the enormous cost of the proceedings, the council should at once plunge into the business before it, and should be able to do this without a preliminary statement of what is to be considered. The tables giving the results of the various examinations are not of an exciting character, but this year Mr. George Brown raised a small storm by contrasting the results of the Victoria and Edinburgh universities, and suggesting that students rushed to the northern Athens. Explanations and counter-statements followed, and the statistics, which may prove or disprove anything, were impugned. Eventually the storm lulled, and the council passed to "the next order of the day."

In the afternoon the freedom of members to inspect documents was considered. Either this subject has lost some of its interest with members, or they were disinclined for a further fight. They adopted the recommendations of the committee with some amendments, but the freedom of inspection is unnecessarily curtailed.

A question arose between Mr. Horsley and the president, respecting the authority of the council to inspect the higher examinations. It was disposed of by "the previous question."

The resolution of the British Medical Association in favor of an extension of direct representation was brought up by Mr. Brown on Wednesday. He proposed a resolution that the time had come when an addition was expedient. This was seconded by Mr. Horsley and supported by Dr. Glover; thus the three direct representatives were agreed. But there was no support for these gentlemen, and some rather strong statements were made in opposition. Sir W. Gairdner said he thought the general practitioner was just bored by direct representation and regarded the elections as a nuisance, while the proposal was urged by a small coterie for the sake of notoriety. Mr. Carter went one better, and described the resolution as cut and dried in a central shop and sent out to book clubs and chess clubs to be obediently indorsed. This sarcastic description of branches may be true in some cases, but certainly not in all, for there are some very large branches with great influence, although others are doubtless small and mere occasions for a friendly chat or smoke.

Sir C. Nixon thought it curious that general practitioners, when they had the opportunity, did not always elect men of their own class. It did not seem to occur to him that they chose men who they believed would represent their wants and wishes, without regard to their style of practice. Dr. Pettigrew opposed the motion, as likely to encourage a spirit of trades-unionism. Sir R. Thorne said only fifty-nine per cent. of practitioners in England voted at the last election, and Dr. Leech did not think this the time to take up the question.

On the other hand, Sir W. Thomson supported the motion as moderate, although he evidently saw that indirect representation would be better; Dr. McVail would vote for it, and startled many by remarking that neither the crown nor universities were required by the act to appoint medical men as representatives. If this should be so, it is a danger to be met, as sixteen out of thirty members are appointed by these authorities.

The whole matter resolves itself into this: that the councillors ought to be elected by the whole body-corporate of each authority, not by the governing committees. That would reform many corporations besides the Medical Council.

The resolution was rejected by a vote of 21 to 7.

The question of reciprocity of practice between English and Italian physicians was referred to the legal adviser of the council before replying to the government.

On Thursday the consideration of penal cases was begun.

The Marshall Hall lecture was delivered on May 23d by Professor Sherrington, who took for his subject "The Spinal Animal." He pointed out that the segmental theory of the spinal cord derived its most trenchant support from invertebrate physiology. In human physiology it had been so far little more than a figure of speech, owing no doubt to the attention directed to cerebral localization. The basis of each segment he described as two groups of cells, "afferent" and "efferent." The former were of three classes—cutaneous, visceral, and muscular. The cutaneous distribution was zonal, lapping round half the body, but there was overlapping. The investigation of the

visceral afferent nerves had yielded few data. The existence of afferent muscular cells had been proved, and in the trunk region the distribution was semizonal, as seen in the intercostal muscles; in the limbs it was ray-like. Each root supplied many muscles, and a single muscle usually received a multiple nerve supply. One of the most instructive aspects of the spinal animal was in regard to muscular sense—which does not lie open to introspection. As an example, flexion of the fingers was perceived, but the individual had no consciousness of the muscles contracting. Yet there was evidence that muscular sense organs played an important part in spinal subconscious reflex actions. In conclusion, Professor Sherrington referred to spinal shock. If the cord was cut across in a monkey, there was profound paralysis of the skeletal muscles, greater than that in chloroform anæsthesia. This is not so in simpler forms of animal life. The visceral muscles were, however, no more affected in monkeys than in frogs. This, Professor Sherrington said, might be because in higher animals the sense organs have acquired greater dominance over the skeletal than over the visceral musculature.

Some scandal has occurred respecting the alleged illegal removal of bodies from the crypt of St. Thomas Church, and the St. Olive's board has suspended its medical officer of health; but as the bishop is equally implicated, I presume explanation will be found and the proceedings proved legally and decently carried out.

Sir F. Laking, who attended the Duke of York in his late severe cold—or was it influenza?—has a sharp attack of influenza, but I hear is progressing favorably.

Sir William MacCormac was entertained on the 24th ult. at dinner, by his former house-surgeons at St. Thomas Hospital. No less than seventy-seven assembled to honor their former teacher in this manner.

The death of Dr. Norman Kerr, which occurred on Tuesday, is a great loss to the cause of temperance, in which he was a tower of strength. He founded the society for the study of inebriety. Early this year he relinquished practice, as he was suffering from Bright's disease and frequent attacks of bronchitis. He went to Hastings, where he died at the age of sixty-five years, with a record of a life's work well done. His contributions to the journals on alcoholism and temperance were numerous and important, and his book on inebriety, which reached a third edition in 1894, was a masterly and authoritative exposition of the subject. He wrote the essay on "Alcoholism and Drug Habits" in the "Twentieth Century Practice of Medicine."

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 17, 1899:

	Cases.	Deaths.
Tuberculosis	128	117
Typhoid fever	18	6
Scarlet fever	136	13
Measles	375	16
Diphtheria	219	31
Laryngeal diphtheria (croup)	10	10
Cerebro-spinal meningitis	0	14
Chicken-pox	62	9
Smallpox	3	2

A Pneumatic Artificial Limb.—An English inventor has devised a very ingenious artificial leg and foot intended for use in cases of amputation below the knee-joint. It is mainly composed of a hollow rubber chamber which is inflated in exactly the same way as is a bicycle tire. The skeleton of the foot is of wood and contains within it a rubber-faced joint which permits of movements like those which take place at the ankle. A pair of rubber pneumatic pads surround the end of the amputated limb so that no undue pressure is exerted on the tissue.—*Scientific American.*

Nervous Dyspepsia.—Nervous dyspepsia is a disease by itself, and chiefly a sensory neurosis; the motor and secretory functions of the stomach may also be impaired by it; it is not so frequent a disease as has been assumed; it mostly exists along with other nervous manifestations; but it is wrong to assume that it is a symptom of neurasthenia; the symptomatic treatment of the stomach symptoms is of great value in nervous dyspepsia, but treatment directed to the general condition and to the cause is even of greater importance.—ROSENHEIM.

Health Reports.—The following cases of smallpox, yellow fever, cholera, plague and leprosy have been reported to the surgeon-general of the United States Marine-Hospital service during the week ending June 17, 1899:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, Los Angeles	May 27th to June 3d	1	1
Dist. of Columbia, Washington	May 27th to June 10th	2	
Florida, Jacksonville	June 3d to 10th	5	
Illinois, Chicago	June 3d to 10th	1	
Indiana, Evansville	June 3d to 10th	3	
Kansas, Emporia	May 24th to 31st	6	
Norton County	May 1st to 31st	12	
Kentucky, Louisville	June 3d to 10th	5	
Louisiana, Baton Rouge	May 20th to 27th	1	
New Orleans	May 27th to June 10th	5	
Massachusetts, Boston	June 3d to 10th	2	1
Chelsea	June 11th	3	
Fall River	From outbreak to June 13th	32	
Minnesota, Albany	June 3d	4	
Inver Grove	June 3d	1	
Minneapolis	June 3d	2	
St. Paul	June 3d	1	
Missouri, St. Louis	June 5th to 12th	5	
Nebraska, Omaha	May 27th to June 3d	1	
New York, New York	June 3d to 10th	..	3
Ohio, Massillon	May 27th to June 3d	1	
Oregon, Portland	June 13th	1	
Pennsylvania, Pittsburg	June 3d to 10th	1	
Virginia, Danville	June 7th to 14th	19	
Norfolk	June 8th to 14th	1	
Washington, Seattle	May 26th to June 2d	1	
Wisconsin, Milwaukee	June 3d to 10th	2	

SMALLPOX—FOREIGN.

Africa, Sierra Leone	May 4th	40	
Belgium, Antwerp	May 20th to 27th	2	4
Brazil, Bahia	May 1st to 20th	3	
Rio de Janeiro	April 21st to May 5th	26	19
China, Hong Kong	April 22d to May 6th	5	4
Egypt, Cairo	May 1st to 20th	..	5
England, London	May 13th to 27th	..	2
India, Bombay	April 29th to May 16th	..	12
Calcutta	April 29th to May 6th	..	2
Madras	May 6th to 12th	..	1
Greece, Athens	May 20th to 27th	21	6
Japan, Nagasaki	May 9th to 16th	1	
Mexico, Chihuahua	May 27th to June 3d	..	1
Mexico	May 28th to June 4th	6	3
Netherlands, Rotterdam	May 27th to June 3d	1	
Russia, Moscow	May 6th to 20th	41	10
Odessa	May 20th to 27th	7	2
St. Petersburg	May 13th to 20th	11	1
Turkey, Syria, Beirut	May 6th to 13th	2	
Uruguay, Montevideo	April 22d to 29th	1	

YELLOW FEVER—UNITED STATES.

Louisiana, New Orleans	May 27th to June 3d	1	1

YELLOW FEVER—FOREIGN.

Brazil, Bahia	April 30th to May 20th	218	65
Rio de Janeiro	April 21st to May 5th	93	59
Colombia, Panama	April 26th to June 3d	4	1
Mexico, Tampico	June 4th	1	
Vera Cruz	May 25th to June 8th	..	13a

CHOLERA.

India, Bombay	May 2d to 16th	..	6
Calcutta	April 29th to May 6th	..	23

PLAGUE.

China, Hong Kong	April 29th to May 6th	98	86
India, Bombay	May 2d to 12th	..	614
Calcutta	April 29th to May 6th	..	85
Japan, Formosa, Tamsui	March 29th to April 12th	476	353

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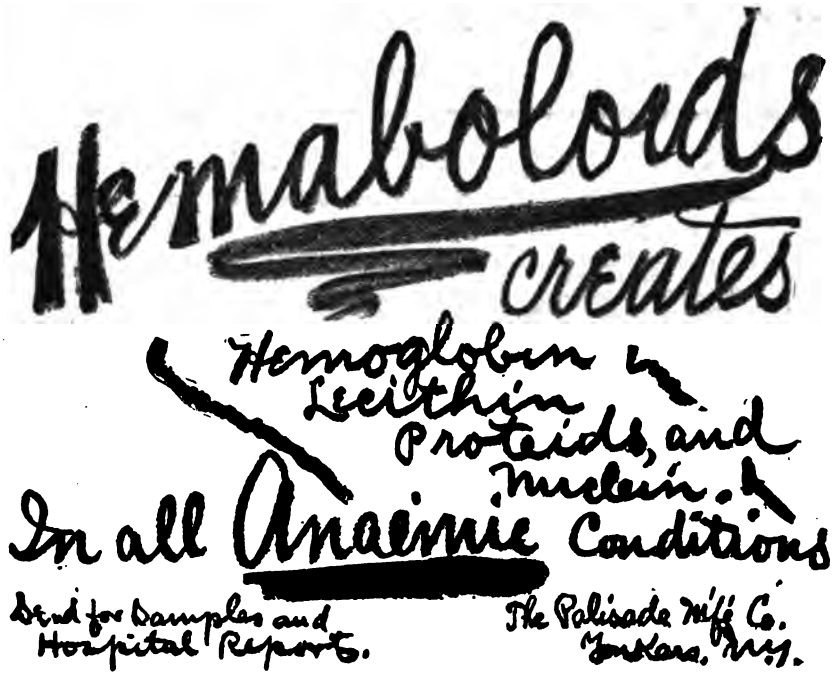

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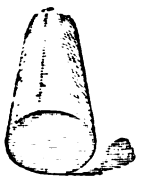

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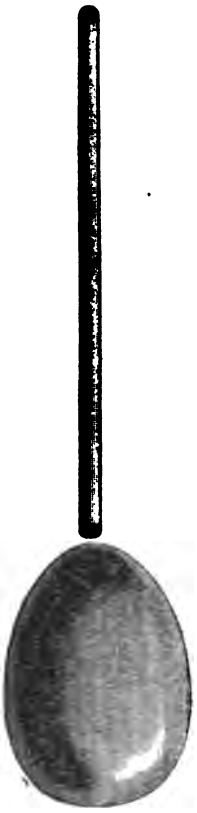

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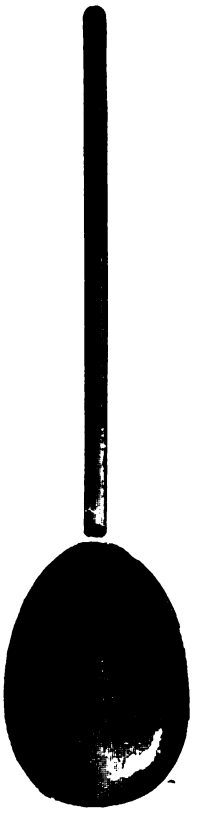

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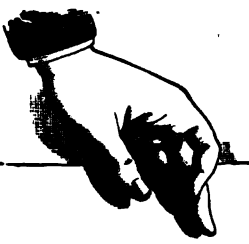

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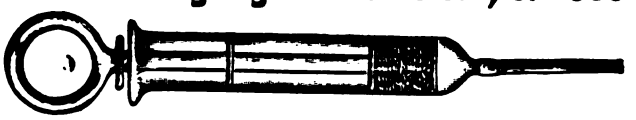

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Flexible connection. Prevents breaking of needle if patient struggles
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In Use—the remedy is combined with Glycerine, Liquid Vaseline Alboline, or other vehicle.

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Tropon exceeds in nutritive properties any albuminous substance hitherto presented in the domain of dietetics.

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The "Allenburys" Milk Foods so closely approximate in composition to the natural food as to supply an artificial diet almost identical with, and in practice found to be a reliable substitute for, the mother's milk. So much so is this the case that an infant can take these Foods and the breast alternately without any disturbance to its digestive organs.

All ordinary substitutes for the mother's milk fail in some important attribute, thus the usual substitute, cow's milk, differs materially in composition, which no amount of mere dilution can correct, being deficient in fat, albumen, and lactose, whilst the casein is in excess. Further, as obtained in towns, cow's milk invariably swarms with bacteria, many of which are pathogenic to the alimentary canal of the infant.

ALLEN & HANBURYS, whilst accepting sole responsibility for the processes of manufacture and the chemical composition of these Foods, wish to add that the further statements above made are based not on their own *ipse dixit*, but on the accumulated experience of members of the Profession who have been good enough to communicate the results of their observations.

THE

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Affords, when prepared for use, a correct substitute for human milk. It is manufactured from fresh cow's milk, so modified as to present all the constituents of human milk in their true relative proportions. Being in a desiccated and sterilized form, it requires only the addition of *boiled* water to obtain a pure and sterile food suitable for infants during the first three months of life.

THE

"Allenburys" Milk Food, No. 2

Is identical with No. 1, with the addition of small quantities of maltose, dextrine, and soluble phosphates derived from the digestion of whole meal with Malt Extract. These ingredients are a valuable adjunct to the increasing needs of digestion, yet the Food is readily and easily assimilated, there being no unconverted starch present. The No. 2 Food is designed for children between three and six months of age.

THE

"Allenburys" Malted Food, No. 3

USUALLY KNOWN AS

Allen & Hanburys' Malted Infants' Food,

Is not a *milk*, but a purely *farinaceous* Food, prepared by improved methods after Baron von LIEBIG's formula. The basis is fine wheaten flour, which has been thoroughly cooked and partially digested by an active Malt Extract, so that a large proportion, but not all of the starch has been converted. It is particularly rich in soluble phosphates and albumenoids.

This Food should be given from six months and upwards. For the first month or so after the change of diet it is generally advisable, instead of using cow's milk, to employ the "ALLENBURYS" MILK FOOD, No. 1 or No. 2 in preparing it. The demand on the child's digestive organs is less abrupt, and a humanized milk is used in place of the more indigestible cow's milk. This precaution is specially recommended in the case of delicate children.

A Sample of any or all of the Foods, and full descriptive pamphlet, will be sent free to physicians upon request.

Please specify on prescription the NUMBER of the Food desired.

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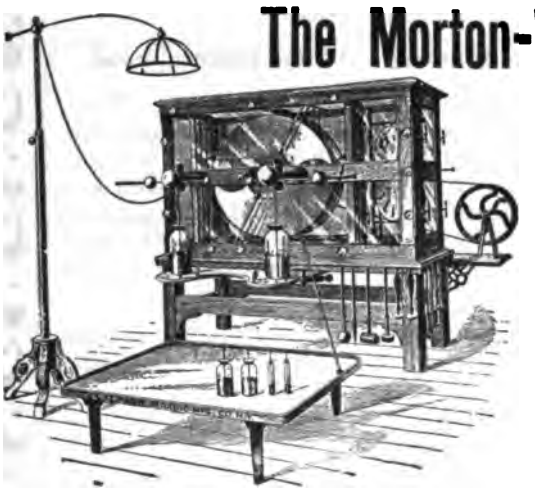

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Orphol is indicated in all catarrhal and fermentative gastro-intestinal processes, in ptomaine poisoning, gastritis, summer diarrhœa, dysentery, typhoid fever, etc. By its use **a practical intestinal antisepsis can be effected and maintained.** It does not disagree with the most delicate stomach, and can be administered to children without difficulty.

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NATIONAL AND STATE MEDICAL SOCIETIES OF AMERICA.

NATIONAL.

AMERICAN MEDICAL ASSOCIATION.

Annual Meeting at Atlantic City, N. J., June 5, 6, 7, 8, 1900.
GEORGE H. SIMMONS, M.D., Sec., Chicago, Ill. W. W. KEEN, M.D., Prest., Philadelphia, Pa.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Annual Meeting at

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Annual Meeting at Indianapolis, Ind., September, 1899.
WILLIAM WARREN POTTER, M.D., Sec., 284 Franklin St., Buffalo, N. Y. EDWARD J. ILL, M.D., Prest., Newark, N. J.

AMERICAN ACADEMY OF MEDICINE.

Annual Meeting at 1900.
CHARLES MCINTIRE, M.D., Sec., Easton, Pa. G. HUDSON MAKUEN, M.D., Prest., Philadelphia, Pa.

ASSOCIATION OF AMERICAN PHYSICIANS.

Annual Meeting at Washington, D. C., May 1, 2, and 3, 1900.
HENRY HUN, M.D., Sec., 149 Washington Ave., Albany, N. Y. E. G. JANEWAY, M.D., Prest., 36 West 40th St., New York City.

AMERICAN ACADEMY OF RAILWAY SURGEONS.

Annual Meeting at Omaha, Neb., October, 1899.
T. B. LACEY, M.D., Sec., Council Bluffs, Iowa. W. W. GRANT, M.D., Prest., Denver, Col.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Annual Meeting at Washington, D.C., May 1, 2, and 3, 1900.
F. H. MONTGOMERY, M.D., Sec., 100 State St., Chicago, Ill. H. W. STELWAGON, M.D., Prest., Philadelphia, Pa.

AMERICAN GYNECOLOGICAL SOCIETY.

Annual Meeting at Washington, D.C., May 1, 2, and 3, 1900.
J. RIDDLE GOFFE, M.D., Sec., 22 East 35th St., New York City. GEORGE J. ENGELMANN, M.D., Prest., Boston, Mass.

AMERICAN NEUROLOGICAL ASSOCIATION.

Annual Meeting at Atlantic City, N. J., June 14, 15, and 16, 1899.
GRAEME M. HAMMOND, M.D., Sec., 56 W. 45th St., New York City. JAMES H. LLOYD, M.D., Prest., 3910 Walnut St., Philadelphia, Pa.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Annual Meeting at Washington, D.C., May 1, 2, and 3, 1900.
HENRY L. SWAIN, M.D., Sec., 282 York St., New Haven, Conn. SAMUEL JOHNSTON, M.D., Prest., Baltimore, Md.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Annual Meeting at New London, Conn., July 19, 1899.
S. B. ST. JOHN, M.D., Sec., 26 Pratt St., Hartford, Conn. O. F. WADSWORTH, M.D., Prest., Boston, Mass.

AMERICAN ORTHOPEDIC ASSOCIATION.

Annual Meeting at Washington, D.C., May 1, 2, and 3, 1900.
JOHN RIDLON, M.D., Sec., 103 State St., Chicago, Ill. H. M. SHERMAN, M.D., Prest., San Francisco, Cal.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

Annual Meeting at Washington, D. C., September 19, 20, and 21, 1899.
JOHN GERIN, M.D., Sec., 68 North St., Auburn, N. Y. FRANCIS B. BISHOP, M.D., Prest., 1913 I St., Washington, D. C.

THE ASSOCIATION OF AMERICAN ANATOMISTS.

Annual Meeting at New Haven, Conn., December, 1899.
D. S. LAMB, M.D., Sec., 800 Tenth Street, N. W., Washington, D.C. B. G. WILDER, M.D., Prest., Ithaca, N. Y.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

Annual Meeting at Washington, D.C., May 1, 2, and 3, 1900.
GUY HINSDALE, M.D., Sec., 3943 Chestnut St., Philadelphia, Pa. ABRAHAM JACOBI, M.D., Prest., 110 West 34th St., New York City.

AMERICAN PEDIATRIC SOCIETY.

Annual Meeting at Deer Park, Md., June, 1899.
SAMUEL S. ADAMS, M.D., Sec., 1 Dupont Circle, Washington, D. C. WILLIAM P. NORTHRUP, M.D., Prest., 57 East 79th St., New York City.

THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

Annual Meeting at Cincinnati, Ohio, 1899.
ROBERT C. MYLES, M.D., Sec., 46 West 38th St., New York City. S. E. SOLLY, M.D., Prest., Colorado Springs, Col.

AMERICAN OTOLOGICAL SOCIETY.

Annual Meeting at New London, Conn., July 18, 1899.
F. L. JACK, M.D., Sec., 215 Beacon St., Boston, Mass. ARTHUR MATHEWSON, M.D., Prest., 189 Montague St., Brooklyn, N. Y.

THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

Annual Meeting at 1900.
LOUIS J. MITCHELL, M.D., Sec., 498 W. Adams St., Chicago, Ill. A. I. BOUFFLEUR, M.D., Prest., Chicago, Ill.

CANADIAN MEDICAL ASSOCIATION.

Annual Meeting at Toronto, Canada, Aug. 30 and 31, and Sept. 1, 1899.
F. N. G. STARR, M.D., Sec., Toronto, Canada. IRVING H. CAMERON, M.D., Prest., Toronto, Canada.

THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

Annual Meeting at 1899.
Major JAMES E. PILCHER, M.D., U.S.A., Sec., Carlisle, Pa. Major J. D. GRIFFITH, M.D., U.S.V., Prest., Kansas City, Mo.

SEABOARD MEDICAL ASSOCIATION.

Annual Meeting at Newport News, Va., January, 1900.
JNO. C. RODMAN, M.D., Sec., Washington, N. C. LUCIEN LOFTON, M.D., Prest. Norfolk, Va.

TRI-STATE MEDICAL SOCIETY.

Annual Meeting at St. Louis, Mo., April 3 and 4, 1900.
J. C. MURPHY, M.D., Sec., St. Louis, Mo. O. B. CAMPBELL, M.D., Prest., St. Joseph, Mo.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Annual Meeting at Chicago, Ill., October 3 to 6, 1899.
H. E. TULEY, M.D., Sec., Louisville, Ky. DUNCAN EVE, M.D., Prest., Nashville, Tenn.

MEDICAL SOCIETY OF THE MISSOURI VALLEY.

Annual Meeting at Council Bluffs, Iowa, September 21, 1899.
V. L. TREYNOR, M.D., Sec., Council Bluffs, Iowa. B. F. CRUMMER, M.D., Prest., Omaha, Neb.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting at New Orleans, La., November 14, 1899.
W. E. B. DAVIS, M.D., Sec., Birmingham, Ala. JOS. TABER JOHNSON, M.D., Prest., Washington, D. C.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Annual Meeting at Des Moines, Ia., December 27 and 28, 1899.
GEORGE H. SIMMONS, M.D., Sec., Lincoln, Neb. H. C. CROWELL, M.D., Prest., Kansas City, Mo.

WESTERN OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ASSOCIATION.

Annual Meeting at St. Louis, Mo., April 5, 6, and 7, 1900.
F. C. EWING, M.D., Sec., Grand Ave. and Lindell Boul., St. Louis, Mo. W. SCHEPPEGRELL, M.D., Prest., New Orleans, La.

STATE.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Annual Meeting at Montgomery, April 17, 1900.
G. P. WALLER, M.D., Sec., Montgomery, Ala. JOHN CLARK LEGRAND, M.D., Prest., Birmingham, Ala.

THE ARKANSAS MEDICAL SOCIETY.

Annual Meeting at

CONNECTICUT MEDICAL SOCIETY.

Annual Meeting at New Haven, May 23 and 24, 1900.
N. E. WORDIN, M.D., Sec., 174 Fairfield Ave., Bridgeport, Conn. C. S. RODMAN, M.D., Prest., Waterbury, Conn.

THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Annual Meeting at

COLORADO STATE MEDICAL SOCIETY

Annual Meeting at Denver, June 20, 1899.
H. B. WHITNEY, M.D., Cor. Sec., Denver, Col. W. A. CAMPBELL, M.D., Prest., Colorado Springs, Col.

MEDICAL SOCIETY, DISTRICT OF COLUMBIA.

Semi-annual Meeting at Washington, October 3, 1899.
J. R. WELLINGTON, M.D., Sec., 1335 N St., N. W., Washington, D. C. D. WEBSTER PRENTISS, M.D., Prest. Washington, D. C.

MEDICAL SOCIETY OF DELAWARE.

Annual Meeting at Wilmington, June 13, 1899.
FRANK BELVILLE, M.D., Sec., Delaware City, Del. BENAIAH L. LEWIS, M.D., Prest., Harrington, Del.

FLORIDA MEDICAL ASSOCIATION.

Annual Meeting at Orlando, April 11, 1900.
J. D. FERNANDEZ, M.D., Sec., Jacksonville, Fla. J. HARRISON HODGES, M.D., Prest., Gainesville, Fla.

THE MEDICAL ASSOCIATION OF GEORGIA.

Annual Meeting at Atlanta, April 18, 19, and 20, 1900.
R. H. TAYLOR, M.D., Sec., Griffin, Ga. F. W. MCRAE, M.D., Prest., Atlanta, Ga.

ILLINOIS STATE MEDICAL SOCIETY.

Annual Meeting at Springfield, May 22, 23, and 24, 1900.
EDMUND W. WEIS, M.D., Sec., Ottawa, Ill. HAROLD N. MOYER, M.D., Prest. Chicago, Ill.

INDIANA STATE MEDICAL SOCIETY.

Annual Meeting at

IOWA STATE MEDICAL SOCIETY.

Annual Meeting at Des Moines, May 16, 1900.
J. W. COKENOWER, M.D., Sec., Des Moines, Iowa. THOMAS J. MAXWELL, M.D., Prest., Keokuk, Iowa.

NATIONAL AND STATE MEDICAL SOCIETIES OF AMERICA.

STATE—CONTINUED.

THE INDIAN TERRITORY MEDICAL ASSOCIATION.

Semi-annual Meeting at South McAlester, June, 1899.

LeRoy Long, M.D., Sec., Caddo, Ind. T. — G. R. Rucker, M.D., Prest., Eufaula, Ind. T.

IDAHO STATE MEDICAL SOCIETY.

Annual Meeting at Lewiston, September 5 and 6, 1899.

Ed. E. Maxey, M.D., Sec., Caldwell, Idaho. — C. W. Shaff, M.D., Prest., Lewiston, Idaho.

KANSAS MEDICAL SOCIETY.

Annual Meeting at Topeka, May, 1900.

W. E. McVey, M.D., Sec., Topeka, Kan. — Chas. Gardiner, M.D., Prest., Emporia, Kan.

KENTUCKY STATE MEDICAL SOCIETY.

Annual Meeting at Georgetown, May, 1900.

Steele Bailey, M.D., Sec., Stanford, Ky. — William Bailey, M.D., Prest., Louisville, Ky.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting at

MAINE MEDICAL ASSOCIATION.

Annual Meeting at

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Annual Meeting at Baltimore, April 24, 1900.

J. Williams Lord, M.D., Sec., 345 North Charles St., Baltimore, Md — Clotworthy Birnie, M.D., Prest., Taneytown, Md.

THE MASSACHUSETTS MEDICAL SOCIETY.

Annual Meeting at Boston, June 13 and 14, 1899.

F. W. Goss, M.D., Sec., Roxbury, Mass. — E. B. Harvey, M.D., Prest., Westborough, Mass.

MICHIGAN STATE MEDICAL SOCIETY.

Annual Meeting at Mackinaw Island, June, 1900.

Collins H. Johnston, M.D., Sec., Grand Rapids, Mich. — A. W. Alvord, M.D., Prest., Battle Creek, Mich.

MINNESOTA STATE MEDICAL SOCIETY.

Annual Meeting at Minneapolis, June 21, 22, and 23, 1899.

Wm. Davis, M.D., Sec., 107 East Sixth Street, St. Paul, Minn. — F. A. Dunsmoor, M.D., Prest., Minneapolis, Minn.

MISSISSIPPI STATE MEDICAL ASSOCIATION.

Annual Meeting at Meridian, April 18, 1900.

J. R. Tackett, M.D., Sec., Meridian, Miss. — R. E. Jones, M.D., Prest., Crystal Springs, Miss.

MISSOURI STATE MEDICAL ASSOCIATION.

Annual Meeting at

MEDICAL ASSOCIATION OF MONTANA.

Annual Meeting at

NEW HAMPSHIRE MEDICAL SOCIETY.

Annual Meeting at Concord, May 31 and June 1, 1900.

G. P. Conn, M.D., Sec., Concord, N. H. — Charles R. Walker, M.D., Prest., Concord, N. H.

NEW YORK STATE MEDICAL ASSOCIATION.

Annual Meeting at New York, October 24, 25, and 26, 1899.

M. C. O'Brien, M.D., Sec., 161 W. 122d St., New York City. — Joseph D. Bryant, M.D., Prest., New York City.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Annual Meeting at Albany, January 30 and 31, and February 1, 1900.

F. C. Curtis, M.D., Sec., 17 Washington Ave., Albany, N. Y. — Willis G. Macdonald, M.D., Prest., 27 Eagle St., Albany, N. Y.

MEDICAL SOCIETY OF NEW JERSEY.

Annual Meeting at , June 27, 28, and 29, 1899.

William J. Chandler, M.D., Sec., South Orange, N. J. — C. R. P. Fisher, M.D., Prest., Bound Brook, N. J.

NEBRASKA STATE MEDICAL SOCIETY.

Annual Meeting at Omaha, 1900.

A. D. Wilkinson, M.D., Sec., Lincoln, Neb. — Robert McConaughy, M.D., Prest., York, Neb.

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Annual Meeting at Tarboro, May, 1900.

G. W. Pressly, M.D., Sec., Charlotte, N. C. — Geo. W. Long, M.D., Prest., Graham, N. C.

NEW MEXICO MEDICAL SOCIETY.

Annual Meeting at

NORTH DAKOTA MEDICAL SOCIETY.

Annual Meeting at Grand Forks, May 16 and 17, 1900.

R. D. Campbell, M.D., Sec., Grand Forks, N. Dak. — George F. Bates, M.D., Prest., Hillsboro, N. Dak.

THE OHIO STATE MEDICAL SOCIETY.

Annual Meeting at

OREGON STATE MEDICAL SOCIETY.

Annual Meeting at Portland, June 13 and 14, 1899.

Wm. F. Amos, M.D., Sec., Portland, Ore. — C. H. Hall, M.D., Prest., Salem, Ore.

ONTARIO MEDICAL ASSOCIATION.

Annual Meeting at

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Annual Meeting at Wilkes-Barre, September 18-20, 1900.

C. L. Stevens, M.D., Sec., Athens, Pa. — George W. Guthrie, M.D., Prest., Wilkes-Barre, Pa.

RHODE ISLAND MEDICAL SOCIETY.

Annual Meeting at Providence, June 7, 1900.

Frank L. Day, M.D., Sec., Providence, R. I. — George D. Hersey, M.D., Prest., Providence, R. I.

SOUTH DAKOTA STATE MEDICAL SOCIETY.

Annual Meeting at Yankton, June, 1899.

W. J. Mattum, M.D., Sec., Alexandria, So. Dak. — F. A. Spafford, M.D., Prest. Flandreau, So. Dak.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Annual Meeting at Charleston, April 18, 1900.

T. P. Whaley, M.D., Sec., 113 Wentworth St., Charleston, S. C. — W. P. Porcher, M.D., Prest., 99 Meeting St., Charleston, S. C.

TENNESSEE STATE MEDICAL SOCIETY.

Annual Meeting at Knoxville, April 10, 11, and 12, 1900.

W. D. Haggard, Jr., M.D., Sec., 312 N. High St., Nashville, Tenn. — D. E. Nelson, M.D., Prest., Chattanooga, Tenn.

THE TEXAS STATE MEDICAL SOCIETY.

Annual Meeting at Waco, April 24, 1900.

H. A. West, M.D., Sec., Galveston, Tex. — A. B. Gardner, M.D., Prest., Bellville, Tex.

UTAH STATE MEDICAL SOCIETY.

Annual Meeting at

VERMONT STATE MEDICAL SOCIETY.

Annual Meeting at Burlington, October 12 and 13, 1899.

D. C. Hawley, M.D., Sec., Burlington, Vt. — S. E. Lawton, M.D., Prest., Brattleboro, Vt.

MEDICAL SOCIETY OF VIRGINIA.

Annual Meeting at Richmond, October, 1899.

John F. Winn, M.D., Cor. Sec., Richmond, Va. — Jacob Michaux, M.D., Prest., Richmond, Va.

THE WASHINGTON STATE MEDICAL SOCIETY.

Annual Meeting at

THE WISCONSIN STATE MEDICAL SOCIETY.

Annual Meeting at Milwaukee, June 20, 1900.

Charles S. Sheldon, M.D., Sec., Madison, Wis. — W. T. Sarles, M.D., Prest., Sparta, Wis.

THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA

Annual Meeting at Morgantown, May, 1900.

G. A. Aschman, M.D., Sec., Wheeling, W. Va. — C. S. Hoffman, M.D., Prest., Keyser, W. Va.

WYOMING STATE MEDICAL SOCIETY.

Annual Meeting at Laramie, October 10, 1899.

E. Stuver, M.D., Sec., Rawlins, Wyo. — R. Harvey Reed, M.D., Prest., Rock Springs, Wyo.

Societies not found in this list have not responded to our request for information.

The Artificial Limb Industry.

THE manufacture of artificial limbs as an industry is but little known outside of the circle of those who are maimed, and when the attention of the inexperienced is called to it, they are inclined to regard it as an industry coupled with that of plastic surgery, or being a part of the surgical profession. Although it is somewhat allied to it, it is as distinct as any of the other mechanical arts. In one sense it is an innovation, that of its recent segregation from other industries which, from their nature, have led the ingenious mind to think and contrive for the relief of the infirm.

Artificial legs and arms have been made for ages, but until recent times have been mechanical curiosities; but few were made and fewer still were worn. Their construction made them expensive, not only to buy but to wear. When a man lost his leg it was a blight to his life. If he was poor, the loss made him still poorer. If he was rich, it was barely possible that he could mitigate his misfortune by calling into operation the cunning of a skilled artisan. As aids in human propulsion or practical substitutes for parts lost, such contrivances were absolute failures. In the present age makeshifts are not tolerated. If a leg is lost, an artificial must be supplied. Not a fancy appendage, composed of strings, springs and joints, merely to exhibit the mechanical construction of the human joints. It must be a leg that will actually enable the wearer to walk, stand, jump, and labor—in fact, an arrangement that will restore him to the status of his fellow-men in every employment of life. If an arm is lost, natural pride revolts against the empty sleeve, and the pendant stump must be turned to some use. This change in the demands of the cripples has forced the development of the prosthetic art, and, as a consequence, the minds of a few ingenious men have been active in the endeavor to meet the fast-increasing want. Foremost in this line stands A. A. Marks, of New York City. In 1853 he began his career as an artificial limb-maker. Since that time he has made upward of a hundred inventions and improvements, with but one object in view, that of producing an artificial leg that would enable the wearer to walk naturally, comfortably, helpfully, and safely—a leg that possessed durability, and shorn of every unnecessary complication; one that would last many years with as little expense as possible, not only in the purchase, but in the item of repair. Also to produce a hand that would similate the natural member, without noisy, heavy, useless, mechanical movements. The rubber foot and the rubber hand are the evolutions of his thought and experience. By employing rubber in these extremities, artificial legs and arms have become realities, and have won the favor of the entire world. The firm of A. A. Marks has for years occupied the foremost rank in the art. They occupy the entire building 701 Broadway, New York City, and employ a colony of skilled artisans. They manufacture largely from data supplied by the crippled, while they remain at home, and ship limbs to all parts of the world. Thus a physician or surgeon can order an artificial limb direct from the maker while the patient remains at home.

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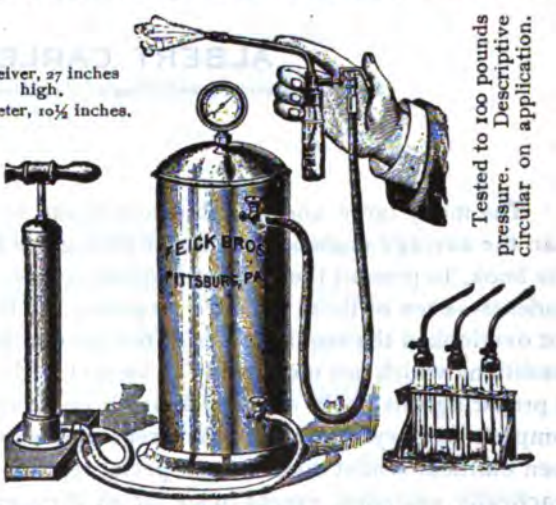

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Prof. Clifford Mitchell, A.M., M.D., Chicago.
(In the Hahnemannian Monthly, Phil., Pa., of Jan., 1897)
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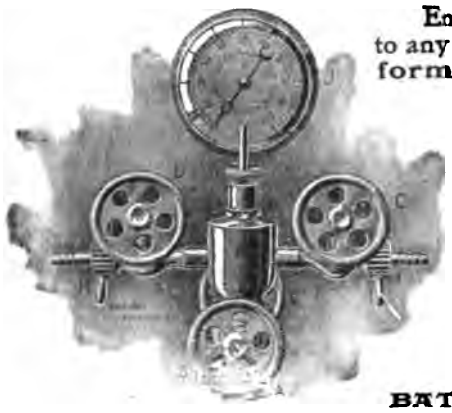

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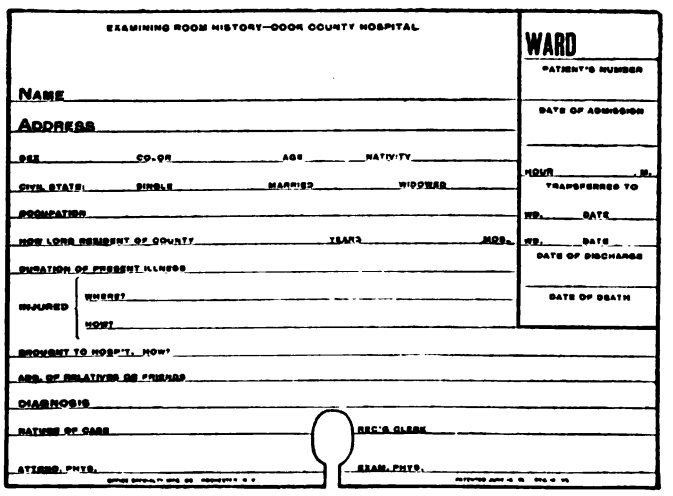
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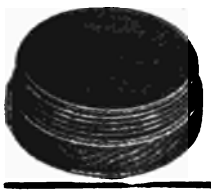

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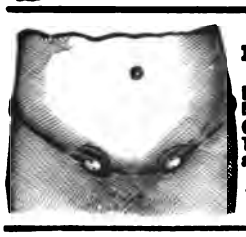

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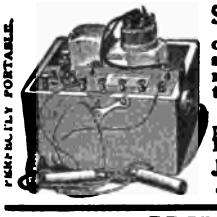

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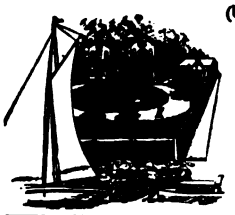

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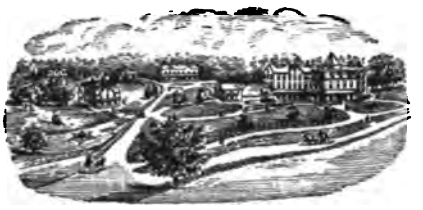

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LIST OF PLATES.

I., II. Comedo, Acne vulgaris.
III. Acne varioliformis, Millium.
III. Molluscum sebaceum, Rosacea.
IV., V. Erythema exsudativum multiforme.
VI. Urticaria.
VII., VIII. Herpes facialis.
VIII. Herpes zoster.
IX., X. Gangræna cutis acuta multiplex.
XI., XII., XIII., XIV. Psoriasis vulgaris.
XV., XVI. Lichen ruber.
XVII. Pityriasis pilaris.
XVIII., XIX., XX., XXI. Eczema.
XXII. Prurigo.
XXIII. Sycosis.
XXIV. Impetigo contagiosa.
XXV. Ecthyma, Pemphigus vulgaris.
XXVI. Pemphigus foliaceus.
XXVII. Pemphigus vegetans.
XXVIII., XXIX. Purpura.
XXX. Lentigo, Chloasma.
XXXI. Leucodermia.
XXXII. Lichen pilaris.
XXXIII. Verruca.
XXXIV. Cornu cutaneum.
XXXV. Onychogryphosis.
XXXVI. Condylomata acuminata.
XXXVII., XXXVIII. Ichthyosis.
XXXIX., XL. Pachydermia.
XLI. Alopecia.
XLII. Keloïd.
XLIII. Fibroma.
XLIV. Sarcoma.
XLV., XLVI. Epithelioma.
XLVII., XLVIII., XLIX., L. Lupus vulgaris. Lupus erythematosus.
LI., LII., LIII. Lepra Arabum.
LIV. Scrophuloderma Ulcus cutaneum.
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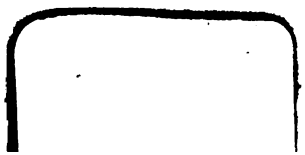
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